

Lecture 27: Fixed Exchange Rates

I. OVERVIEW

- In the last lecture, we looked at the short-run impact of monetary and fiscal policy in an open economy under flexible exchange rates.
- With expansionary fiscal policy, the increase in interest rates would be accompanied by an inflow of money from abroad, causing an appreciation of the currency. This in turn reduces NX and lowers Y.
- With expansionary monetary policy the decrease in interest rates would be accompanied by an outflow of money to other countries causing a depreciation of the currency. This in turn increases NX and raises Y.
- The impact of policy flows varies depending on the type of exchange rate system. In today's class we will examine the impact of fiscal and monetary policy in a country with a fixed exchange rate system.

II. FIXED EXCHANGE RATE SYSTEMS

- Many countries still have an exchange rate system where the central bank announces a fixed exchange rate for the currency and then agrees to buy and sell the domestic currency at this value.
- This can be done by keeping reserves of foreign currency (along with domestic currency reserves that any central bank already has). If demand for foreign currency exceeds supply the central bank meets the excess demand by running down its reserves. If supply exceeds demand, the central bank absorbs the excess supply by increasing its foreign currency reserves.
- The basic motivation for keeping exchange rates fixed is the belief that a stable exchange rate will help facilitate trade and investment flows between countries by reducing fluctuations in relative prices and by reducing uncertainty.

III. THE IS-LM MODEL IN AN OPEN ECONOMY WITH FIXED EXCHANGE RATES

- As before, it is vital to keep in mind that the closed economy effects still continue to hold: in other words an increase in G will shift out the IS curve. A decrease in money supply will shift in the LM curve etc.
- Once again we now have additional changes coming from the open economy dimension, which we have to incorporate into our analysis.

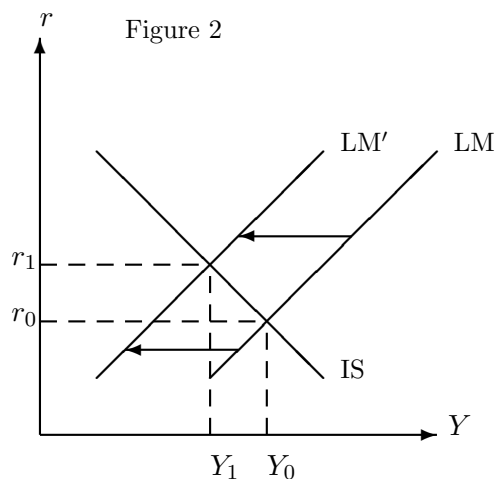
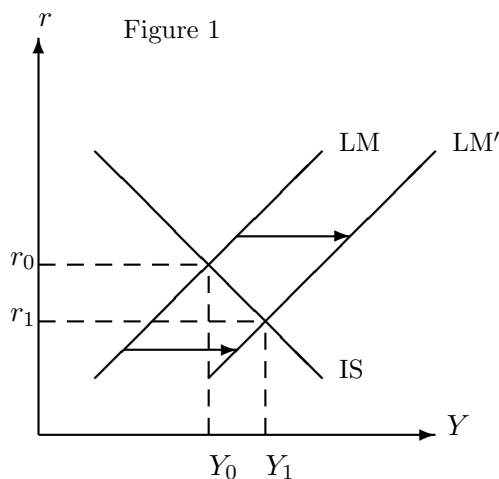
- In the case of fixed exchange rates, this additional effect will fall on the LM curve through increases and decreases in the money supply (because the central bank is handing out or taking in domestic currency for foreign currency).

The IS Curve under Fixed Exchange Rates

- Under flexible exchange rates, the open economy has an additional effect on the IS curve through depreciation and appreciation of the currency.
- There is no additional effect under fixed exchange rates because E is, by definition, fixed.

The LM Curve under Fixed Exchange Rates

- The real demand for money still depends on the interest rate and on income. We still continue to assume that the nominal supply of money is set by the Federal Reserve (or the central bank).
- In the closed economy case, the Fed was assumed to change the money supply principally by buying and selling bonds. In the open economy, under a fixed exchange rate regime, the central bank will also change the money supply through the exchange of domestic and foreign currency.
- When the central bank exchanges domestic currency for foreign currency it is increasing the domestic money supply: the LM curve shifts out. This is illustrated in Figure 1 below.
- When it exchanges foreign currency for domestic currency, it decreases the amount of domestic currency in circulation: the LM curve shifts in. This is illustrated in Figure 2 below.
- So under fixed exchange rates, the open economy has an additional effect on the LM curve.



III. FISCAL AND MONETARY POLICY IN A SMALL OPEN ECONOMY UNDER FIXED EXCHANGE RATES.

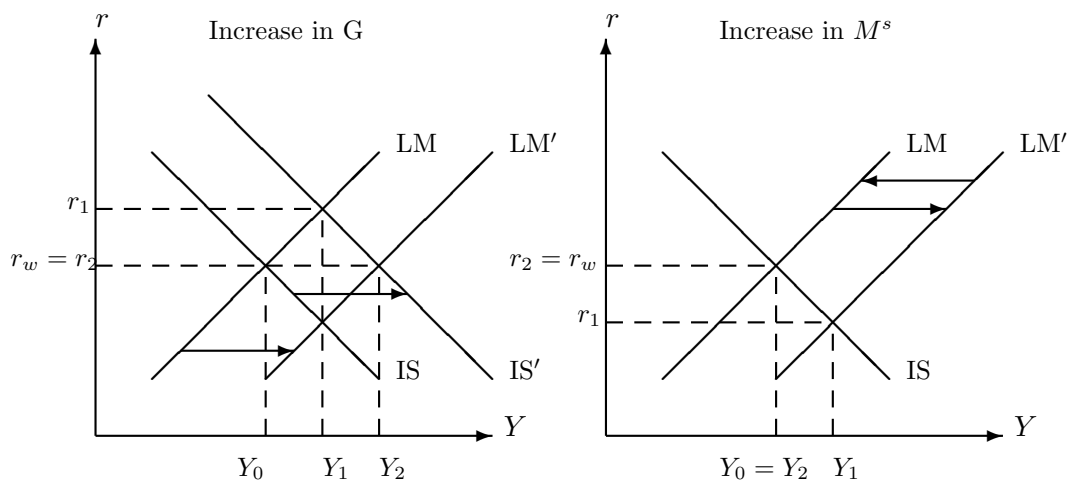
- Consider a small open economy with fixed exchange rates. As with a flexible exchange rate, the small open economy still cannot deviate from the world interest rate, any such attempt will result in capital flows either to or from the country seeking to obtain higher returns.
- In the flexible exchange rate case, these inflows caused the value of the currency to change, affecting NX, shifting the IS curve and restoring interest rate parity with the world.
- In the fixed exchange rate case, of course, the exchange rate by definition will not change. This time the mechanism is through changes in money supply that result from the Central Bank exchange of domestic currency for foreign currency. These changes in money supply affect interest rates until the interest rate is driven back to the world interest rate.

Expansionary Fiscal Policy

- Increase in G: Shifts IS to IS' and causes r to increase above r_w and Y to increase to Y_1 .
- This brings about an inflow of money into the country. The central bank takes in foreign money and hands out domestic money, increasing the domestic money supply.
- The increase in M^s shifts the LM curve out lowering interest rates. The process will continue until r has returned to the world interest rate.
- So expansionary fiscal policy has very powerful short-run effect in a small open economy under fixed exchange rates.
- This case is shown in Figure 3. Y_1, r_1 is the closed economy short-run equilibrium, while Y_2, r_2 is the open economy short-run equilibrium

Expansionary Monetary Policy

- Increase in money supply: Shifts LM to LM' and reduces r below r_w .
- This brings about an outflow of money out of the country. The Central bank hands out foreign money in exchange for domestic money reducing its holdings of foreign reserves and reducing the domestic money supply.
- The fall in the money supply shifts the LM curve in raising interest rates. The process will continue until r has returned to the world interest rate.
- So expansionary monetary policy is ineffective in a small open economy under fixed exchange rates.
- This case is shown in Figure 4. Y_1, r_1 is the closed economy short-run equilibrium, while Y_2, r_2 is the open economy short-run equilibrium



- So expansionary fiscal policy has powerful short-run effects on output in a small open economy under fixed exchange rates while expansionary monetary policy has no effect in a small open economy under fixed exchange rates.
- The general intuition is that expansionary fiscal policy tends to raise interest rates, which results in an inflow of money that results in an increase in the domestic money supply. This leads to a further expansionary effect on domestic output.
- Similarly, expansionary monetary policy tends to lower interest rates, resulting in a outflow of money that counters the original monetary expansion.