

# OPEN ECONOMY MACROECONOMICS

Open economy macroeconomics is the study of economics in which international transactions play a significant role. The purpose of this course is to show how international transactions affect the domestic economy. The suggested outline is:

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1. The Foreign Exchange market
  2. The Balance of Payments
  3. The Components of the Balance of Payments
  4. Internal and external Balance
  5. Monetary and Fiscal policy under Fixed exchange Rates
  6. Devaluation
  7. The Determination of Floating Exchange Rates
  8. Monetary and Fiscal policy under Floating exchange Rates

## ***1. THE FOREIGN EXCHANGE MARKET***

*The foreign exchange market is the international market in which one national currency can be exchanged for another. The price at which the two currencies exchange is called the **exchange rate**.*

When the dollar-pound exchange rate is increasing, we say the pound has **appreciated**, because the international value of the sterling has risen. Conversely, when the dollar-pound exchange rate falls we say that the pound has **depreciated**, because its international value is reduced.

### ***1.1 Alternative Exchange rate Regimes***

*An exchange rate regime is a description of the conditions under which national government allow exchange rates to be determined.*

In this course, we discuss the different exchange rate regimes, which have been adopted to handle international transactions in the world economy. That to say, fixed and floating exchange rates.

***Fixed Exchange Rates*** In a fixed exchange rate regime, national governments agree to maintain the convertibility of their currency at a fixed exchange rate.

A currency is convertible if the government, acting through the central bank, agrees to buy or sell as much of the currency as people wish to trade at the fixed exchange rate.

***Floating Exchange rates*** In a floating exchange rate regime, the exchange rate is allowed to attain its free market equilibrium level without any government intervention through transactions that increase or reduce the foreign reserves.

## 2. THE BALANCE OF PAYMENTS

The balance of payments is a systematic record of all transactions between residents of one country and the rest of the world.

Taking the UK as the domestic country and the United States as the 'rest of the world', all international transactions that give rise to an *inflow* of pounds to the UK are entered as credits in the UK balance of payments accounts. *Outflows* of pounds are shown as debits, and are entered with a *minus sign*. Similarly, inflows of dollars to United States are credits in the US balance of payments accounts but outflows are debits. To master this better, we show the UK balance of payments account with the rest of the world in 1982.

### UK BALANCE OF PAYMENTS, 1982

Visible exports	55.54
Visible imports	-53.32
Invisibles: credits	30.56
debits	-28.70
(1) UK CURRENT ACCOUNT	<b>4.08</b>
Net investment in the UK	-6.31
Net trade credit	-1.42
Net financial transactions	5.99
(2) UK CAPITAL ACCOUNT	<b>-1.74</b>
(3) Balancing item	<b>-3.62</b>
(4) UK BALANCE OF PAYMENTS ((1) + (2) + (3))	<b>-1.28</b>
(5) Official financing	<b>1.28</b>

Source: CSO, *Monthly Digest of Statistics*

**THE CURRENT ACCOUNT** The current account of the balance of payments records international flows of goods and services, and other net income from abroad.

Visible trade → exports and imports of *goods*

Invisible trade → exports and imports of *services*

(Visible trade + Invisible trade = Trade balance or net exports of goods and services)

The question here is whether the trade balance is identical or not to the current account on the balance of payments. (Think about transfer of payments between countries (foreign aid); the net flow of property income interest, profits, dividends).

**THE CAPITAL ACCOUNT** The capital account of the balance of payments records international transactions in financial assets.

Net investment in the UK → the outflow of money from the UK exceeds the inflow of money to the UK.

Net trade credit → the net outflow shows that UK exporters were lending more to foreign importers than foreign exporters were lending to domestic importers.

Suppose a UK exporter exports a car for £20,000 but is not paid immediately. On the current account, the value of the physical export of a car is immediately recorded as £20,000 under visible exports. Nevertheless, on the capital account, we enter -£20,000 to show the credit extended to the foreign importer. When we add the current and capital accounts together, we shall conclude that the monetary inflow to the UK is zero, which is correct the money comes in only when the exporter is paid.

The third entry on the capital account shows all other net transactions in financial assets. Foreign money flowing into UK bank accounts in sterling (pound) or being used to purchase British government bills and bonds exceeded corresponding outflows from the UK to acquire financial assets abroad.

The balancing item is a statistical adjustment, which would be zero if all previous items had been correctly measured. It reflects a failure to record all transactions in the official statistics. Adding together the current account (1), the capital account (2), and the adjustment (3) required to measure (1) and (2) properly, we obtain the UK balance of payments in 1982.

The balance of payments shows the net inflow of money to the country when individuals, firms and the government make the transactions they wish to undertake under existing market conditions. It is in surplus (deficit) when there is a net inflow of money (outflow of money). It takes account of transactions that individuals wish to make in importing and exporting and in buying and selling foreign assets, and the amount of transactions that governments wish to make in the form of foreign aid (transfer payments to foreigners), military spending (maintaining military bases abroad), and so on.

The final entry in the table above is official financing. This is always of equal magnitude and opposite sign to the balance of payments in the line above, so that the sum of all entries in the table above is always zero. Official financing measures the international transactions that the government must take to accommodate all the other transactions shown in the balance of payments accounts. *WHAT IS THIS OFFICIAL FINANCING?*

***The rest of the outline of this course is left to the student as a homework.***

## **SUMMARY**

1. The exchange rate is the number of units of the foreign currency that exchange for a unit of the domestic currency. A fall (rise) in the exchange rate is called a depreciation (appreciation).
2. The demand for the domestic currency arises from exports and purchases of domestic assets by foreigners. Floating exchange rates equate supply and demand in the absence of any government intervention in the foreign exchange market.
3. Under fixed exchange rates, the government meets an excess supply of pounds by running down foreign currency reserves in order to demand pounds. Conversely, an

excess demand for pounds at the fixed exchange rate is met by increasing the foreign exchange reserves and supplying pounds to the market.

4. In the balance of payments accounts, items leading to monetary inflows are recorded as credits and items leading to monetary outflows are recorded as debits. The current account shows the balance on trade in goods and services plus net flows of income earned from assets own in other currencies. The capital account shows net purchases and sales of assets. The balance of payments is the sum of the current and capital account balances.
5. Under floating exchange rates, a current surplus must be offset by a capital deficit or vice versa. Under fixed exchange rates, a balance of payments surplus or deficit must be matched by an offsetting quantity of official financing. Official financing simply measures government intervention in the foreign exchange market.
6. The real exchange rate adjusts the nominal exchange rate for prices at home and abroad, and measures the relative price of domestic to foreign goods when measured in a common currency. A rise in the real exchange rate reduces the international competitiveness of the domestic economy.
7. An increase in domestic (foreign) income increases the demand for imports (exports). An increase in the real exchange rate reduces the demand for exports, increases the demand for imports, and thus reduces the demand for net exports.
8. Holders of international funds compare the domestic interest rate with the total return that can be obtained by temporarily lending abroad. This return is the sum of the foreign interest rate plus the depreciation of the international value of the domestic currency over the period of the loan. Perfect international capital mobility means that an enormous quantity of funds will shift between currencies when the perceived rate of return differs across currencies.
9. Internal balance occurs when aggregate demand is at the full-employment level. External balance surplus occurs when imports equal exports. Both are necessary for long-run equilibrium.
10. A balance of payments deficit leads to an equivalent reduction of the domestic money supply. A balance of payments surplus increases the domestic money supply by an equal amount.
11. Under fixed exchange rates and perfect capital mobility, monetary policy is almost powerless. Domestic interest rates are pegged at world levels. An increase in the domestic money supply leads to an equivalent balance of payments deficit until the money supply is restored to the level people wish to demand at the given level of world interest rates.
12. In the short-run, fiscal policy is a powerful tool under fixed exchange rates. Fiscal expansion no longer bids up domestic interest rates in the short-run. Any tendency for interest rates to rise leads to an immediate inflow on the capital account until the money supply is increased enough to maintain interest rates at the world level.
13. A devaluation is a reduction in the fixed exchange rate maintained by the government. With sluggish price adjustment, its immediate effect is to increase competitiveness and aggregate demand. With spare resources, output increases. Nevertheless, at full employment, net exports can increase only if domestic absorption is reduced by tighter fiscal policy.
14. In the long run, devaluation is unlikely to have much effect. Changing one nominal variable merely leads to offsetting changes in other nominal variables. In passing on higher imports prices and seeking cost-of-living wage increases, firms and workers will

increase domestic prices and wages to offset the competitive advantage of devaluation. Nevertheless, devaluation could speed up the adjustment process when a shock requires an adjustment in competitiveness to restore internal and external balance.

15. Under floating exchange rates, the long run value of the nominal exchange rate will be determined to secure external balance, given prices at home and abroad. However, in the short-run it is determined by speculative considerations, and must change to prevent massive flows on the capital account.
16. The exchange rate must begin at a level from which the anticipated convergent path to its long-run equilibrium continuously provides capital gains or losses to offset prevailing interest rate differentials, thus equating the rate of return on lending at home and abroad.
17. Under floating exchange rates, monetary policy is a powerful short-run tool. A reduction in the money supply increases domestic interest rates and leads to a sharp appreciation of the exchange rate, which overshoots its long-run level. The reduction in competitiveness, until domestic prices and wages adjust, can sharply reduce aggregate demand in the short-run.
18. Fiscal policy is now a weaker tool in the short run. Fiscal expansion increases interest rates and the exchange rate, crowding out not merely domestic consumption and investment but also net exports.
19. An improvement in the oil-related part of the current account eventually requires an equivalent deterioration in other items on the current account to preserve overall external balance. This is achieved through a rise in the real exchange rate. Anticipating an eventual rise in the exchange rate, speculators move in at once and the exchange rate appreciates immediately.

## KEY TERMS

Open economy, macroeconomics	Purchasing power parity ( <i>PPP</i> )
Nominal and real exchange rates	Perfect capital mobility
Fixed and floating exchange rates	Speculation
Intervention and official financing	Internal and external balance
Convertibility	Domestic absorption
Foreign exchange reserves	Devaluation and revaluation
The balance of payments	Appreciation and depreciation
Current and capital accounts	Sterilization
International competitiveness	Overshooting

## PROBLEMS

1. Since 1974, the OPEC countries have run a persistent current account surplus. How is this compatible with the statement that countries must eventually get back to external balance? Does this mean that there is more pressure on deficit countries to restore external balance than there is pressure on the corresponding surplus countries?

2. Rank the following three situations according to the ability of monetary policy to affect real output and employment in the short-run: (a) a closed economy; (b) an open economy with fixed exchange rates; (c) an open economy with floating exchange rates. **Explain.** Assume the same speed of wage and price adjustment in each case.
3. Suppose the interest rate in Algeria 20 per cent a year but in UK, it is only 10 per cent. What would an international investor need to know before deciding in which country to lend?
4. Newsreaders say that ‘the pond had a good day’ whenever the sterling exchange rate rises on the foreign exchange market. (a) Under what circumstances might an appreciation of the exchange rate be desirable? (b) Undesirable?
5. **Common Fallacies** Show why each of the following statements is incorrect. (a) Countries with low inflation must be more competitive in the long-run. (b) Under floating exchange rates the current and capital accounts, have equal magnitude but opposite sign. Hence, both must be equally important in determining day-to-day exchange rate changes. (c) UK interest rates are high. This means the pound will appreciate for the next few months.

## **FURTHER READING**

D. Begg, S. Fischer, @ R. Dornbusch, “Economics”, British Edition, Chapter 28.

R.G. Lipsey, “Positive economics”, Part 7.

E.V. Morgan, “Economics”, Part VIII.

G.F. Stanlake, “Introductory Economics”, fourth Edition, Part 6.