

The adjustment for exchange rate expectations thus accounts for international differences in interest rates that persist even when capital is freely mobile among countries. When capital is completely mobile, we expect interest rates to be equalized, after adjusting for expected depreciation:

$$i = i_f - \Delta e/e \quad (6a)$$

Expected depreciation helps account for differences in interest rates among low- and high-inflation countries. When the inflation rate in a country is high, its exchange rate is expected to depreciate. In addition, the Fisher relationship suggests that the nominal interest rate in that country will be high.¹⁹ Thus high-inflation countries tend to have high interest rates and depreciating currencies. This is an international extension of the Fisher equation, which relies on PPP to argue that inflation differentials internationally are matched by depreciation. Our long-term relation, then, is

$$\text{Inflation differential} \cong \text{interest differential} \cong \text{depreciation rate} \quad (7)$$

The \cong means “approximately equal to.” The relation is only approximate because exchange rates can move independently of prices and also because obstacles to capital flows may create long-term interest differentials.

SPECULATIVE CAPITAL FLOWS

Changes in exchange rate expectations can affect the actual exchange rate as well as the domestic interest rate and output. The point is made with the help of Figure 21-10,

¹⁹The Fisher relationship states that the nominal interest rate equals the expected real interest rate plus expected inflation, $i = r + \pi^e$.

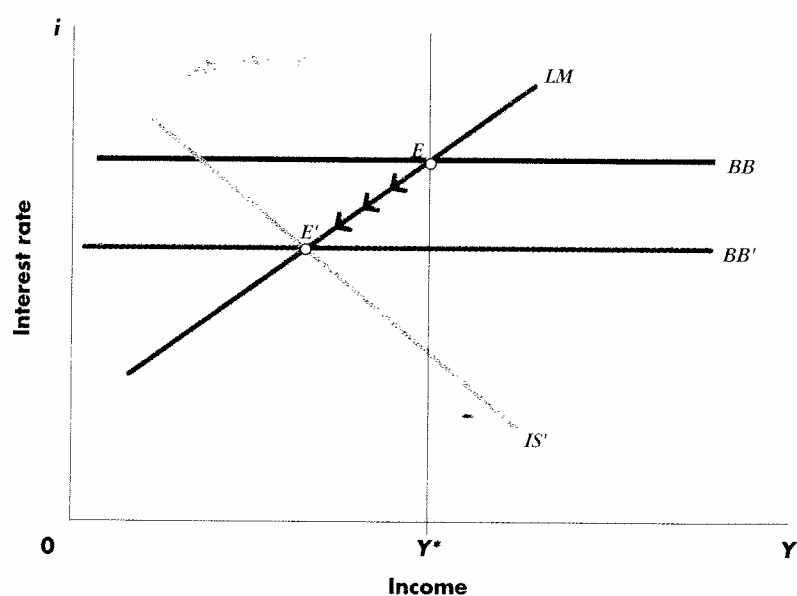


FIGURE 21-10 RESPONSE TO AN EXPECTED APPRECIATION OF CURRENCY.

which assumes perfect capital mobility, as specified in equation (6a). Here the BB schedule is drawn for a given foreign interest rate and a given expected rate of change of the exchange rate, say, zero.

Suppose that we start in full equilibrium at point E and that the market develops the expectation that the home currency will appreciate. This implies that even with a lower home interest rate, domestic assets are attractive, and so the BB schedule shifts downward by the amount of expected appreciation.

Point E is no longer an equilibrium, given the shift of the BB schedule to BB' , but rather a position of surplus with large-scale capital inflows motivated by the anticipation of appreciation. The surplus at E causes the exchange rate to start appreciating, and we move in a southwesterly direction, as indicated by the arrow. The speculative attack causes appreciation, a loss in competitiveness, and, consequently, falling output and employment. Thus the expectation of an exchange rate appreciation is *self-fulfilling*.

This analysis confirms that exchange rate expectations, through their impact on capital flows and thus on actual exchange rates, are a potential source of disturbance to macroeconomic equilibrium—something which policy makers who try to fix exchange rates when capital is fully mobile keep having to learn.

21-6

EXCHANGE RATE FLUCTUATIONS AND INTERDEPENDENCE

In the 1960s there was growing dissatisfaction with fixed exchange rates. The Bretton Woods system put in place at the end of World War II was called a “crisis system” because from time to time exchange rates would get out of line and expectations of exchange rate changes would mobilize massive capital flows that often precipitated the exchange rate changes that speculators expected. Is the system of flexible rates among the major currencies of the period since 1973 better? Is it less crisis-prone, and does it provide a better framework for macroeconomic stability? Before providing answers, we look briefly at how flexibly the system has, in fact, operated.

FOREIGN EXCHANGE MARKET INTERVENTION

When exchange rates are fully flexible, the government takes no action in the foreign exchange market. It stays out of the foreign exchange market, whatever happens to the exchange rate. Such a system is almost unheard of, although the United States did behave that way briefly in 1981–1982. More commonly, governments intervene in the foreign exchange market to a lesser or greater extent. *Foreign exchange market intervention* occurs when a government buys or sells foreign exchange in an attempt to influence the exchange rate.

The extent to which governments intervene in the foreign exchange markets varies substantially. They may try only to offset short-term fluctuations and buy or sell foreign exchange to maintain “orderly markets.” But they also may try to keep an overvalued exchange rate from depreciating or an undervalued exchange rate from appreciating. *Dirty* (as opposed to *clean*) *floating* is the practice of using substantial intervention to try to maintain an exchange rate against the pressure of market forces.