Overall the UK current account is in deficit, meaning that UK is a net borrower.

The Nominal Exchange Rate

The nominal exchange rate is the price of one currency in terms of another currency (bilateral rate). There two ways to quote an exchange rate:

a) The relative price of domestic currency in terms of foreign currency. For example, Euros per UK pound: €1.55 = £1. To buy one pound we must pay 1.55 euros.

b) The relative price of foreign currency in terms of domestic currency. For example, UK pounds per Euros. In this case: £0.645 = €1. To buy one Euro we need to pay 0.645 pounds.

It is clear that the definition in b) is the reciprocal of the definition in a).

Define the exchange rate €1.55 = £1 as $e_{€,£} = 1.55$, that is the price of a pound in terms of Euros. Define the exchange rate £0.645 = €1 as $e_{£,€} = 0.645$.

Then, it is clear that: $e_{€,£} = \frac{1}{e_{£,€}}$. In this note we will consider the nominal exchange rate defined as in a). The reason is: suppose that $e_{€,£}$ increases, for example, from 1.55 to 2. This means that it is more expensive to buy British pounds using Euros. In this case we say that an increase in $e_{€,£}$ means an **APPRECIATION** of the British pound against the Euro. On the other hand if $e_{€,£}$ decreases then it is cheaper to buy the same amount of pounds using euros, and therefore the British pound is **DEPRECIATING** against the Euro.

Therefore:

1) $e_{€,£}$ increases: this corresponds to an "**appreciation**" of the country's currency against the foreign currency (in this case Euros);

2) $e_{€,£}$ decreases: this corresponds to an "**depreciation**" of the country's currency against the foreign currency;

In the following we will call the nominal exchange rate as e without specifying the currencies involved. This means that an increase in e will mean an appreciation of the home currency and a decrease in e will mean a depreciation in home currency.

Using the definition of the exchange rate as in b) the previous reasoning must be reversed. If $e_{£,€}$ **increases**, for example from 0.645 to 1, then we have a **Depreciation** of the British pound against the Euro (the Euro is now more expensive meaning that risk. At the time of investing in the US bond (time t) the investor should have some expectations about the exchange rate at time t+1. Call this expectation as $E_t(e_{t+1})$.

The Uncovered Interest Parity condition (UIP) can be expressed as:

$$(1+i_t) = \frac{e_t}{E_t(e_{t+1})}(1+i_t^*) \qquad 9)$$

Equation 9) says that the return from investing in the UK bond and in the US bond is expected to be the same (that is the no-profit condition for a risk neutral investor)

Using logs as before and define $E_t\left(\frac{\Delta e}{e}\right) \cong \ln(E_t(e_{t+1})) - \ln(e_t)$, we can write equation 9) as:

$$i_t = i_t^* - E_t\left(\frac{\Delta e}{e}\right) \qquad 10)$$

Equation 10) is the UIP condition that you normally find in macro books. [1]

It is called uncovered because now you cannot cover yourself against the exchange rate risk (before you could by using forward contracts).

The UIP condition implicitly can tell you what the market expects in terms of appreciation of depreciation of the exchange rate. The expected change in exchange rate depends on the interest rate differential. When $i_t^* > i_t$ then $E_t\left(\frac{\Delta e}{e}\right) > 0$ the nominal exchange rate is expected to appreciate. When $i_t^* < i_t$, $E_t\left(\frac{\Delta e}{e}\right) < 0$ and the nominal exchange rate is expected to depreciate.

[1] In many books you will find the UIP condition written as: $i_t = i_t^* + E_t\left(\frac{\Delta e}{e}\right)$. This is because the exchange rate is defined in terms of domestic currency (definition b) in this lecture note. In this case an INCREASE in $E_t\left(\frac{\Delta e}{e}\right)$ denotes a DEPRECIATION in the nominal exchange rate.