Economics 302 (Sec. 001) Intermediate Macroeconomic Theory and Policy (Spring 2011)

4/13/2011

(slide 11 rev'd 4/19)

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Openness in Goods and Financial Markets

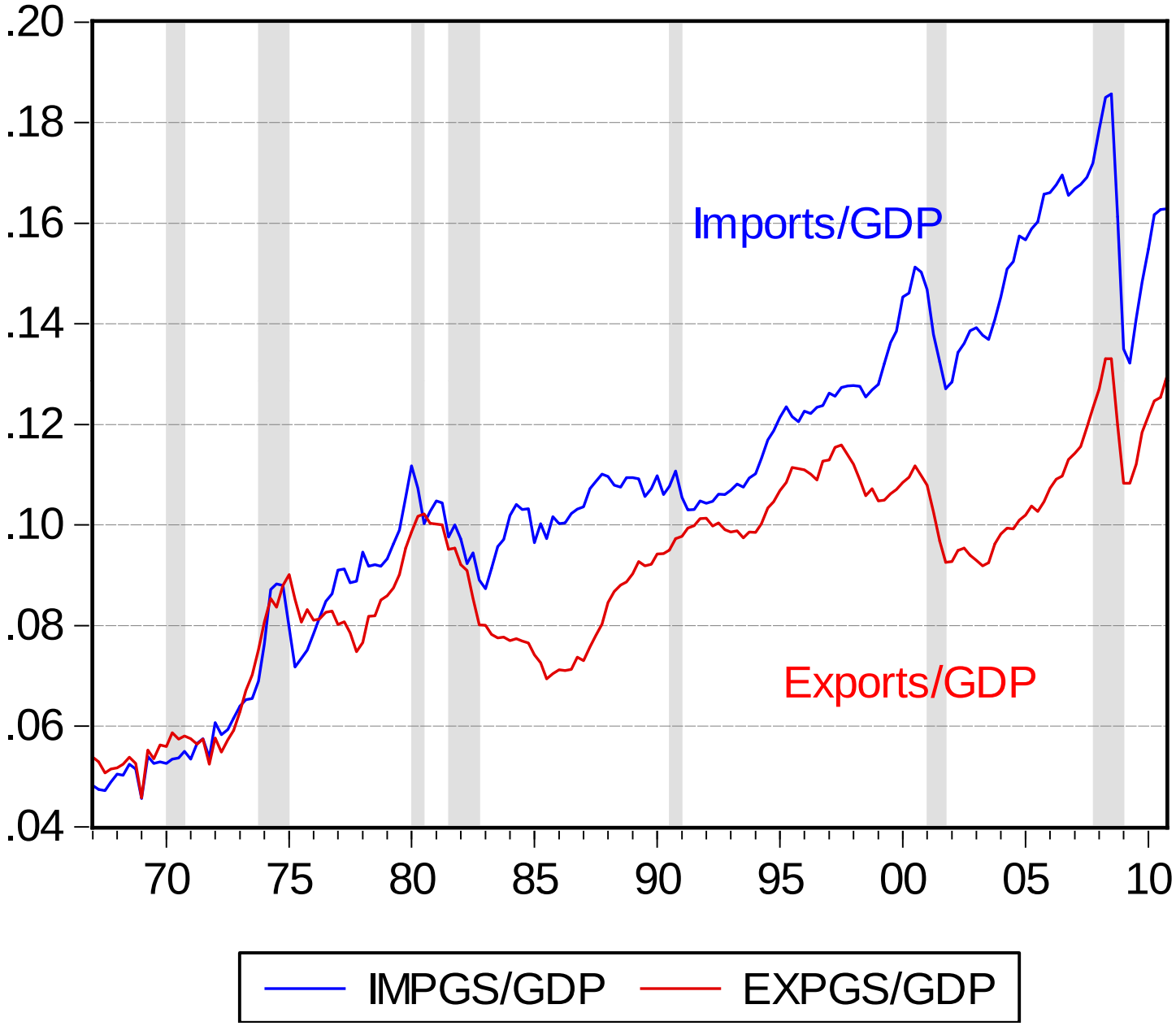
- Openness has three distinct dimensions:

1. **Openness in goods markets**. Free trade restrictions include **tariffs** and **quotas**.

2. **Openness in financial markets**. **Capital controls** place restrictions on the ownership of foreign assets.

3. **Openness in factor markets**. The ability of firms to choose where to locate production, and workers to choose where to work. The **North American Free Trade Agreement (NAFTA)** is an example of this.

18-1 Openness in Goods Markets



18-1 Openness in Goods Markets

•A good index of openness is the proportion of aggregate output composed of tradable goods: ~ 60% in US

Table 18-1 Ratios of Exports to GDP for Selected OECD Countries, 2006

Country	Export Ratio (%)	Country	Export Ratio (%)
United States	11	Switzerland	54
Japan	18	Austria	62
United Kingdom	30	Netherlands	80
Germany	48	Belgium	92

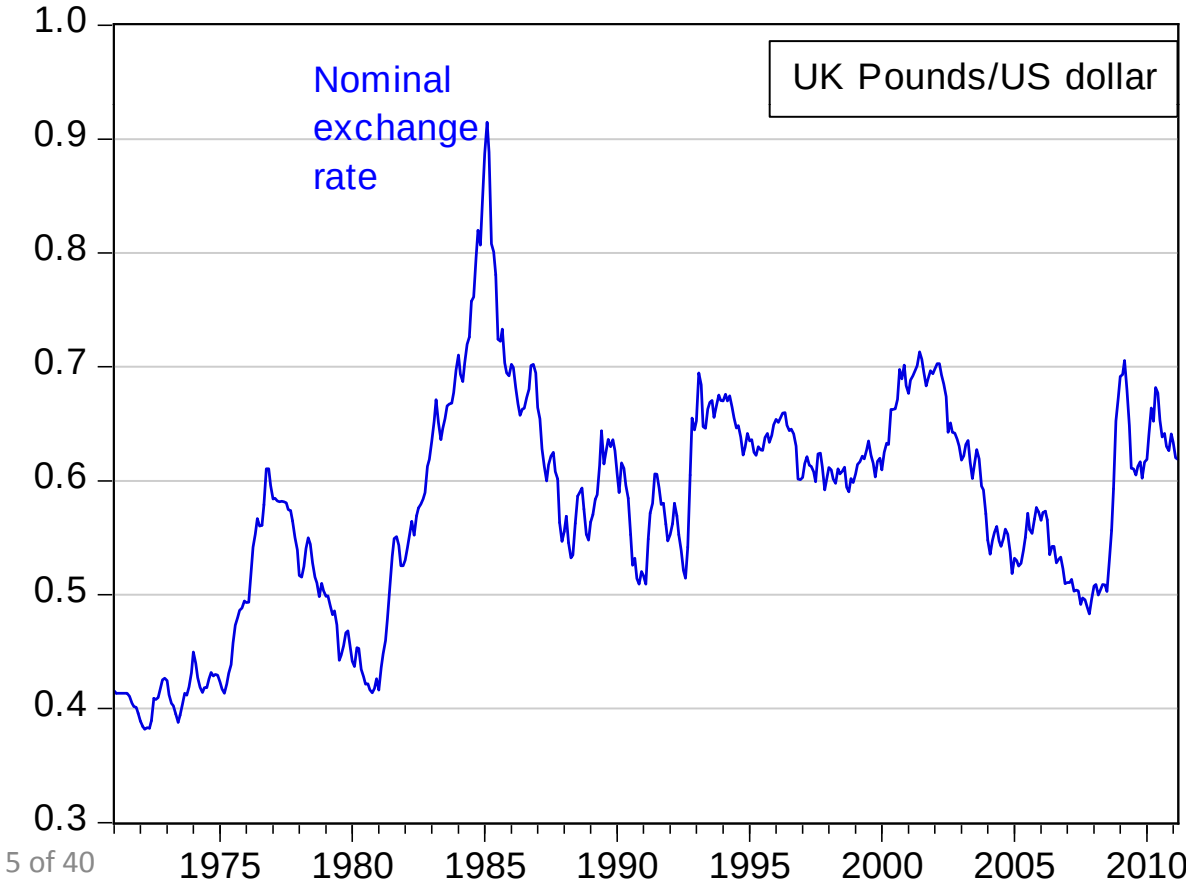
• The main factors behind differences in export ratios are geography and country size:

• - Distance from other markets.

• - Size also matters: The smaller the country, the more it must specialize in producing and exporting only a few products and rely on imports for other products.

Exchange Rates: Floating

- Nominal exchange rates between two currencies can be quoted in one of two ways:
  - **As the price of the domestic currency in terms of the foreign currency,** (our textbook) denoted as *E*
  - As the price of the foreign currency in terms of the domestic currency.



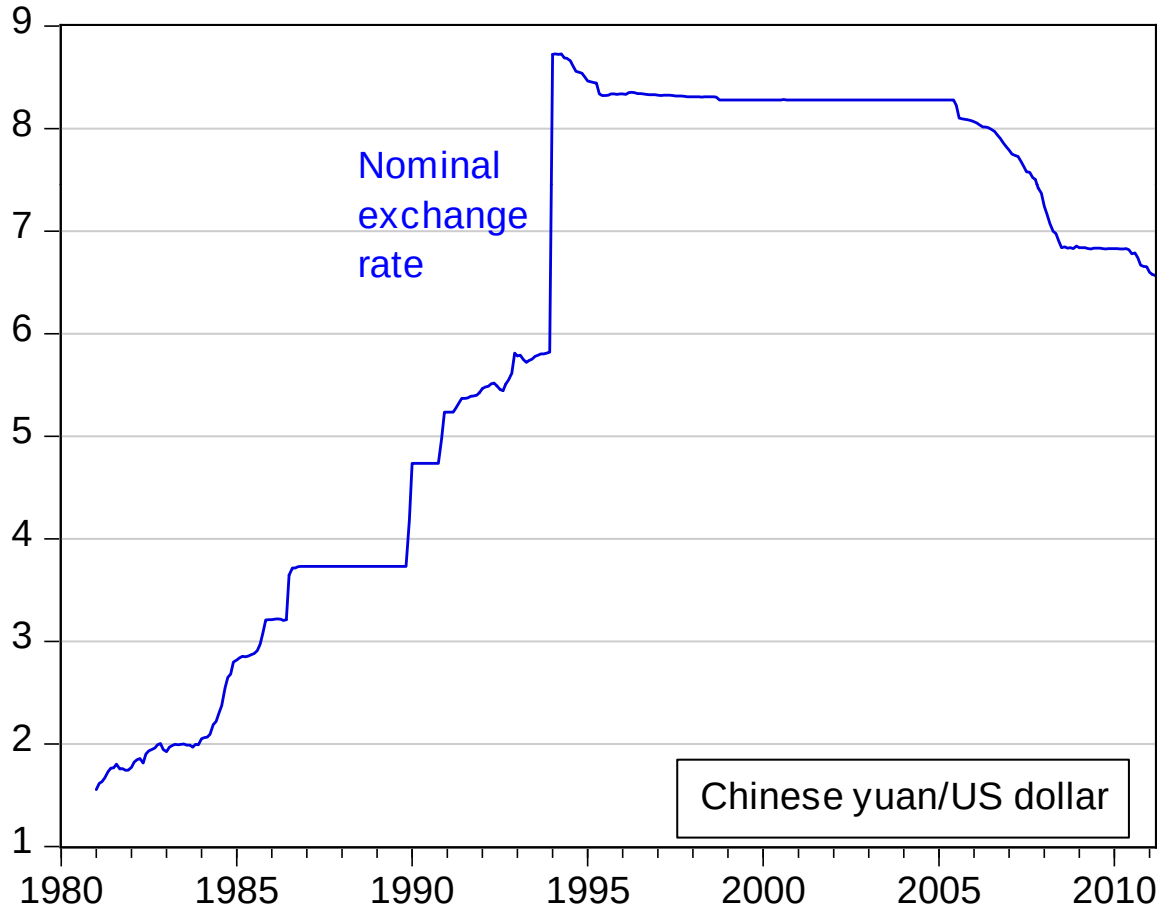
E {UK Pounds/US $}

"how many UK pounds It takes to buy a single US dollar"

"Up" is appreciation of US$.
"Down" is depreciation Of US $

Exchange Rates: Fixed

- When countries operate under fixed exchange rates, that is, maintain a constant exchange rate between them, up is a revaluation, down is a devaluation.

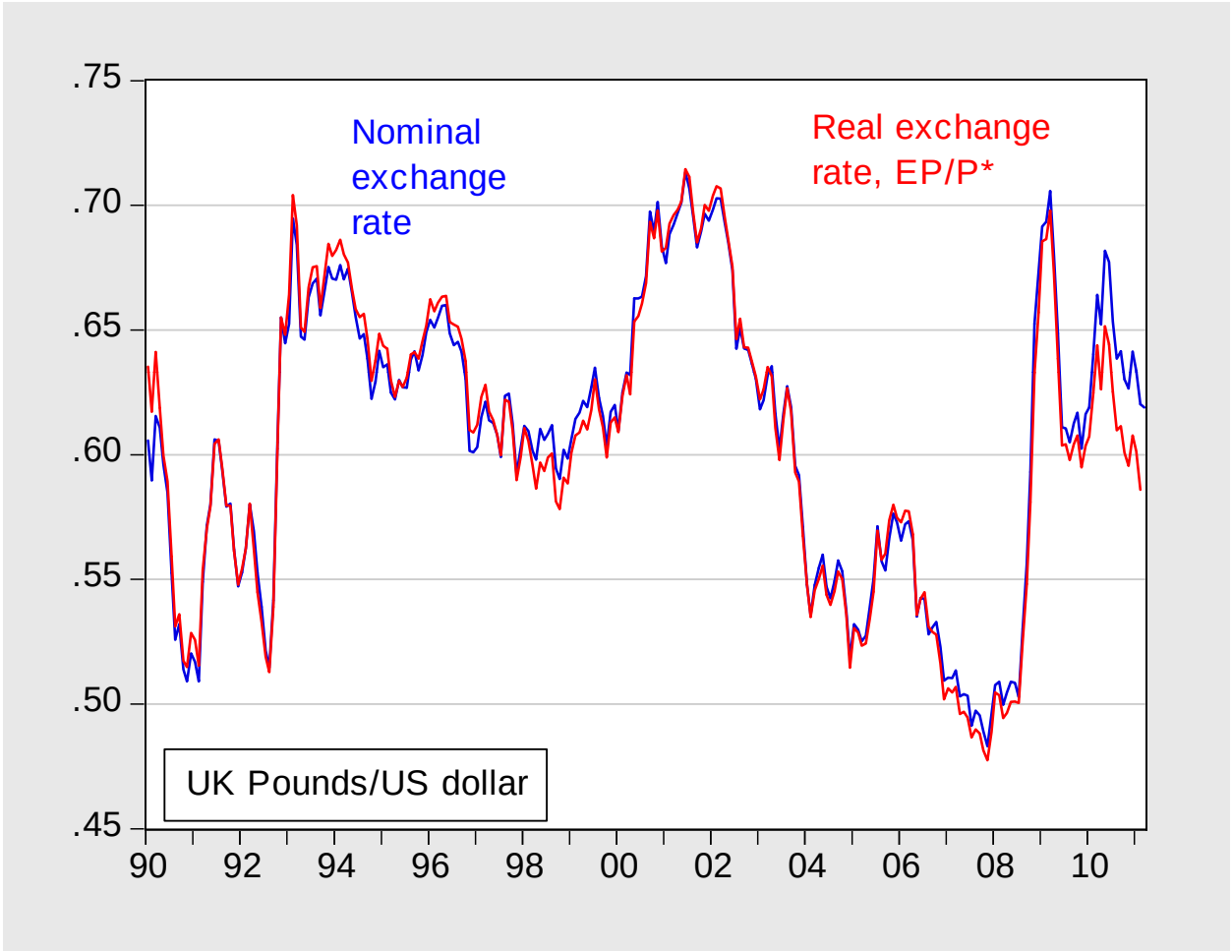


E {Chinese yuan/US $}

"how many Chinese yuan It takes to buy a single US dollar"

"Up" is appreciation of US$.
"Down" is depreciation Of US $

Real Exchange Rates



E {UK Pounds/US $}

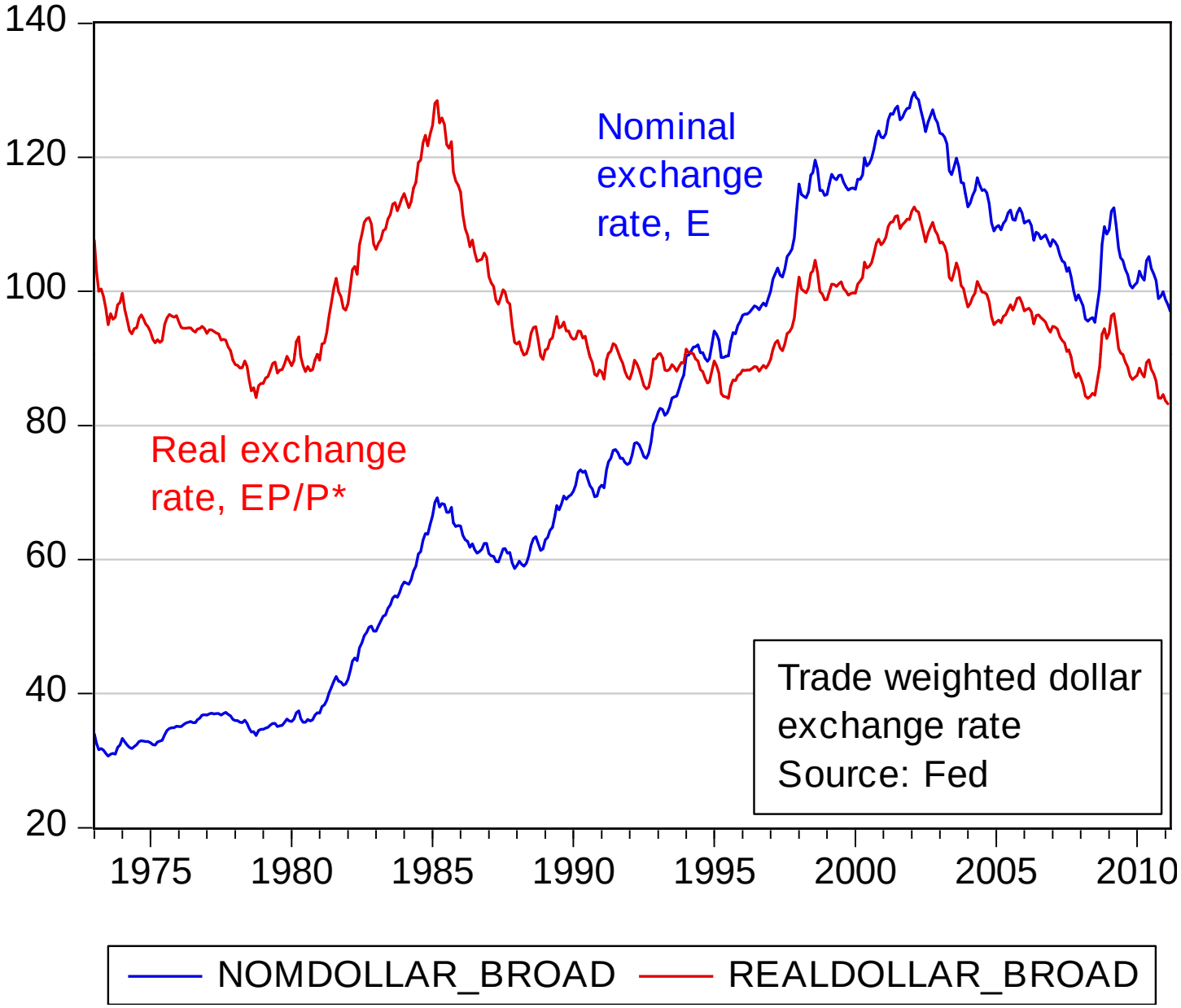
"how many UK pounds It takes to buy a single US dollar"

ε {UK widgets/US widget}

"how many UK widgets it takes to buy a single US widget"

Corrected graph 4/13/11

Exchange Rate Indices



18-2 Openness in Financial Markets

•The purchase and sale of foreign assets implies buying or selling foreign currency—sometimes called foreign exchange.

•Openness in financial markets allows:

- Financial investors to diversify -- to hold both domestic and foreign assets and speculate on foreign interest rate movements.

- Allows countries to run trade surpluses and deficits. A country that buys more than it sells must pay for the difference by borrowing from the rest of the world.

The Balance of Payments

•The balance of payments account summarizes a country's transactions with the rest of the world.

•Transactions above the line are current account transactions. Transactions below the line are capital account transactions.

18-2 Openness in Financial Markets

The Balance of Payments

- The balance of payments account summarizes a country's transactions with the rest of the world.

- Transactions above the line are current account transactions. Transactions below the line are capital account transactions.

- The current account balance and the capital account balance should be equal, but because of data gathering errors they don't. For this reason, the account shows a statistical discrepancy.

18-2 Openness in Financial Markets

The Balance of Payments

Table 18-3 The U.S. Balance of Payments, 2006 (in billions of U.S. dollars)

Current Account		
Exports	1,436	
Imports	2,200	
Trade balance (deficit = –) (1)		-763
Investment income received	620	
Investment income paid	629	
Net investment income (2)		-9
Net transfers received (3)		-84
Current account balance (deficit = -) (1) + (2) + (3)		-856
~~Capital~~ [Financial] Account		
Increase in foreign holdings of U.S. assets (4)	1,764	
Increase in U.S. holdings of foreign assets (5)	1,049	
Capital account balance (deficit = -) (4) – (5)		715
Statistical discrepancy		141

Under the new classification, the "Capital account" is now the "Financial Account" (4/19/2011)

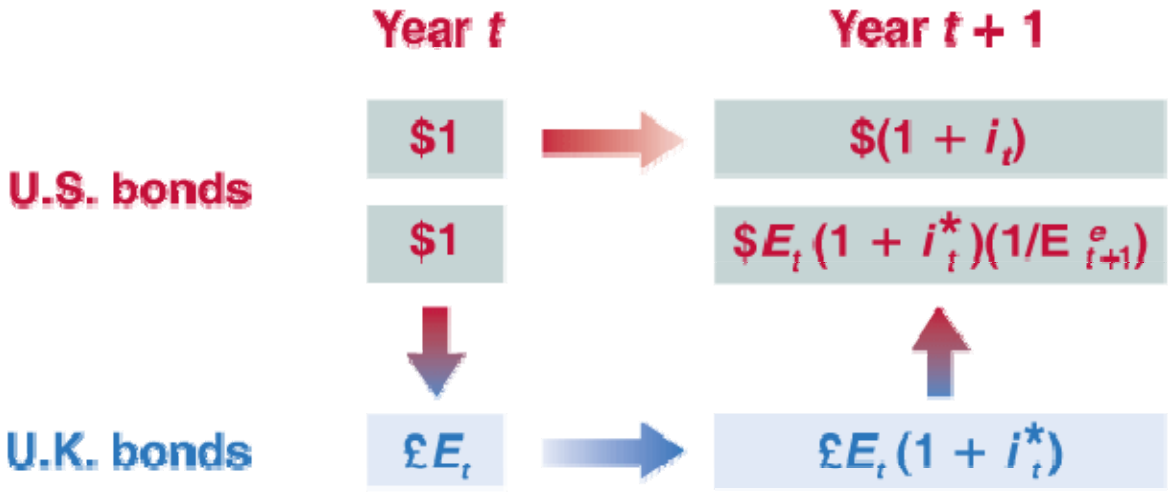
18-2 Openness in Financial Markets

The Choice between Domestic and Foreign Assets

•The decision whether to invest abroad or at home depends not only on interest rate differences, but also on your expectation of what will happen to the nominal exchange rate.

Figure 18 - 6

Expected Returns from Holding One-Year U.S. Bonds or One-Year U.K. Bonds



18-2 Openness in Financial Markets

The Choice between Domestic and Foreign Assets

If both U.K. bonds and U.S. bonds are to be held, they must have the same expected rate of return, so that the following arbitrage relation must hold:

$$(1 + i_t) = (E_t)(1 + i_t^*)\left(\frac{1}{E_{t+1}^e}\right)$$

Rearranging the equation, we obtain the **uncovered interest parity relation**, or **interest parity condition**:

$$(1 + i_t) = (1 + i_t^*)\left(\frac{E_t}{E_{t+1}^e}\right)$$

Ignores transactions costs, and ignores risk.

18-2 Openness in Financial Markets

Interest Rates and Exchange Rates

•The relation between the domestic nominal interest rate, the foreign nominal interest rate, and the expected rate of depreciation of the domestic currency is stated as:

$$(1 + i_t) = \frac{(1 + i_t^*)}{[1 + (E_{t+1}^e - E_t)/E_t)]}$$

A good approximation of the equation above is given by:

$$i_t \approx i_t^* - \frac{E_{t+1}^e - E_t}{E_t}$$

18-2 Openness in Financial Markets

Interest Rates and Exchange Rates

$$i_t \approx i^*_t - \frac{E^e_{t+1} - E_t}{E_t}$$

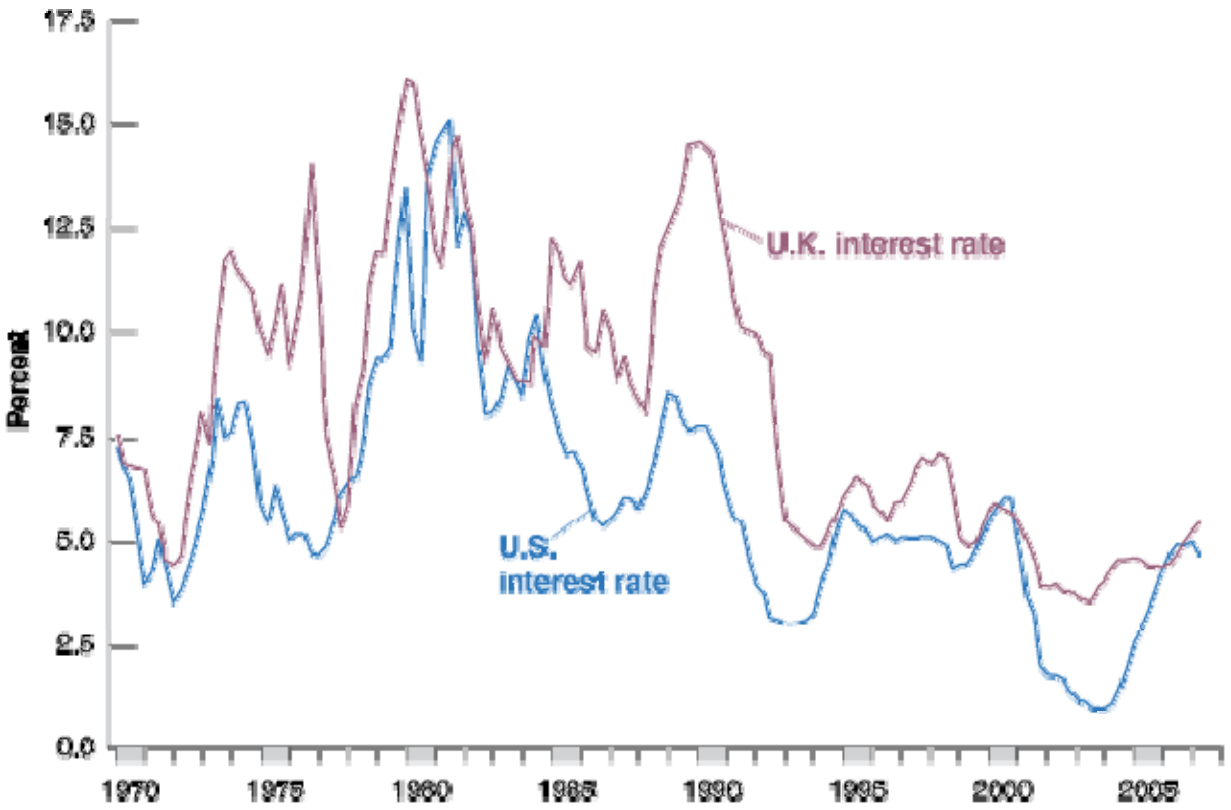
•This is the relation you must remember: Arbitrage implies that the domestic interest rate must be (approximately) equal to the foreign interest rate plus the expected depreciation rate of the domestic currency.

If $E^e_{t+1} = E_t$, then $i_t = i^*_t$

18-2 Openness in Financial Markets

Interest Rates and Exchange Rates

Figure 18 - 7

Three-Month Nominal Interest Rates in the United States and in the United Kingdom since 1970

U.S. and U.K. nominal interest rates have largely moved together over the past 38 years.