LECTURE TEN - PART THREE

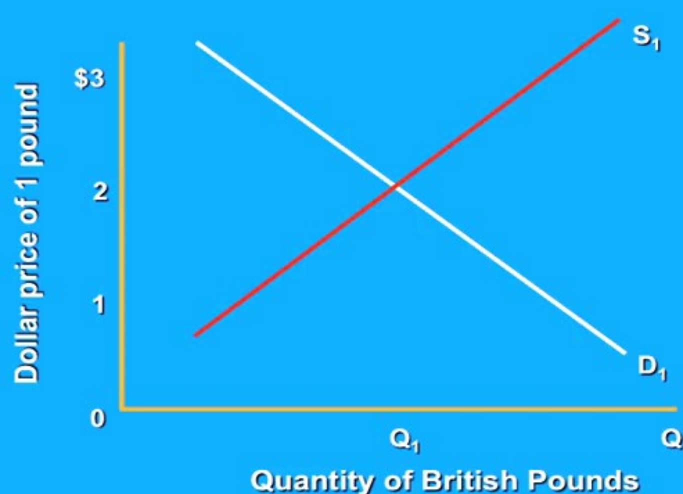
Exchange Rates

Key Definition

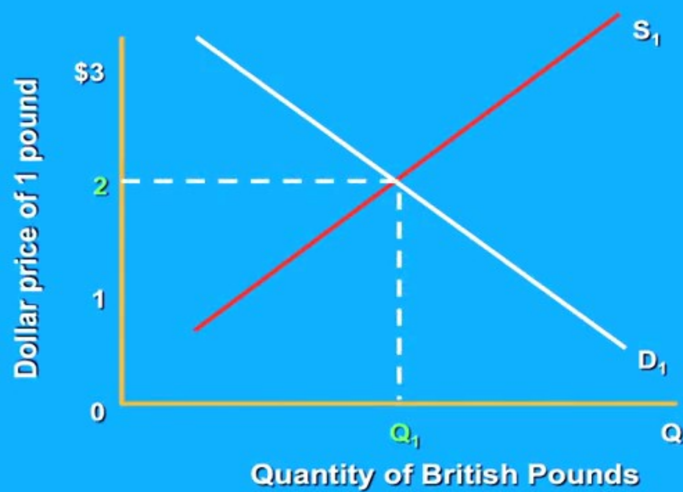
Exchange Rate: The rate at which one nation's currency can be traded for another nation's currency.

Exchange Rate Basics

- Exchange rates are quoted by currency pairs and therefore are relative values.
- 12.68 Mexican Pesos = One U.S. Dollar
- One Swiss Franc = 0.70 British Pounds Sterling



- **Equilibrium Exchange Rate:** Intersection of demand for pounds D_1 and supply of pounds S_1.
- **Question:** What is the equilibrium exchange rate?



Equilibrium Exchange Rate
Two U.S. Dollars For One British Pound

Exchange Rate Terminology

- Exchange rates rise and fall over time.
- A country's currency that gains in value relative to another is said to appreciate.
- If a country's currency loses value relative to another, it depreciates.

Question
Suppose the U.S. dollar exchanges today for 1.2 euros but next year exchanges for 1.5 euros. Has it appreciated or depreciated?

The Answer!

- In this case, one dollar can buy more Euros so it has risen in value and therefore appreciated.
- In contrast, if the exchange rate falls to one euro for one dollar, the dollar buys fewer euros and therefore has depreciated.

Question
What are some of the reasons currencies appreciate or depreciate?

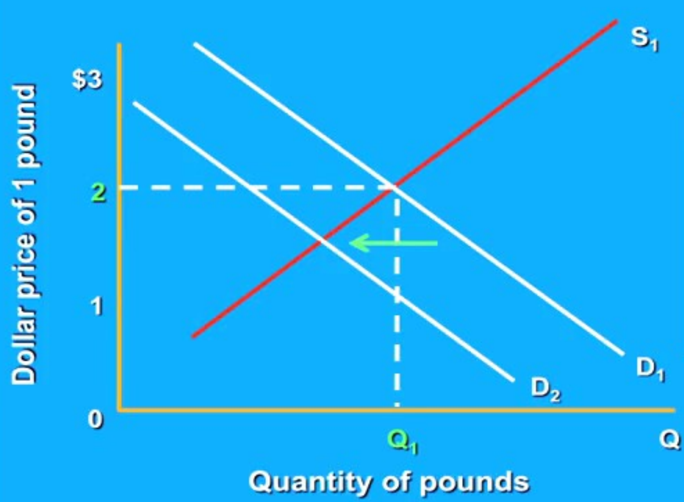
Five Reasons Exchange Rates Move

1. Differing rates of GDP growth between countries.
2. Differing rates of inflation between countries.
3. A change in real relative interest rates between countries.
4. A change in tastes.
5. Currency speculation.

#1: Differing Rates Of GDP Growth

- Faster GDP growth in one country like Great Britain relative to another country like the U.S. will typically lead to faster income growth.
- Faster British income growth means British consumers will increase their purchases of U.S. imports.

Question
Which currency do you think will appreciate relative to the other – the English pound or the U.S. dollar?



1. U.S. recession
2. U.S. income falls
3. U.S. buys fewer British imports
4. U.S. demand for pounds decreases
5. Dollar appreciates

#2: Differing Rates Of Inflation

- Suppose the rate of inflation in Canada is higher than in Europe.

> Question
> Will the Canadian dollar appreciate or depreciate relative to the Euro?

The Answer!

- In this case, the Canadian dollar will <u>depreciate</u> relative to the Euro.
- This is because exchange rates in the <u>currency</u> markets must reflect <u>real</u>, inflation-adjusted price differences in the <u>goods</u> markets.

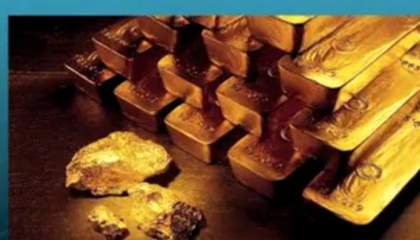
Exchange Rates Must Adjust For Differing Rates of Inflation

- Suppose inflation raises the actual or nominal price of an auto made in Canada relative to an identical auto made in Europe.
- In this case, there must be a corresponding adjustment in the exchange rate so that the real, inflation-adjusted prices of the two autos stay the same.

Key Concept
Economists refer to this as “The Law of One Price.”

Historical Note

- Differing rates of inflation played a key role in the downfall of the “gold standard.”
- The gold standard was a key linchpin of the international monetary system for over sixty years.



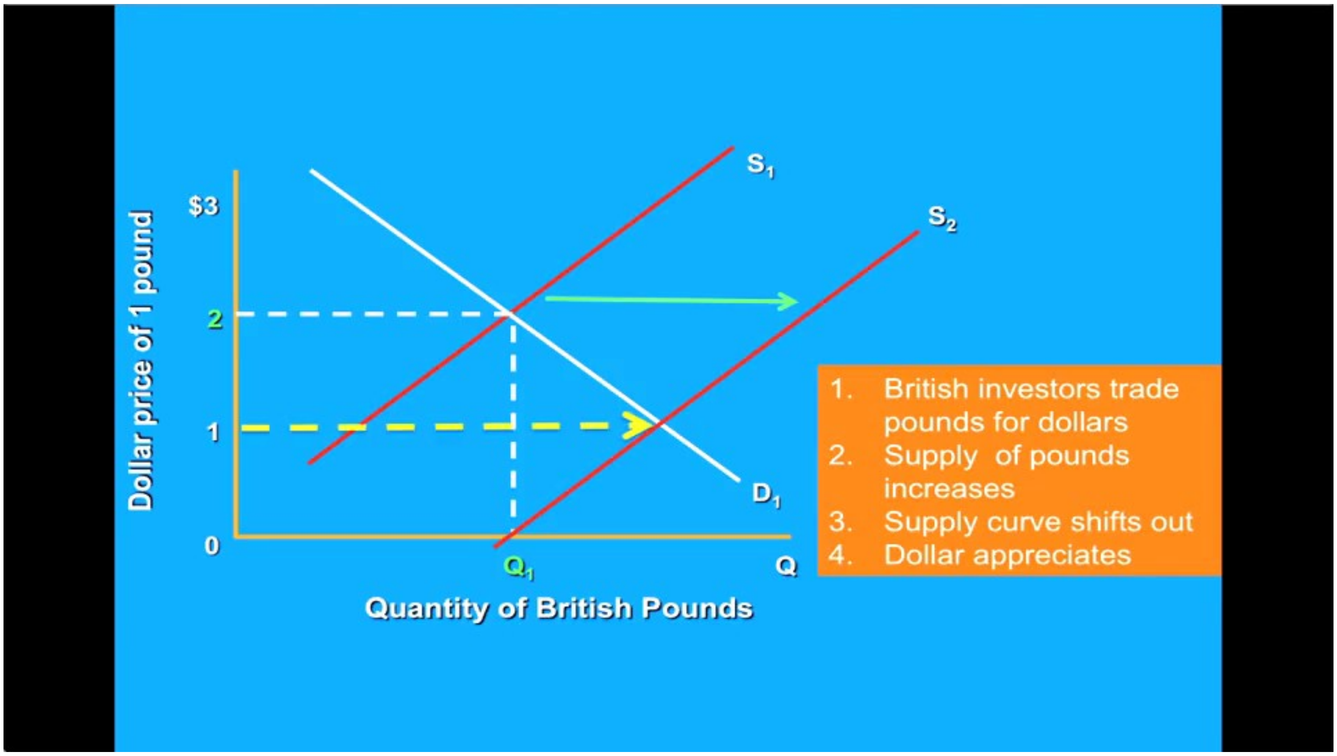
#3: Change In Relative Interest Rates

- Suppose the U.S. Federal Reserve raises interest rates while the Bank of England takes no such action.
- In this case, U.S. interest rates have risen relative to those in England.

Question
Which currency will appreciate relative to the other – the dollar or the pound -- and why?

The Adjustment Process

- British investors respond to a rise in American interest rates by shifting more of their investment funds to America.
- For example, they may wish to buy U.S. government bonds at the higher interest rates.
- To do this, they must first sell some of their domestic investments and then exchange pounds for dollars in global currency markets.



#4: A Change In Tastes

- Suppose that Japanese autos decline in popularity in the United States because of increased concerns over their safety.

Question
Will the Japanese yen appreciate or depreciate relative to the dollar?

The Answer

- Clearly, the Japanese yen will depreciate relative to the U.S. dollar.
- As U.S. consumers reduce their purchases of Japanese autos, this reduces their demand for yen.

#5: Speculation

- Suppose currency traders believe the Brazilian central bank is going to soon raise interest rates to fight inflation.

Question

Will currency traders be more likely to buy or sell the Brazilian currency, the *real*, before the Central Bank makes its forecasted move?

The Answer!

- If Brazil's central bank raises interest rates, this attracts more foreign investment into Brazil.
- This, in turn, boosts the demand for the Brazilian currency, the real.
- Therefore, a currency speculator is likely to buy the Brazilian real before the move.
- In effect, the speculator is betting the Brazilian real will appreciate!