CHAPTER 9 LECTURE - EXCHANGE RATES AND THE BALANCE OF PAYMENTS

The Foreign Exchange Market

- **Exchange Rates -** The price at which one currency exchanges for another is called a **foreign exchange rate**.
- A fall in the value of one currency in terms of another currency is called **currency depreciation**.
- A rise in value of one currency in terms of another currency is called **currency appreciation**.
- **An Exchange Rate Is a Price -** An exchange rate is the price—the price of one currency in terms of another.
- Like all prices, an exchange rate is determined in a market—the foreign exchange market.

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The Foreign Exchange Market

- To buy goods and services produced in another country we need money of that country.
- Foreign bank notes, coins, and bank deposits are called **foreign currency**.
- We get foreign currency in the foreign exchange market.
- We get foreign currency and foreigners get U.S dollars in the foreign exchange market.
- The **foreign exchange market** is the market in which the currency of one country is exchanged for the currency of another.

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The Foreign Exchange Market

The Demand for One Money Is the Supply of Another Money

- When people who are holding one money want to exchange it for U.S. dollars, they demand U.S. dollars and they supply that other country's money.
- So the factors that influence the demand for U.S. dollars also influence the supply of Canadian dollars, E.U. euros, U.K. pounds, and Japanese yen.
- And the factors that influence the demand for another country's money also influence the supply of U.S. dollars.

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The Foreign Exchange Market

Demand in the Foreign Exchange Market - quantity of U.S. dollars that traders plan to buy in the foreign exchange market during a given period depends on

1. The exchange rate
2. World demand for U.S. exports
3. Interest rates in the United States and other countries
4. The expected future exchange rate

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The Foreign Exchange Market

The Law of Demand for Foreign Exchange

- The demand for dollars is a *derived demand*.
- People buy U.S. dollars so that they can buy U.S.-produced goods and services or U.S. assets.
- Other things remaining the same, the higher the exchange rate, the smaller is the quantity of U.S. dollars demanded in the foreign exchange market.

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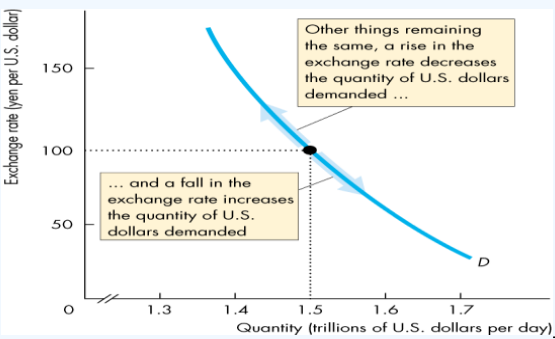
The Foreign Exchange Market

The Demand Curve for U.S. Dollars



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The Foreign Exchange Market

Supply in the Foreign Exchange Market

- The quantity of U.S. dollars supplied in the foreign exchange market is the amount that traders plan to sell during a given time period at a given exchange rate.
- This quantity depends on many factors but the main ones are

1. The exchange rate
2. U.S. demand for imports
3. Interest rates in the United States and other countries
4. The expected future exchange rate

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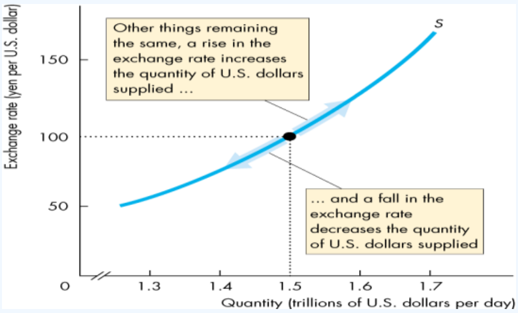
The Foreign Exchange Market

Supply curve of U.S. dollars in the foreign exchange market.



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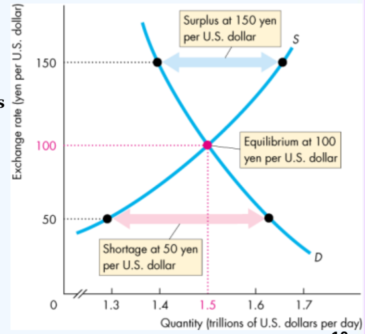
Market Equilibrium

Market Equilibrium is a rate of 100 yen per dollar.

- **If the exchange rate is too low, a shortage of U.S. dollars drives it up.**
- **The market is pulled (quickly) to the equilibrium exchange rate at which there is neither a shortage nor a surplus**



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Exchange Rate Fluctuations

Changes in the Demand for U.S. Dollars

- A change in any influence on the quantity of U.S. dollars that people plan to buy, other than the exchange rate, brings a change in the demand for U.S. dollars.
- These other influences are
  - World demand for U.S. exports
  - U.S. interest rate relative to the foreign interest rate
  - The expected future exchange rate

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Exchange Rate Fluctuations

World Demand for U.S. Exports

- At a given exchange rate, if world demand for U.S. exports increases, the demand for U.S. dollars increases and the demand curve for U.S. dollars shifts rightward.

U.S. Interest Rate Relative to the Foreign Interest Rate

- The U.S. interest rate minus the foreign interest rate is called the **U.S. interest rate differential**.
- If the U.S. interest differential rises, the demand for U.S. dollars increases and the demand curve for U.S. dollars shifts rightward.

The Expected Future Exchange Rate

- At a given current exchange rate, if the expected future exchange rate for U.S. dollars rises,
- the demand for U.S. dollars increases and the demand curve for dollars shifts rightward.

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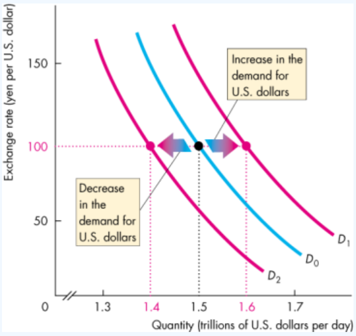
Exchange Rate Fluctuations

The figure shows how the demand curve for U.S. dollars shifts in response to changes in

- U.S. exports
- The U.S. interest rate differential
- The expected future exchange rate



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Exchange Rate Fluctuations

Changes in the Supply of Dollars

- A change in any influence on the quantity of U.S. dollars that people plan to sell, other than the exchange rate, brings a change in the supply of dollars.
- These other influences are
  - U.S. demand for imports
  - U.S. interest rates relative to the foreign interest rate
  - The expected future exchange rate

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Exchange Rate Fluctuations

U.S. Demand for Imports

- At a given exchange rate, if the U.S. demand for imports increases, the supply of U.S. dollars on the foreign exchange market increases and the supply curve of U.S. dollars shifts rightward.

U.S. Interest Rate Relative to the Foreign Interest Rate

- If the U.S. interest differential rises, the supply for U.S. dollars decreases and the supply curve of U.S. dollars shifts leftward.

The Expected Future Exchange Rate

- At a given current exchange rate, if the expected future exchange rate for U.S. dollars rises,
- the supply of U.S. dollars decreases and the demand curve for dollars shifts leftward.

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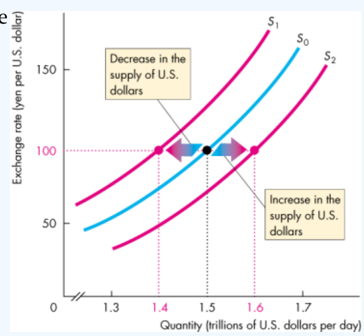
Exchange Rate Fluctuations

The figure shows how the supply curve of U.S. dollars shifts in response to changes in

- U.S. demand for imports
- The U.S. interest rate differential
- The expected future exchange rate



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CHAPTER 9 LECTURE - EXCHANGE RATES AND THE BALANCE OF PAYMENTS

Exchange Rate Fluctuations

Changes in the Exchange Rate

- If demand for U.S. dollars increases and supply does not change, the exchange rate rises.
- If demand for U.S. dollars decreases and supply does not change, the exchange rate falls.
- If supply of U.S. dollars increases and demand does not change, the exchange rate falls.
- If supply of U.S. dollars decreases and demand does not change, the exchange rate rises.

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Exchange Rate Policy

Three possible exchange rate policies are

- Flexible exchange rate
- Fixed exchange rate
- Crawling peg

- **Flexible Exchange Rate** - a flexible exchange rate policy is one that permits the exchange rate to be determined by demand and supply with *no* direct intervention in the foreign exchange market by the central bank.
- **Fixed Exchange Rate** - a fixed exchange rate policy is one that pegs the exchange rate at a value decided by the government or central bank and is achieved by direct intervention in the foreign exchange market to block unregulated forces of demand and supply. A fixed exchange rate requires active intervention in the foreign exchange market.

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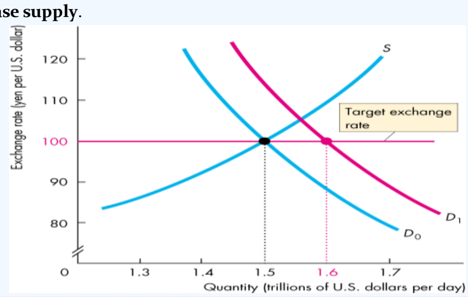
Exchange Rate Policy

- **The Fed can intervene in the foreign exchange market to keep the exchange rate close to a target rate.**
- **Suppose that the target is 100 yen per U.S. dollar.**
- **If the demand for U.S. dollars increases, the Fed sells U.S. dollars to increase supply.**



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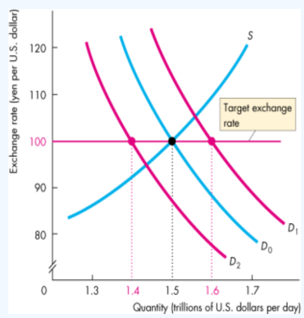
Exchange Rate Policy

- If demand for the U.S. dollar decreases, the Fed buys U.S. dollars to decrease supply.
- Persistent intervention on one side of the foreign exchange market cannot be sustained.



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Purchasing Power Parity

- An economic theory that estimates the amount of adjustment needed on the exchange rate between countries in order for the exchange to be equivalent to each currency's purchasing power.
  http://www.travelex.com/big-mac-index-explained/
  http://cdn.static-economist.com/sites/default/files/imagecache/original-size/images/print-edition/20140125_FNC217_1.png

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Purchasing Power Parity and Baseball Bats

First suppose that one U.S. Dollar (USD) is currently selling for ten Mexican Pesos (MXN) on the exchange rate market. In the United States wooden baseball bats sell for $40 while in Mexico they sell for 150 pesos.

Since 1 USD = 10 MXN, then the bat costs $40 USD if we buy it in the U.S. but only 15 USD if we buy it in Mexico. Clearly there's an advantage to buying the bat in Mexico, so consumers are much better off going to Mexico to buy their bats. If consumers decide to do this, we should expect to see three things happen:

American consumers desire Mexico Pesos in order to buy baseball bats in Mexico. So they go to an exchange rate office and sell their American Dollars and buy Mexican Pesos.

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The demand for baseball bats sold in the United States decreases, so the price American retailers charge goes down.

The demand for baseball bats sold in Mexico increases, so the price Mexican retailers charge goes up.

Eventually these three factors should cause the exchange rates and the prices in the two countries to change such that we have purchasing power parity.

If the U.S. Dollar declines in value to 1 USD = 8 MXN, the price of baseball bats in the United States goes down to $30 each and the price of baseball bats in Mexico goes up to 240 pesos each, we will have purchasing power parity. You can show that 1 Bat = $30USD = 240MNX

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Trade - Looking at the Data

https://www.census.gov/foreign-trade/data/index.html

http://useconomy.about.com/od/tradepolicy/p/Imports-Exports-Components.htm

https://www.cia.gov/library/publications/the-world-factbook/fields/2050.html

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