Exchange Rates and the Foreign Exchange Market

Definitions of Exchange Rates

- Exchange rates are quoted as foreign currency per unit of domestic currency or domestic currency per unit of foreign currency.

- Exchange rates allow us to denominate the cost or price of a good or service in a common currency.
  - How much does a Nissan cost? $50,000

Table Exchange Rate Quotations

CURRENCIES

Jan 19	Currency	DOLLAR Closing Mid	DOLLAR Day's Change	EURO Closing Mid	EURO Day's Change	POUND Closing Mid	POUND Day's Change
Argentina	Argentine Peso	15.9795	0.0015	16.9597	−0.1293	19.6613	−0.0603
Australia	Australian Dollar	1.3250	0.0031	1.4061	−0.0076	1.6303	−0.0014
Bahrain	Bahrainin Dinar	0.3771	0.0000	0.4001	−0.0030	0.4639	−0.0014
Bolivia	Bolivian Boliviano	6.9300	-	7.3538	−0.0568	8.5267	−0.0269
Brazil	Brazilian Real	3.2087	−0.0094	3.4049	−0.0363	3.9480	−0.0241
Canada	Canadian Dollar	1.3327	0.0233	1.4142	0.0139	1.6398	0.0235
Chile	Chilean Peso	661.4250	2.0350	701.8740	−3.2428	813.8212	−0.0597
China	Chinese Yuan	6.8766	0.0424	7.2971	−0.0110	8.4610	−0.0256
Colombia	Colombian Peso	2942.8500	7.4950	3122.8189	−16.0953	3620.9004	−2.1895
Costa Rica	Costa Rican Colon	553.0400	3.3600	586.8608	−0.9380	680.4637	1.9971
Czech Republic	Czech Koruna	25.4634	0.1957	27.0206	0.0007	31.3303	0.1426
Denmark	Danish Krone	7.0073	0.0534	7.4358	−0.0003	8.6218	0.0387
Egypt	Egyptian Pound	18.9085	0.0350	20.0648	−0.1175	23.2651	−0.0303
Hong Kong	Hong Kong Dollar	7.7569	0.0008	8.2313	−0.0626	9.5441	−0.0291

Depreciation and Appreciation

- **Depreciation**
  - A depreciated currency is **less valuable** (less expensive) and therefore can be exchanged for (can buy) a smaller amount of foreign currency.
  - ฿30/ $ → ฿35/ $ means that
  - The dollar has appreciated relative to the baht: it is now more valuable.

Eg. $1/€ → $1.20/€ means that

- **Appreciation** is an increase in the value of a currency relative to another currency.
  - An appreciated currency is **more valuable** (more expensive) and therefore can be exchanged for (can buy) a larger amount of foreign currency.
  - ฿30/ $ → ฿28/ $ means that the baht has appreciated relative to the dollar. It now takes only ฿28 to buy one dollar, so that the baht is more valuable.
  - The dollar has depreciated relative to the baht: it is now less valuable.

Eg. $1/€ → $0.90/€ means that

- A depreciated currency is less valuable, and therefore it can buy fewer foreign produced goods that are denominated in foreign currency.
- A depreciated currency means that

- An appreciated currency is more valuable, and therefore it can buy more foreign produced goods that are denominated in foreign currency.
- An appreciated currency means that imports are less expensive and domestically produced goods and exports are more expensive.

Foreign Exchange Markets

- The set of markets where foreign currencies and other assets are exchanged for domestic ones
  - Institutions buy and sell deposits of currencies or other assets for investment purposes.
- Most transactions (85% in April 2010) exchange foreign currencies for U.S. dollars.

The participants:

1. Commercial banks and other depository institutions:

2. Non-bank financial institutions
3. Non-financial businesses
4. Central banks

Arbitrage

- If the euro were to sell for $1.1 in New York and $1.2 in London

- The integration of financial markets implies that there can be no significant differences in exchange rates across locations.

Exchange rate

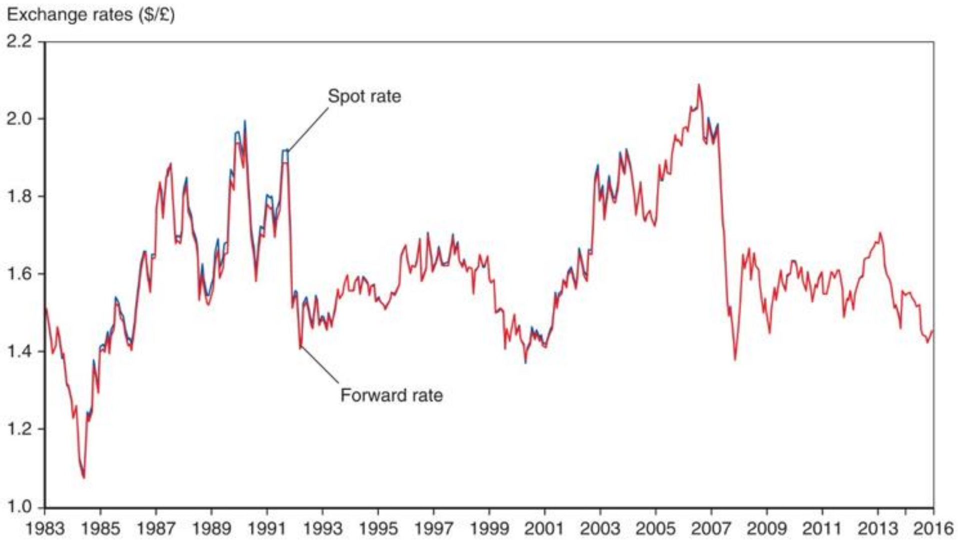
Spot Rates and Forward Rates

- **Spot rates** are exchange rates for currency exchanges "on the spot," or when trading is executed in the present.

- **Forward rates** are exchange rates for currency exchanges that will occur at a future ("forward") date.

- Forward dates are typically 30, 90, 180, or 360 days in the future.
- Rates are negotiated between two parties in the present, but the exchange occurs in the future.

Figure 14.1 Dollar/Pound Spot and Forward Exchange Rates, 1983–2016



Source: Datastream. Rates shown are 90-day forward exchange rates and spot exchange rates, at end of month.

Spot and Forward markets

Forward premium / Forward discount

So, USD having a forward premium to THB is equivalent to THB having a forward discount to USD.

A difference in spot and forward rates is often measured in terms of swap premium, which is conventionally quoted as

1. Satang per US Dollar
2. % per year

Calculating a swap premium as a percentage of spot rate facilitates a comparison of the derived premium to prevailing interest rate.

Example: To calculate a forward premium, if we use a 3-month forward rate (1$ = 45.33฿) and a spot rate (1$ = 45.29฿), the result yields

Example: To calculate a forward premium, if we use a 6-month forward rate (1$ = 45.295฿) and a spot rate (1$ = 45.39฿), the result yields

Generally, if the difference between spot and forward rates is not specified as either premium or discount, such difference can be termed as "forward difference" denoted by

Other Methods of Currency Exchange

- **Foreign exchange swaps**: a combination of a spot sale with a forward repurchase.
  - For example, suppose Toyota receives ฿1 million from sales, plans to use it to pay its suppliers in three months, but wants to invest the money in dollar bonds in the meantime.
  - Swaps allow parties to meet each other's needs for a temporary amount of time and often cost less in fees than separate transactions.
- **Futures contracts**: a contract designed by a **third party** for a **standard** amount of foreign currency delivered/received on a **standard** date.
  - Contracts can be bought and sold in markets, and only the current owner is obliged to fulfill the contract.

- **Options contracts**: a contract designed by a **third party** for a **standard** amount of foreign currency delivered/received on or before a **standard** date.
  - Contracts can be bought and sold in markets.
  - A contract gives the owner the option, but not obligation, of buying or selling currency if the need arises.