

Course: Foundations of Economics

Lecture 10: Exchange rates and Balance of Payments

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Source: Getty Images

AGENDA

- Define Current Account, Capital/Financial Account
- How can one use the BOP sub-accounts to make financial decisions?
- Exchange rates regimes
- Exchange rates and Balance of Payments

THE BALANCE OF PAYMENTS

- The *balance of payments* is the record of a country's transactions in goods, services, and assets with the rest of the world; also the record of a country's sources (supply) and uses (demand) of foreign exchange.
- *Foreign exchange* is simply all currencies other than the domestic currency of a given country.

THE BALANCE OF PAYMENTS

- ***Balance of Payments (BOP):***

measures all international economic transactions between residents & foreign residents.

- Monetary and fiscal policy must take the BOP into account at the national level
- BOP data may be important
 - Indicates pressure on exchange rate
 - May signal imposition/ removal of controls over payments, dividends, interest.
 - Helps forecast country's market potential

THE BALANCE OF PAYMENTS

The balance of payments records all transactions between a country and the rest of the world

- **Current Account**
 - Trade in goods and services
 - Current transfers and other income
- **Capital Account** shows international flows of transfer payments relating to capital items
 - **Financial Account** records international purchases and sales of financial assets.

FOR EXAMPLE...

- **BOP transactions (US side)**
 - Daimler-Chrysler purchases manufacturer in Chicago.
 - GM China pays dividends to parent in US.
 - An American tourist purchases a necklace in India.
 - A Mexican lawyer purchases US bond via investment broker in Cleveland.
- **Rule of thumb:** “follow the cash flow”

THE BALANCE OF PAYMENT TRANSACTIONS RECORDING

	Sources of Foreign Currency +	Use of foreign currency -
Current account	Export (X)	Import (M)
Capital account	Foreigners buying domestic assets	Locals buying foreign assets
Reserves	Reduction in reserves	Increase in reserves

BALANCE OF PAYMENTS SUMMARY

A. Current Account

- A. Net exports/imports goods&services (Balance of Trade)
- B. Net Income (investment income from direct portfolio investment plus employee compensation)
- C. Net transfers (sums sent home by migrant abroad)

B. Capital Account

Capital transfers related to purchase and sale of fixed assets such as real estate

C. Financial Account

- A. Net foreign direct investment
- B. Net portfolio investment
- C. Other financial items

Basic Balance = A+B+C

D. Net Errors and Omissions

Missing data such as illegal transfers

Overall Balance = A+B+C+D

E. Reserves and Related Items

Changes in official monetary reserves including gold and foreign exchange reserves

$\Sigma (A:E) = \text{Overall Balance}$

BOP ACCOUNTING

- The BOP must balance
- How to measure international economic activity?
 - Is it an international economic transaction?
 - How do flow of goods/services/assets/money translate in debits & credits?
 - Bookkeeping procedures for BOP?
- Mistakes are common...
- BOP is **a flow statement**, not a stock statement.
 - Main transactions in BOP:
 - Exchange of real assets.
 - Exchange of financial assets.

THE CURRENT ACCOUNT

- Goods Trade or **Balance of Trade (BOT)** – export/import of goods.
- Services Trade – export/import of services (financial, construction, and tourism).
- Income – predominately **current income** associated with investments made in previous periods, + wages & salaries paid to non-resident workers.
- Current Transfers – financial settlements due to change in ownership of real resources or financial items. Any transfer b/n countries which is one-way, a gift or a grant.
- CA typically dominated by export/import of goods, for this reason **Balance of Trade (BOT)** is widely quoted.

FOR EXAMPLE...

- Trade balance

- Debit:** Sun Microsystems buys LCDs from Hong Kong.

- Credit:** Singapore Airlines buys Boeing jet.

- Trade in services

- Debit:** American rents an apartment in Singapore.

- Credit:** TUI - Germany places an ad in the NYT.

- Income payments

- Debit:** Honda US pays dividend to Honda Japan.

- Credit:** Bank Austria pays salary to rep in NY office.

- Unilateral Current Transactions

- Debit:** Peace Corps pays US volunteer teachers in Bosnia.

- Credit:** TotalFina pays tuition of employee for Stern MBA.

THE CURRENT ACCOUNT

US Current Account, 2015-2017 (US\$ bn)

	<u>2015</u>	<u>2016</u>	<u>2017</u>
Goods exports	682	672	687
Goods imports	(876)	(917)	(1030)
Goods trade balance (BOT)	(194)	(245)	(343)
Services exports	255	261	270
Services imports	(167)	(183)	(191)
Services trade balance	88	78	79
Income receipts	257	258	276
Income payments	(251)	(265)	(295)
Income balance	6	(7)	(19)
Current transfers, credits	8	9	9
Current transfers, debits	(49)	(53)	(57)
Net transfers	(41)	(44)	(48)

THE CAPITAL/FINANCIAL ACCOUNT

- **Capital account:** transfers of fixed assets, real estate, acquisitions/disposal of non-produced/non-financial assets
- **Financial account:** three components; classified by degree of control,
 - Direct Investment – Net balance of capital which is dispersed from and into US for the purpose of exerting control over assets.
 - E.g. US company acquires foreign company stake (-)
 - Foreign company acquires US company stake (+)
 - foreign direct investment (FDI): 10%+ of voting shares acquired.

THE CAPITAL/FINANCIAL ACCOUNT

- Portfolio Investment – Net balance of capital which flows in/out of US but does not reach 10% ownership.
 - No voting or control rights over the asset.
 - Purchase/sale of equity securities.
 - Purchase/sale of debt securities.
 - E.g. T-bill purchases by foreigners (net portfolio investment)
 - E.g. US\$ debt issues by foreign companies/ governments.
 - Risk/Return motivated.
 - Far more volatile than FDI.
- Other Investment Assets/Liabilities – Short & long-term trade credits, cross-border loans, currency & bank deposits, & other accounts receivable and payable in cross-border trade.

DIRECT INVESTMENT CONCERNS

- How much shall the country control the direct investments?
 - What can foreigners buy?
 - Land, real estate sale to foreigners limited (Eastern Europe)
 - Certain stock can not be purchased (China, Russia)
 - How shall profit be distributed?
 - Profit drain?
 - Many foreign firms in US reinvest most of their profits.

THE CAPITAL/FINANCIAL ACCOUNT

US Capital/Financial Account, 2015-2017 (billions of US\$)

Direct investment abroad	(105)	(146)	(151)
Direct investment in the US	106	186	276
Net direct investment	1	40	125
<i>Portfolio Investment</i>			
Assets purchased by US residents, net	(119)	(136)	(129)
Assets purchased by foreign residents, net	386	269	342
Net portfolio investment	267	133	213
<i>Other Investment</i>			
Other investment assets	(264)	(47)	(159)
Other investment liabilities	265	27	136
Net other investment	1	(20)	(23)
Financial Account Balance	269	153	315

FOR EXAMPLE

- **Direct Investment**

- **Debit:** Ford builds factory in Australia.
- **Credit:** Ford sells its factory in UK.

- **Portfolio Investment**

- **Debit:** US investor buys BASF stock @ Frankfurt Stock Exchange
- **Credit:** Korean gov't buys US T-bills to hold as forex reserves.

- **Other investment**

- **Debit:** HP deposits \$10m in a bank account in London.
- **Credit:** HP generates accounts receivable in Canada.

THE OTHER ACCOUNTS

- Net Errors and Omissions – Account is used to account for statistical errors and/or untraceable monies within a country
- Official Reserves (ORA) – total reserves held by official monetary authorities within a country.
 - Comprised of major currencies used in international trade and financial transactions, & reserve accounts (SDR) held @ IMF.
 - Important indicator for countries with fixed exchange rate regimes
 - Need to maintain parity rate with official reserves.

EXCHANGE RATES

- An exchange rate (E) is the price of some foreign currency expressed in terms of a home (or domestic) currency.
- An exchange rate is the relative price of two currencies, it may be quoted in either of two ways:
 1. The number of home currency units that can be exchanged for one unit of foreign currency.
 2. The number of foreign currency units that can be exchanged for one unit of home currency.

EXCHANGE RATE ESSENTIALS

- To avoid confusion, we specify which country is the home country and which is foreign.
- When we refer to a particular country's exchange rate, we will quote it in terms of units of home currency per units of foreign currency.
- For example, Uzbekistan's exchange rate with the USD is quoted as Uzbek sums per \$US (or UZS/USD).

Exchange Rates: quotations

Exchange Rate Quotations This table shows major exchange rates as they might appear in the financial media. Columns (1) to (3) show rates on June 30, 2010. For comparison, columns (4) to (6) show rates on June 30, 2009. For example, column (1) shows that on June 30, 2010, one U.S. dollar was worth 1.063 Canadian dollars, 6.081 Danish krone, 0.816 euros, and so on. The euro-dollar rates appear in bold type.

Country (currency)	Currency Symbol	EXCHANGE RATES ON JUNE 30, 2010			EXCHANGE RATES ON JUNE 30, 2009 <i>ONE YEAR PREVIOUSLY</i>		
		(1) Per \$	(2) Per £	(3) Per €	(4) Per \$	(5) Per £	(6) Per €
Canada (dollar)	C\$	1.063	1.590	1.302	1.161	1.913	1.629
Denmark (krone)	DKr	6.081	9.098	7.449	5.309	8.743	7.447
Euro (euro)	€	0.816	1.221	—	0.713	1.174	—
Japan (yen)	¥	88.49	132.39	108.39	96.49	158.90	135.34
Norway (krone)	NKr	6.503	9.729	7.966	6.437	10.600	9.028
Sweden (krona)	SKr	7.782	11.643	9.532	7.748	12.760	10.868
Switzerland (franc)	SFr	1.078	1.613	1.321	1.088	1.791	1.526
United Kingdom (pound)	£	0.668	—	0.819	0.607	—	0.852
United States (dollar)	\$	—	1.496	1.225	—	1.647	1.403

$$E_{\$/\epsilon} = 1.225 = \text{U.S. exchange rate (American terms)}$$

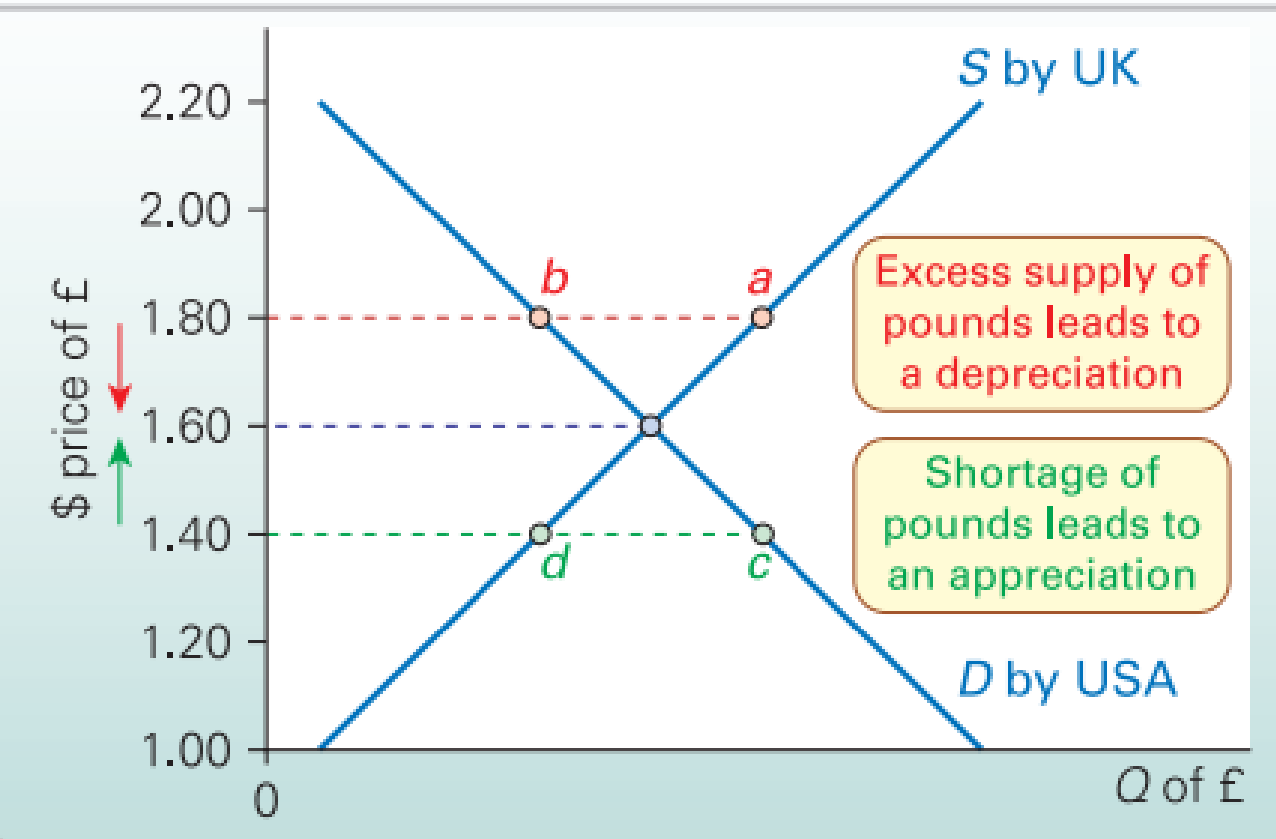
$$E_{\epsilon/\$} = 0.816 = \text{Eurozone exchange rate (European terms)}$$

$$E_{\$/\epsilon} = \frac{1}{E_{\epsilon/\$}} \quad 1.225 = \frac{1}{0.816}$$

Exchange Rate Appreciations and Depreciations

- If one currency buys more of another currency, we say it has experienced an appreciation – its value has *risen, appreciated or strengthened*.
- If a currency buys less of another currency, we say it has experienced a depreciation – its value has *fallen, depreciated, or weakened*.

DETERMINATION OF THE RATE OF EXCHANGE



Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 404.

EXCHANGE RATES DETERMINANTS

- Change in domestic interest rates;
- Inflation rate;
- Change in domestic income;
- Investment prospects;
- Speculation.

EXCHANGE RATES IN PRACTICE

Exchange Rate Regimes: Fixed Versus Floating

Economists group different patterns of exchange rate behavior into categories known as exchange rate regimes.

There are two major regime types – fixed and flexible.

Exchange Rate Regimes: Fixed Versus Floating


- Fixed (or pegged) exchange rate regimes are those in which a country's exchange rate fluctuates in a narrow range (or not at all) against some *base currency* over a sustained period, usually a year or longer.
- Floating (or flexible) exchange rate regimes are those in which a country's exchange rate fluctuates in a wider range, and the government makes no attempt to fix it against any base currency. Appreciations and depreciations may occur from year to year, each month, by the day, or every minute.

FIXED EXCHANGE RATES REGIME

- **Advantages**

- Certainty
- no speculation (if rate is absolutely fixed)
- prevents 'irresponsible' government policies

- **Disadvantages**

- balance of payments deficits can lead to recession
 - possibility of competitive deflation
 - problems of international liquidity
 - inability to adjust to shocks
- 

FREE-FLOATING RATES

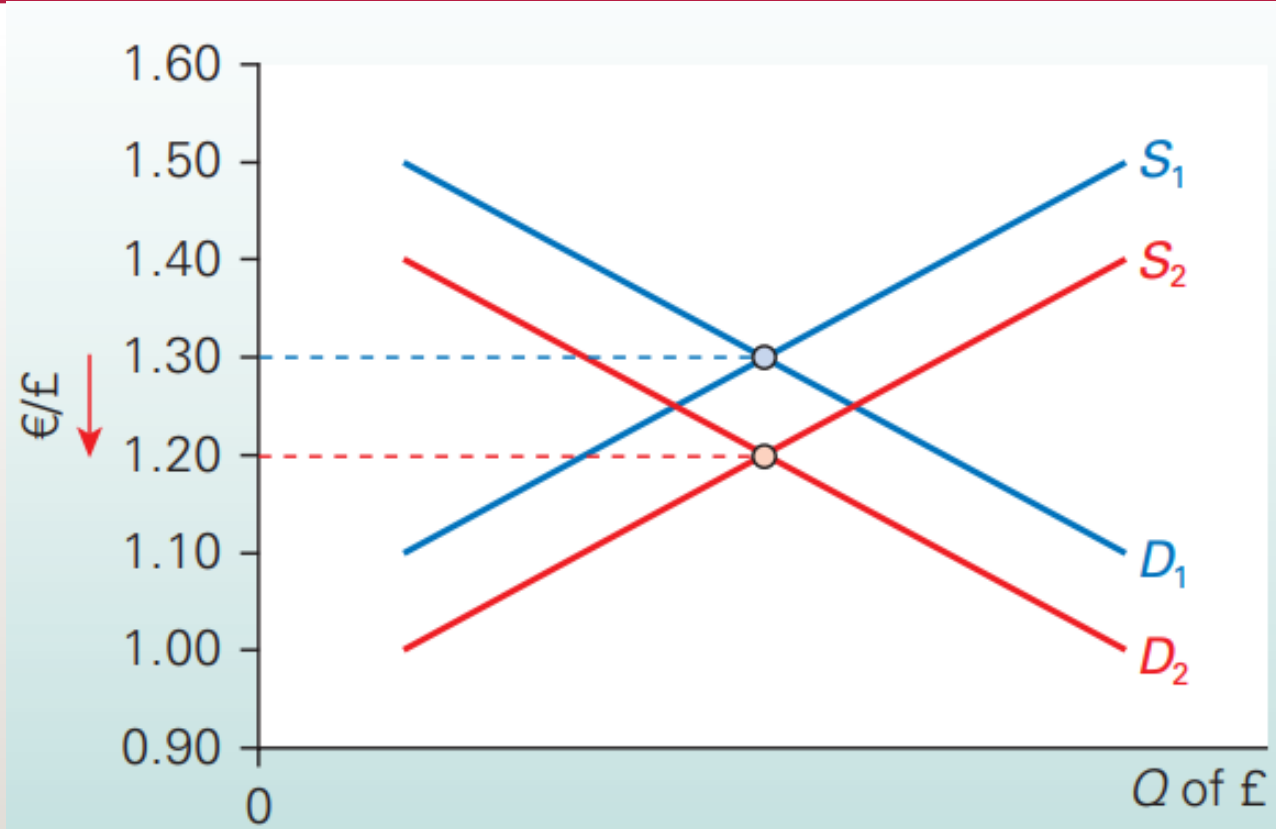
- **Advantages**

- automatic correction
- no problem of international liquidity and reserves
- insulation from external events
- governments free to pursue domestic policy

- **Disadvantages of free-floating rates**

- unstable exchange rates
- speculation
- uncertainty for business
- lack of discipline on economy

FLOATING EXCHANGE RATE: MOVEMENT TO NEW EQUILIBRIUM



Source: Sloman (2016), Essentials of Economics, 7th ed, Prentice Hall, page 404.

THE BOP AND EXCHANGE RATES

$$(X - M) + (CI - CO) + (FI - FO) + FXB = BOP$$

Where:

X = exports of goods and services
M = imports of goods and services

} Current Account Balance

CI = capital inflows
CO = capital outflows

} Capital Account Balance

FI = financial inflows
FO = financial outflows
FXB = official monetary reserves

} Financial Account Balance

THE BOP AND EXCHANGE RATES

- Fixed Exchange Rate Countries
 - Under a fixed exchange rate system, the government bears the responsibility to ensure that the BOP is near zero
- Floating Exchange Rate Countries
 - Under a floating exchange rate system, the government has no responsibility to peg its foreign exchange rate
- Managed Floats
 - Countries operating with a managed float often find it necessary to take action to maintain their desired exchange rate values

TRADE BALANCES AND EXCHANGE RATES

- A country's import and export of goods and services is affected by changes in exchange rates
- The transmission mechanism is in principle quite simple: changes in exchange rates change relative prices of imports and exports, and changing prices in turn result in changes in quantities demanded through the price elasticity of demand
- Theoretically, this is straightforward; in reality global business is more complex

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