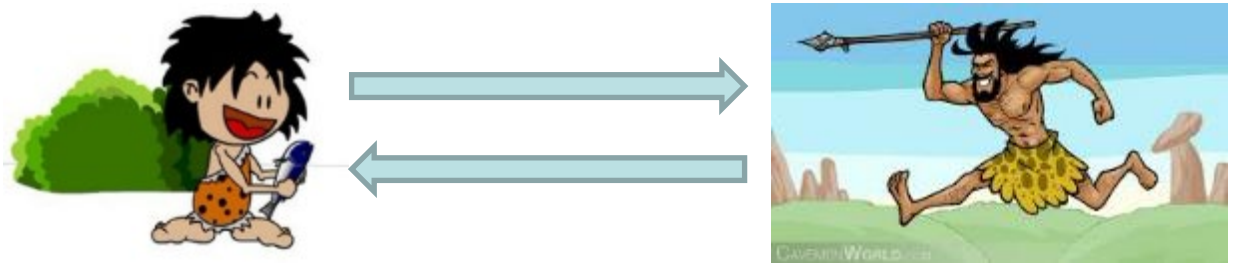
International Financial Market

Learning Objectives

- Money and monetary systems
- Currency exchange regimes
- Global financial institutions (IMF, WB)
- Markets for international borrowing/lending/investing
- FOREX market
- FOREX rate determinations

Origin of money

- **Transactions: accidental to routinized**



- **Organic currency**

- **Fiat currency**

Trust in money

- Can we trust fiat currency?
  - Gold dollar (Bretton Woods system 1945-1971)
  - Oil dollar (1970s – now)
  - Central bank money printing
  - Inflation as taxation
  - Ultimately – state power, no viable alternative

- Can we trust cryptocurrency?
  - Transparency
  - No inflation
  - No state power backing
  - Energy consumption

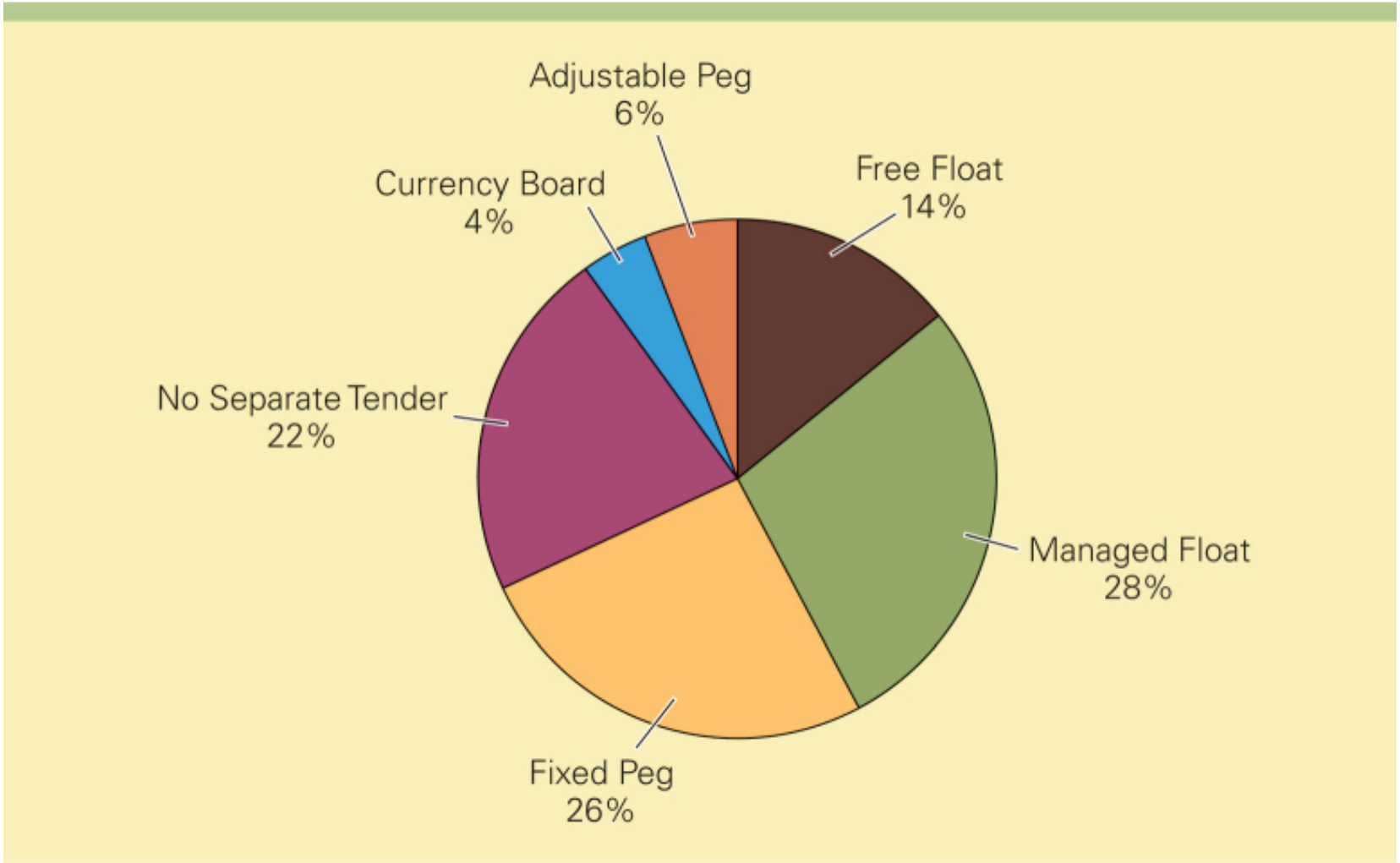
Currency regime

- Different types of central bank operation

(different degrees of monetary policy autonomy)

- free-floating currency
  - full monetary autonomy
- pegged currency
  - no monetary autonomy
- managed floating/pegging
  - partial monetary autonomy (a.k.a. dirty float)

Exchange Rate Regimes of IMF Member Countries



Source: Hill, C. 2012. *International Business*: Competing in the Global Marketplace, 9th edition.

Pegged versus Floating

- The case for floating exchange rates
  - Monetary policy autonomy
  - Help with trade balance adjustment
- The case for fixed exchange rates
  - Monetary discipline
  - Speculation limited
  - Uncertainty reduced
- Which system is better?

International Monetary Fund

- Objectives of the IMF
  - Stability in the international monetary system
  - International monetary cooperation
  - Trade facilitation
  - Bailout members
- Three main functions
  - Surveillance
  - Technical assistance
  - Lending

Key instrument of the IMF

- The Quota System

A member country's quota determines its

1. *maximum financial commitment to the IMF*
2. *voting power*
3. *its access to IMF financing*

Currency	Weights determined in the 2015 Review	Fixed Number of Units of Currency for a 5-year period Starting Oct 1, 2016
U.S. Dollar	41.73	0.58252
Euro	30.93	0.38671
Chinese Yuan	10.92	1.0174
Japanese Yen	8.33	11.900
Pound Sterling	8.09	0.085946

Change in ranking of countries by IMF quota after latest reforms

Country	Before	After	Direction of changes
US	1	1	◆
Japan	2	2	◆
China	6	3	▲
Germany	3	4	▼
France	4	5	▼
UK	4	5	▼
Italy	7	7	◆
India	11	8	▲
Russia	10	9	▲
Brazil	14	10	▲
Canada	9	11	▼
Saudi Arabia	8	12	▼
Spain	15	13	▲
Mexico	16	14	▲
Netherlands	12	15	▼

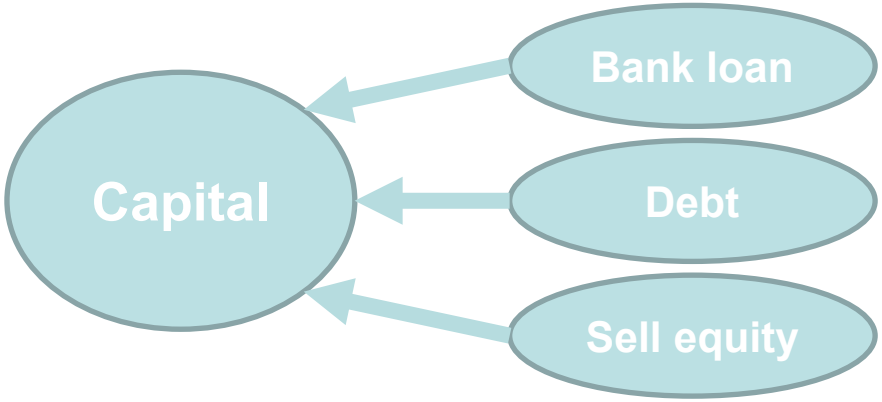
Board Reform Amendment on January 26, 2016 Source: IMF

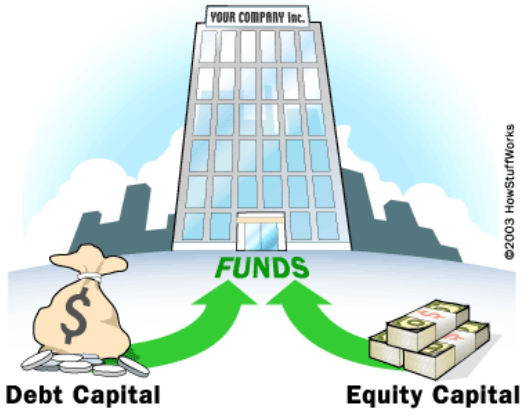
World Bank

- Mission: global ***poverty reduction*** and improvement of ***living standards***
- Made up of two development institutions
  - International Bank for Reconstruction and Development (IBRD)
    - Middle income and creditworthy poor countries
  - International Development Association (IDA)
    - Poorest countries in the world
  - Low-interest loans, interest-free credit, grants for education, health, infrastructure, communications etc.

http://web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/0,,pagePK:50004410~piPK:36602~theSitePK:29708,00.html

International Capital Market





- International capital markets bring together demand and supply of capital (i.e., money) across countries
  - Borrow from bank – Euromoney market
  - Borrow from other creditors – Int'l bond market
  - Sell equity to investors – Int'l equity market

Pros and Cons

- Borrowers benefit from the additional supply global capital markets provide
  - lowers the cost of capital
- Investors/creditors benefit from the wider range of investment opportunities
  - diversify portfolios and lower risk
- But volatile exchange rates can make what would otherwise be profitable investments, unprofitable
- Additional benefits of overseas IPO

Cost Of International Capital

- Cost of international capital =

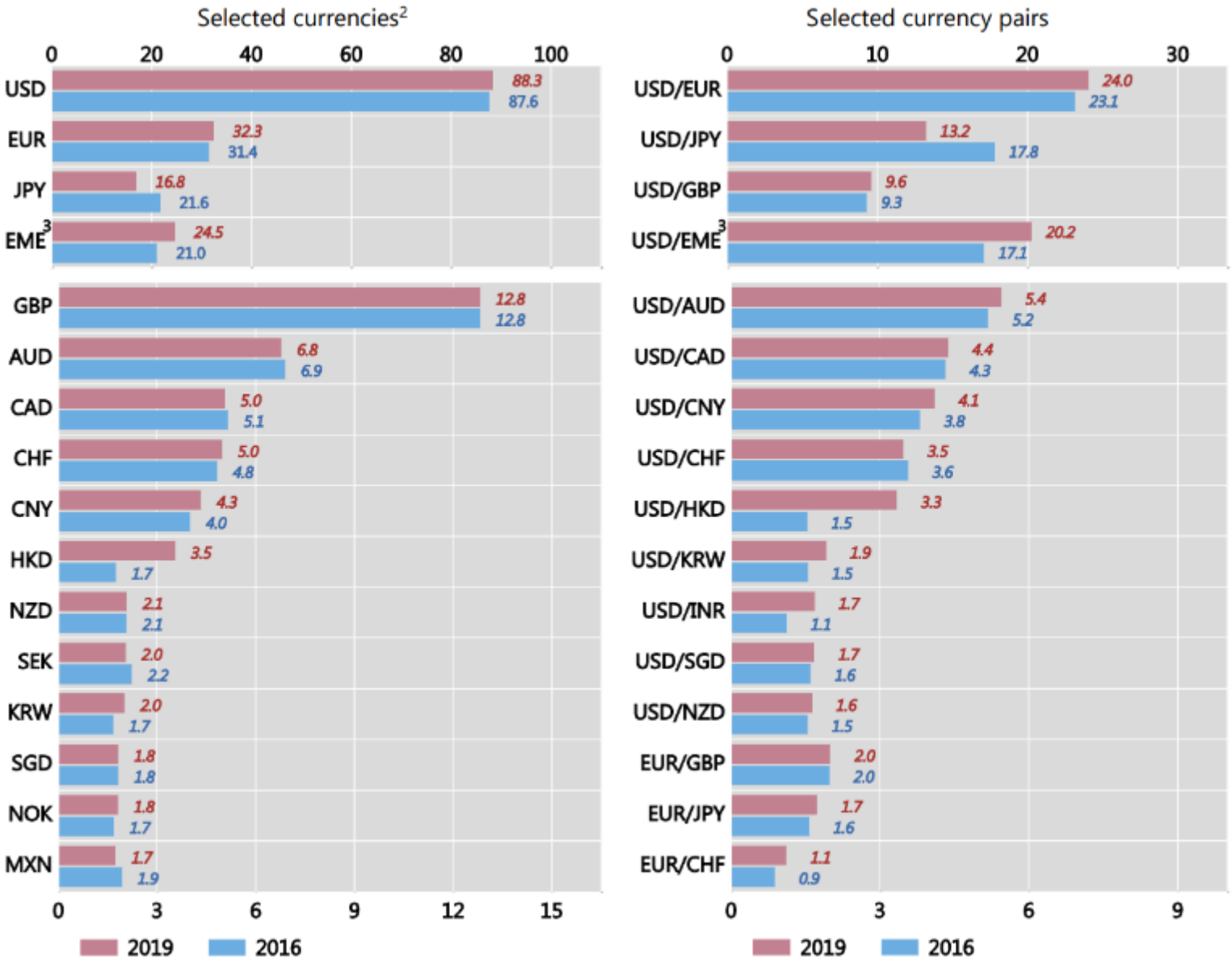
Interest rate (T1) + Euro/Dollar(T2)

Example: an US importer borrowing Euro

Scenarios	Euro loan (T1)	interest	Euro loan (T2)	USD Sales (T2)	Euro/USD (T2)	USD cost (T2)	USD Profit (T2)
1	1000	10%	1100	1500	0.8	1375.00	125.00
2	1000	10%	1100	1500	0.7	1571.43	-71.43

- What are the variables?
  - USD Sales (T2)
  - Euro/USD (T2)

Forex Market Turnover



Source:
www.bis.org/statistics/rpfx19.htm

Traditional Forex Instruments

A. Spot Transactions

B. Outright Forward Transactions

C. FX Swap

D. Currency Swaps

E. Options

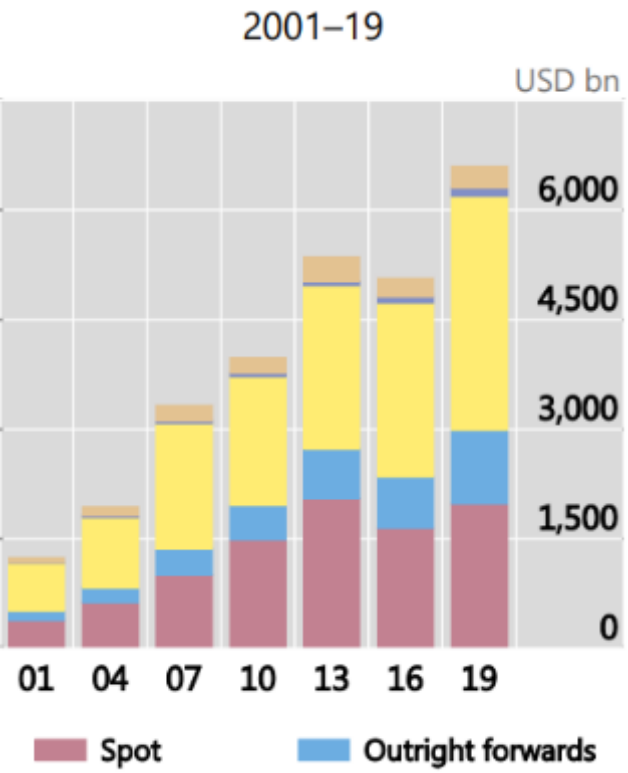
Hedging benefits

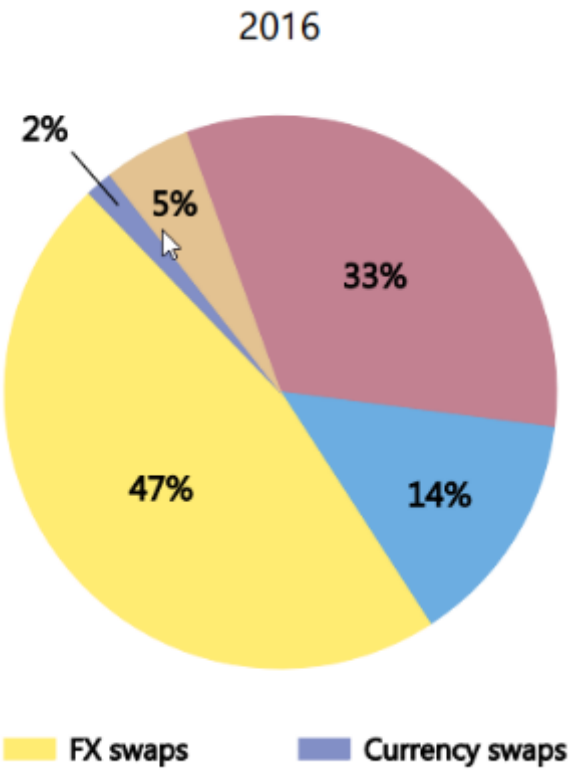
C = A + B, between a borrower and a bank

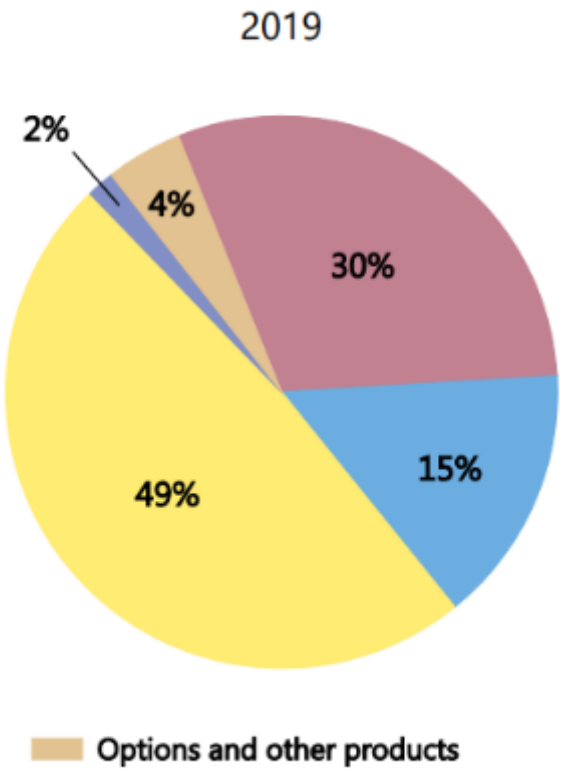
D = C + interests, between any two parties

E = future freedom to choose between A and B

Global Forex: By Instrument







Source: www.bis.org/statistics/rpfx19.htm

Forex Rates Determination

- Exchange rates are determined by the demand and supply for different currencies
  - E.g., If country A has a trade deficit, there is relative oversupply of A's currency → currency depreciates

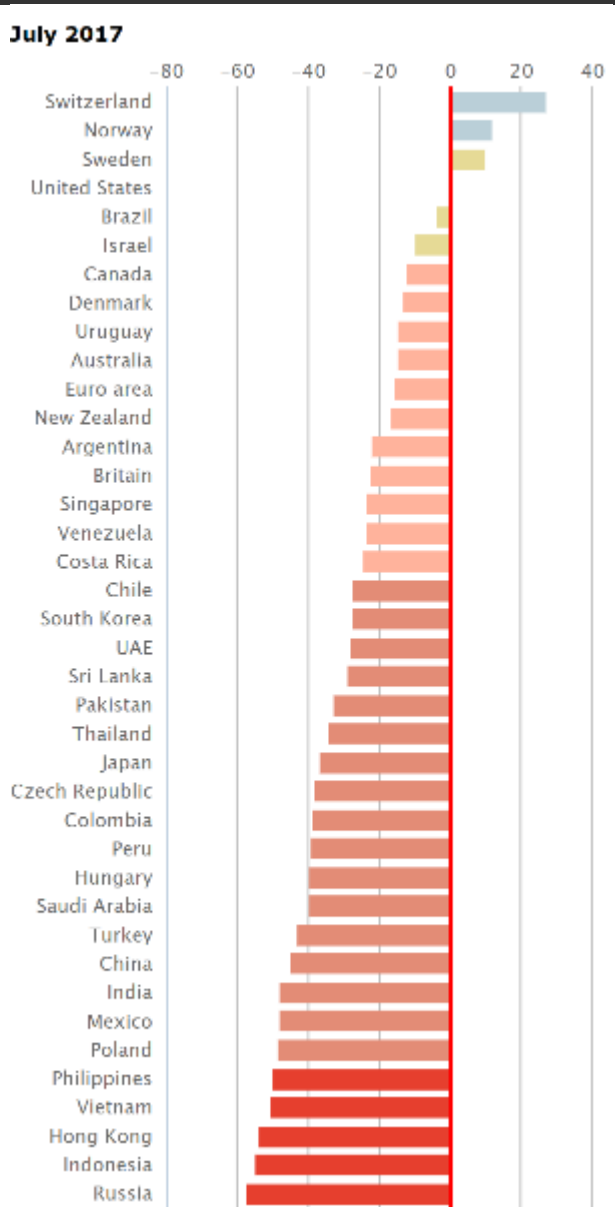
- Three factors impact future exchange rate movements
  1. Relative inflation
  2. Relative interest rate
  3. Market psychology

Prices and Exchange Rates

- The law of one price
  - Competitive markets: identical products sold in different markets for the same price when price expressed in same currency

- Purchasing Power Parity (PPP)
  - Argues that given relatively efficient markets, the price of a "basket of goods" should be roughly equivalent in each country
  - Changes in relative prices of two countries → changes in exchange rates
    - e.g., high inflation → currency depreciation

A Practical Application: Big Mac Index

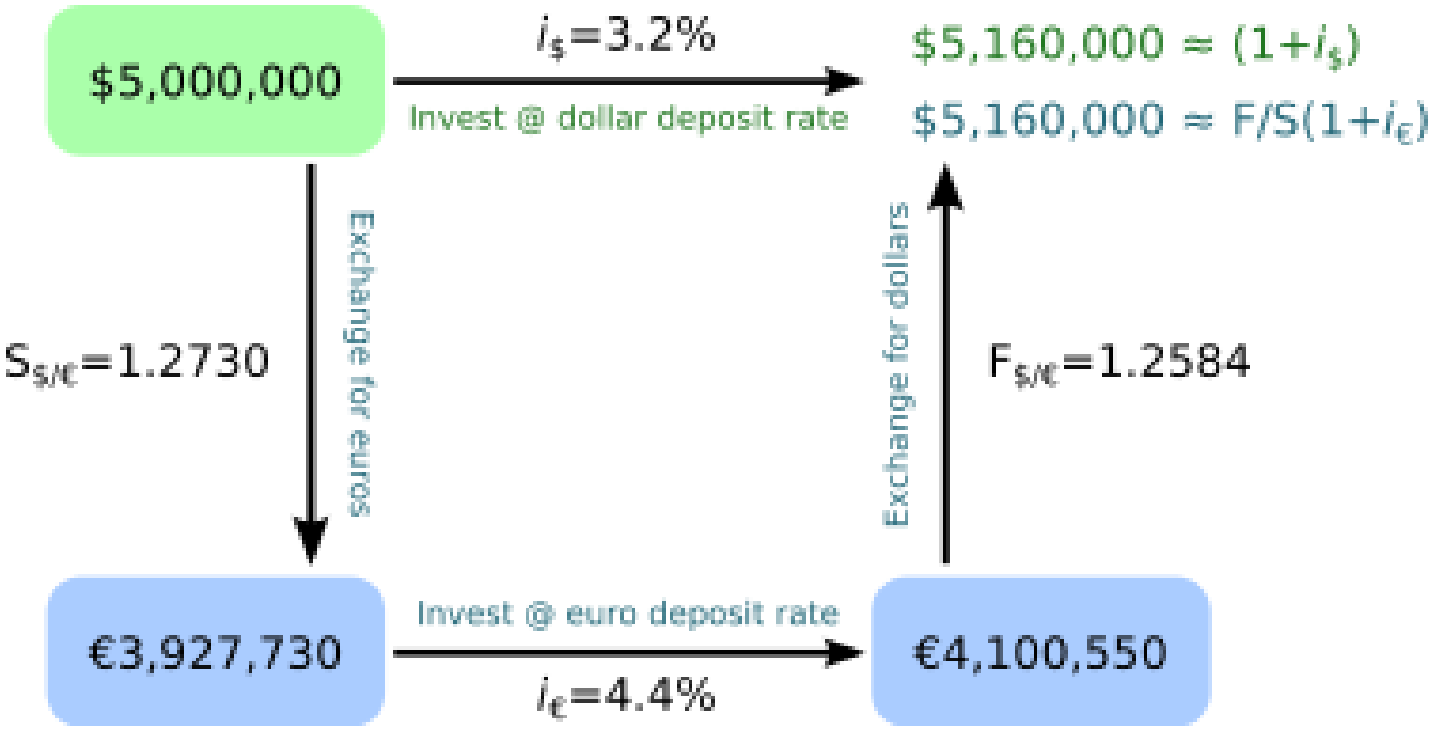


Interest Rates and Exchange Rates

- Fisher effect: i = r + I
  - *i* = nominal interest rate
  - *r* = real interest rate
  - *I* = inflation over the period funds are borrowed for

- International Fisher effect: (S1 – S2)/S2 x 100 = i$ - i¥
  - $\Delta i = \Delta I$
  - High I ➔ low purchasing power ➔ depreciation

- Interest rate parity



rate. The following equation represents covered interest rate parity.[1][4]

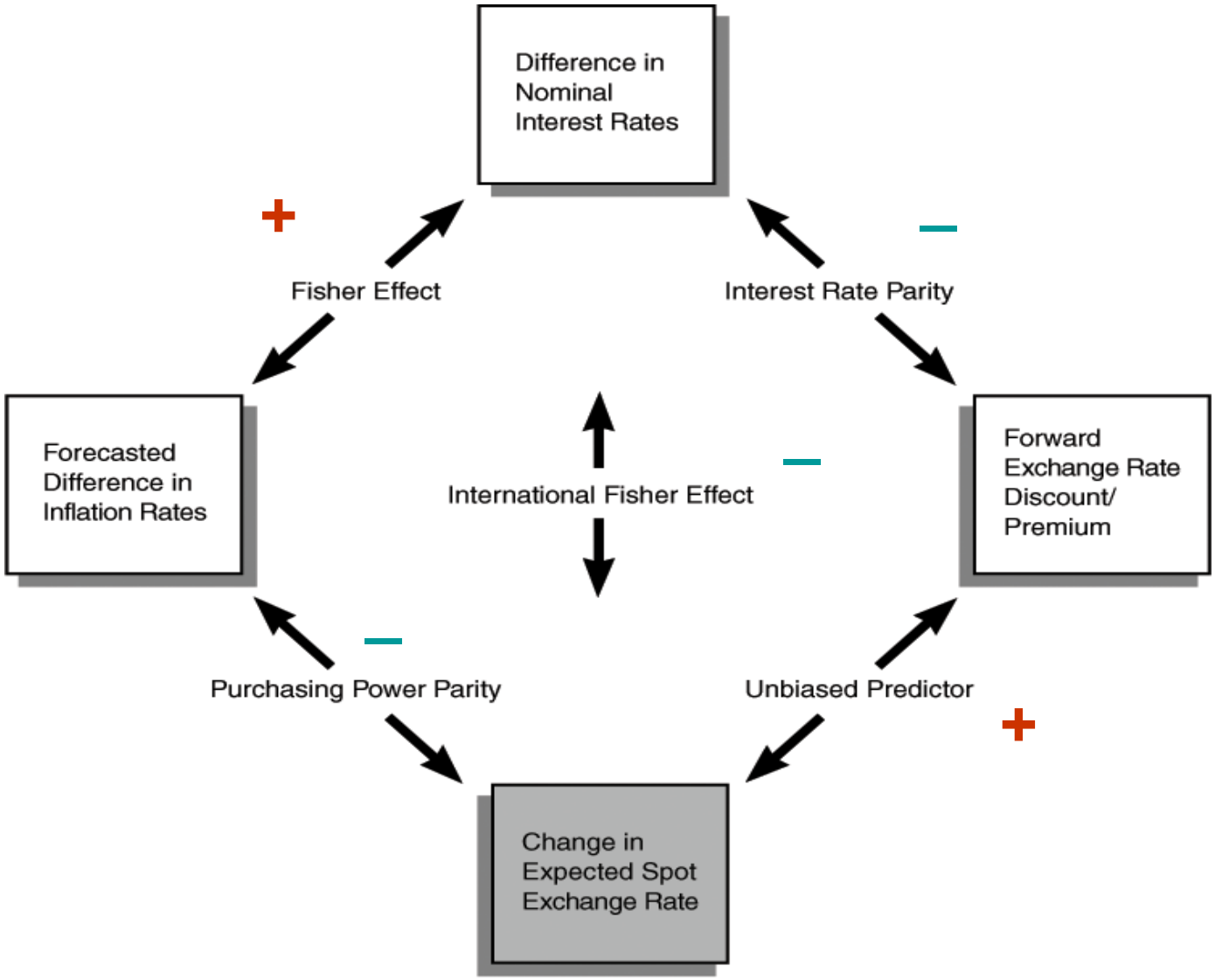
$$(1 + i_{\$}) = \frac{F_t}{S_t}(1 + i_c)$$

where

F_t is the forward exchange rate at time t

The dollar return on dollar deposits, $1 + i_{\$}$, is shown to be equal to the dollar return on euro deposits, $\frac{F_t}{S_t}(1 + i_c)$.

Put together:



Exchange Rate Forecasting

- Is the market efficient?
- Are market participants fully rational?
- Approaches to forecasting future movements
  - Fundamental analysis
    - Predictions using econometric models based on economic theory
  - Technical analysis
    - Extrapolation/interpretation of past trends assuming they predict future movements

Implications For Managers

Managers need to consider foreign exchange risks in various levels of decision-making

1. Deal level – Transaction exposure

2. Strategy level – Economic exposure