Macroeconomic and financial data
- Purchasing Power
- Inflation
- Currencies and exchanges rates
- Sources of information

Statistical information on the cocoa sector
- List of basic statistical information required
- Sources of information

Collection of data on cocoa resources
- Individual farmers & policy makers need information
- Methodology for data collection
INTERNATIONAL COCOA ORGANIZATION

MACROECONOMIC AND FINANCIAL DATA

- GDP at current prices
  \[ GDP = \text{gross values added} + \text{taxes} - \text{subsidies} \]
  and
  \[ GDP = \text{consumption} + \text{investment} + \text{government spending} + (\text{exports} - \text{imports}) \]
- GDP at constant prices
- GDP in Purchasing Power parity (PPP)
- Selection of the adequate measure of GDP
INTERNATIONAL COCOA ORGANIZATION
Macroeconomic and financial data

INFLATION

- Consumer Price Indices (CPI)
- GDP deflators
- Cost-of-living indices
- Producer price indices (PPI)
- Wholesale price indices
- Commodity price indices
- Manufactures Unit value index (MUV)
- Purchasing Power Parity (PPP)

- Selection of the adequate measure of inflation

INFLATION (Contd.)

Converting values at current prices and at constant prices

- If the base year \( (b) \) used for the computation of the value at constant prices differs from the base year used for the price index:

\[
\text{Real} \ (t/b) = \text{nominal} \ (t) \times \frac{\text{price index} \ (b)}{\text{price index} \ (t)} \quad \text{Example.xls}
\]

- If the base year used for the computation of the value at constant prices is the same as the base year used for the price index:

\[
\text{Real} \ (t) = \text{nominal} \ (t) \times 100 / \text{price index} \ (t)
\]

- To modify the base year of the value at constant prices from year \( a \) to year \( b \):

\[
\text{Real} \ (t/b) = \text{Real} \ (t/a) \times \frac{\text{price index} \ (b)}{\text{price index} \ (a)}
\]
CURRENCIES AND EXCHANGE RATES

- End-of-period exchange rates
- Period average exchange rates

MAJOR SOURCES OF MACROECONOMIC AND FINANCIAL DATA

The United Nations (UN)


(1970 – 2012)
MAJOR SOURCES OF MACROECONOMIC AND FINANCIAL DATA (2)

The International Monetary Fund (IMF)

- The World Economic Outlook (WEO): the WEO database contains selected macroeconomic data series from the statistical appendix of the World Economic Outlook report, which presents the IMF staff analysis and projections of economic developments at global level, in major country groups and in many individual countries. The WEO is released in April and September each year.


- The International Financial statistics (IFS): the IFS database contains a selected financial time series covering more than 200 countries starting in 1948

  [link](http://elibrary-data.imf.org/FindDataReports.aspx?d=33061&e=169393) (Free: 2010 - 2013)
  [link](http://www.imfbookstore.org/ProdDetails.asp?ID=IFEOL) (Free for developing countries: 1948 - 2013)

MAJOR SOURCES OF MACROECONOMIC AND FINANCIAL DATA (3)

The World Bank (WB)

The World Development Indicators (WDI) publication is the World Bank’s premier annual compilation of data about development. The 2013 WDI includes more than 900 indicators in over 80 tables organized in 6 sections: World View, People, Environment, Economy, States and Markets, and Global Links.

MAJOR SOURCES OF MACROECONOMIC AND FINANCIAL DATA (4)

The Penn World Tables (PWT)

Center for International Comparisons at the University of Pennsylvania (CICUP): The Penn World Tables provide purchasing power parity and national income accounts converted to international prices for 190 countries.

https://pwt.sas.upenn.edu/php_site/pwt71/pwt71_form_test.php
(1950 - 2010)

MAJOR SOURCES OF MACROECONOMIC AND FINANCIAL DATA (5)

National Statistical Offices / National Central Banks

National Statistical Offices and National Central Banks provide data on their home economy.

http://www.bis.org/cbanks.htm
Basic statistical information:

- Production
- Grindings
- Total end-of-season stocks
- Area harvested / variety of cocoa trees / age distribution
- International prices
- Farmgate prices
Calculation of ICCO daily cocoa prices and regular dispatch of price information to ICCO website, to news agencies, requesting member countries and other interested parties.

Definition:
The daily price for cocoa beans is the average of the quotations of the nearest three active futures trading months on NYSE Liffe and ICE at the time of the London close. The London prices are converted into United States dollars per tonne by using the current six-month forward rate of exchange in London at closing time. The United States dollar-denominated average of the London and New York prices is converted into its SDR equivalent at the appropriate daily official United States dollar/SDR exchange rate published by the International Monetary Fund. The time for shift to the next three-month period is the fifteenth of the month preceding the nearest active maturing month.

Sources: Reuters, NYSE Liffe, ICE US and IMF
## Exchange Rates

### Statistical Information on the Cocoa Sector

<table>
<thead>
<tr>
<th>Date</th>
<th>Open</th>
<th>High</th>
<th>Low</th>
<th>Close</th>
<th>Volume</th>
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## Futures Prices on LIFFE and NYBOT

### Statistical Information on the Cocoa Sector

<table>
<thead>
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<th>Contract</th>
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IS THE ICCO DAILY PRICE A GOOD INDICATOR OF THE PRICE OF COCOA BEANS?

- Some historical background
- Why the nearest 3 active futures trading months?
- Why use the current 6-month forward rate of exchange?
- What is SDR and why use SDR?
- Are ICCO prices a good indicator for cocoa bean prices (spot prices)?
The International Cocoa Organization (ICCO) is the main statistical source of information on the cocoa sector. The Quarterly Bulletin of Cocoa Statistics provides statistical information on prices, production, grindings, stocks and consumption of cocoa beans as well as on trade of cocoa beans, cocoa semi-finished products and chocolate products. It is mainly based on the response to the ICCO quarterly questionnaire on cocoa statistics. Other sources include also publications, subscription to a trade database, internet, news agencies, etc.
The Quarterly Bulletin of Cocoa Statistics

Which information have you access to?

- world cocoa market development reviews, detailing the latest developments in the production, grindings and prices of cocoa beans during the current season;
- estimates of global cocoa bean supply, demand and stocks as well as historical data;
- up-to-date and historical data on cocoa bean prices;

• statistics on the trade of cocoa beans, cocoa products and chocolate;
• country table statistics for major cocoa-producing and importing countries;
• unique cocoa consumption data by country; and
• ‘at a glance’ information through charts and summary tables
• Available on subscription
The monthly Cocoa Market Review

• Review of price developments in the cocoa futures markets (NYSE Liffe and ICE Futures US) during the previous month (2-page document);

• Review major developments related to the supply and demand for cocoa beans, incl. arrivals, trade, grindings data as well as weather conditions and spread of pests and diseases;

• Vast dissemination.

• Free (sent by email and posted on website http://www.icco.org)

The International Cocoa Organization (ICCO)

Other relevant statistical information is available in documents published by ICCO:
- World Cocoa Economy: past to future developments;
- Assessment of world stocks of cocoa beans (ICCO annual survey on cocoa beans stocks);
- Statistics on niche cocoa markets (fairtrade, organic);
- Monthly review of the market situation;
- etc.

http://www.icco.org/
The Food and Agricultural Organization of the United Nations (FAO)

The FAOSTAT database provides access to over 3 million time-series and cross sectional data relating to food and agriculture. FAOSTAT contains data for 245 countries and more than 200 primary products and input.

Data are available on-line from 1961 to 2012:

http://faostat3.fao.org/faostat-gateway/go/to/home/E3

The United Nations Commodity Trade Statistics Database (COMTRADE) provides access to trade statistics of cocoa beans and cocoa products by partner country, in volume and value.

Data are available from 1962 to 2013, by internet:

http://comtrade.un.org/db/
MAJOR SOURCES OF STATISTICAL INFORMATION ON THE COCOA SECTOR

The European Commission

The Statistical Office of the European Communities (Eurostat) provides statistics of trade in goods between EU member countries and the rest of the world and within EU countries.

Data are available, by internet:


NYSE LIFFE and US ICE futures markets

Cocoa futures prices on the NYSE Life (London International Financial Futures and Options Exchange) and the ICE (IntercontinentalExchange) Futures U.S. markets are accessible through internet at no cost. Users can follow price movements on these two markets with a maximum 15-minute delay by connecting to the corresponding websites.

- NYSE LIFFE: http://www.life-commodities.com/
COLLECTION OF DATA ON COCOA RESOURCES

INDIVIDUAL FARMERS & POLICY MAKERS NEED INFORMATION

- **Farmers** need price information and prospects over 3 time horizons:
  1) Current price for negotiating sales
  2) Intra-seasonal price prospects for planning the management of current crop
  3) Long-term prospects for making (or not) new investments in cocoa production

- **Governments** should assist farmers in making the right decisions; this could include:
  1) Technical assistance and training (best farming practices)
  2) Stimulation of research (improved planting material available, improved pest management, etc.)
  3) Long-term prospects for making (or not) new investments in cocoa production (new cocoa growth markets, diversification, etc.)
METHODOLOGY FOR DATA COLLECTION
Adequate evaluation of the cocoa production capacity includes:

1. number of cocoa farms;
2. acreage of cocoa cultivated area;
3. farm size distribution;
4. labour available on the farms;
5. typical (and average) density of cocoa plantings (trees per hectare);
6. typical and average age profile of cocoa trees;
7. percentage of cultivated area under hybrid and traditional varieties;
8. average yields of hybrid/traditional varieties;
9. information on previous land use; and
10. actual use of inputs / actual farm practices used by farmers.

Collection of data on cocoa resources

- Census
- Partial sample surveys

“The Executive Director should like to confirm that the ICCO Secretariat stands ready to provide, to the best of its abilities, technical assistance to producing Member countries in relation to the collection, processing and use of information on their cocoa resources, to assist in the future development of their cocoa economies.”
ED(MEM)875 - 10 April 2007