

# Note on the Monthly Database

clément carrier

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## 1 Database

In this file, I describe the database used, and explain in more details the transformation made before using them into our model. If not mentioned, variables are introduced for the 11 original members countries of the eurozone + Greece + Sweden + UK + Denmark.

All the variables in the folder /IMF, /ECB and /OECD contain .csv files corresponding to original (raw) database. We transform the variables thanks to the .R file called "transformation". Then we save subsets from the complete database according to the model that we want to estimate.

### 1.1 ECB

These are the variables from ECB data warehouse :

- HICP : ICP.M.COUNTRY.N.000000.4.INX
- Processed food exc. Alcohol and tobacco : ICP.M.COUNTRY.N.FDPXAT.4.INX
- Unprocessed food : ICP.M.COUNTRY.N.FOODUN.4.INX
- Indus good exc. Energy : ICP.M.COUNTRY.N.IGXE00.4.INX
- Energy : ICP.M.COUNTRY.N.NRGY00.4.INX
- Services : ICP.M.COUNTRY.N.SERV00.4.INX
- Unemployment : STS.M.COUNTRY.S.UNEH.RTT000.4.000
- EUR/USD exchange rate (nominal) : EXR.M.USD.EUR.SP00.A

These variables are in the folder Data/ECB and are raw variables directly loaded from the ECB database. These variables are transformed in the .R file called "traitementECB" located in the subfolder Data/ECB. (The transformation is described in the following table)

Two databases are saved in the subfolder Data/ECB, one in level, the other one differentiated one time :

- ecb.Rdata
- difecb.RData

In this file ("traitementECB.R"), I also transform the monthly frequency database into quarterly frequency in order to add variables to the quarterly database when not available in quarterly frequency. This file is saved in the subfolder /Data/Quarterly/ECB under the name "ecbq.RData"

### 1.2 IMF

These are the variables from IMF (IFS) :

- Commodity Prices, Crude Oil, Petroleum (World)
- London Interbank Offer Rate, 3-Month (US)
- M1 (Eurozone)
- M3 (Eurozone)
- Interest Rates, Monetary Policy-Related Interest Rate, FPOLM (Eurozone + US)

- Central Bank, Total Gross Assets (ECB + FED)
- Nominal Effective Exchange Rate, Consumer Price Index (Eurozone)
- Industrial Production

These variable are in the folder Data/IMF and are raw variable directly loaded from the IFS database. These variables are transformed in the .R file called "traitementIMF" located in the subfolder Data/IMF. (The transformation are describe in the following table)

Two databases are saved in the subfolder Data/IMF, one in level, the other one differentiated one time :

- imf.Rdata
- difimf.RData

In this file ("traitementIMF.R"), I also transform the monthly frequency database into quarterly frequency in order to add variable to the quarterly database when not available in quarterly frequency. This file is saved in the subfolder /Data/Quarterly/IMF under the name "imfq.RData"

### 1.3 OECD

These variable is in the folder /OECD and are raw variables directly loaded from the OECD database. These variables are transformed in the .R file called "traitementOECD" located in the subfolder Data/OECD. (The transformation are describe in the following table)

These are the variables from OECD :

- Short-term Interest rates (Monthly Monetary and Financial Statistics)
- Long-term Interest rates (Monthly Monetary and Financial Statistics)

In this file ("traitementOECD.R"), I also transform the monthly frequency database into quarterly frequency in order to add variable to the quarterly database when not available in quarterly frequency. This file is saved in the subfolder /Data/Quarterly/OECD under the name "oecdq.RData"

## 2 Recapitulative table

| Database          |                               |           |            |            |               |           |                |
|-------------------|-------------------------------|-----------|------------|------------|---------------|-----------|----------------|
|                   | Variable                      | Source    | Country    | Adjustment | Original      | Frequency | Transformation |
| Price             | HICP                          | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Processed food exc. Alc & tob | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Unprocessed food              | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Indus good exc. Energy        | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Energy                        | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Services                      | ECB       | by country | NSA/NWD    | index         | monthly   | log            |
|                   | Oil Price                     | IFS (IMF) | World      | NSA        | index         | monthly   | log            |
| Economic Activity | Indus. Production             | IFS (IMF) | by country | NSA        | index         | monthly   | log            |
|                   | Unemployment rate             | ECB       | by country | SA/NWD     | %             | monthly   | /100           |
| Interest rates    | Short-term Interest rates     | OECD      | by country | NSA/NWD    | annual %      | monthly   | /100           |
|                   | Long-term Interest rates      | OECD      | by country | NSA/NWD    | annual %      | monthly   | /100           |
|                   | LIBOR 3 month                 | IFS (IMF) | US         | NSA/NWD    | annual %      | monthly   | /100           |
| Monetary          | M1                            | IFS (IMF) | EZ         | NSA/NWD    | EUR           | monthly   | log            |
|                   | M3                            | IFS (IMF) | EZ         | NSA/NWD    | EUR           | monthly   | log            |
|                   | Monetary Policy-Related Rate  | IFS (IMF) | US/EZ      | NSA/NWD    | annual %      | monthly   | /100           |
|                   | Central Bank Asset            | IFS (IMF) | US/EZ      | NSA/NWD    | USD/EUR       | monthly   | log            |
| Other             | NEER                          | IFS (IMF) | EZ         | NSA/NWD    | index         | monthly   | log            |
|                   | EUR/USD exchange rate         | ECB       | EZ         | NSA/NWD    | 1 EUR = x USD | monthly   | -              |