METHOD

Monthly monetary statistics (excluding banking interest rates)

13 March 2017

The monetary statistics methodology applies to all countries of the euro area. As part of the Eurosystem's statistical system, the Banque de France collects and analyses trends for France and the European Central Bank centralises national contributions, calculates and disseminates euro area aggregates.

1. Definitions

Geographical areas

Euro area = Austria + Belgium + Cyprus + Estonia + Finland + France + Germany + Greece + Ireland + Italy + Latvia + Lithuania + Luxembourg + Malta + Netherlands + Portugal + Slovakia + Slovenia + Spain

The European Stability Mechanism (ESM) and the European Financial Stability Facility (EFSF) are also included in the geographical area "Euro area".

France's territory is defined as follows for the compilation of monetary statistics (unless otherwise stated):

France = metropolitan France + Monaco + Overseas Departments (French Guyana, Martinique, Guadeloupe, Réunion, Mayotte) + Saint-Pierre-et-Miquelon + Saint Martin + Saint Barthélémy (Decision 2014-01 of the Governor of the Banque de France).

2. Sources

The monetary statistics are produced and analysed in the Directorate General Statistics by the Monetary and Financial Statistics Directorate and more specifically by the European Statistics Division. The European Central Bank (ECB) calculates the euro area monetary aggregates by compiling the data supplied by the Eurosystem central banks.

The balance sheet data collection arrangement applies primarily to MFIs, in accordance with Regulation No.1071/2013 of the ECB concerning the consolidated balance sheet of the monetary financial institutions sector (ECB/2013/33). Decision No. 2014-01 of the Governor of the Banque de France sets out the procedures for implementing this regulation at the Banque de France. In operational terms, the transmission of data to the Banque de France passes through different channels, depending on the category of reporting agents:

- The main source of information about credit institutions is their financial statements and the notes to these statements, which they file with the General Secretariat of the Autorité de contrôle prudentiel et de résolution on a monthly or quarterly basis, depending on their business volume. Notice No. 2014-01 from the Monetary and Financial Statistics Directorate sets out the forms for the statements;
- Data from money market funds are reported to the Directorate General Statistics (Financial Savings and Securitisation Division). This Division is the point of entry into the Banque de France system for statistics

Contact : DGS-DSMF
1415-CONTACTSI-UT@banque-france.fr

provided by investment funds. Notice 2014-01 from the Monetary and Financial Statistics Directorate sets out the detailed content of the data collected;

- In the case of the Banque de France, the basic information is provided by the Accounting Directorate. Detailed data from the auxiliary accounts kept by the Directorate General Operations are used to compile the statistics relating to the Banque de France's securities portfolio;
- In accordance with the definitions contained in the first part of Annex II to aforementioned Regulation (EC) 1071/2013, the population reporting to the Banque de France for the purposes of these statistics includes the branches and subsidiaries of credit institutions with their registered office or parent company located outside of France. For the purposes of this regulation, the reporting population includes the branches and subsidiaries of credit institutions from other European Union countries.

Information about **deposits taken by the Treasury** is obtained directly from the Directorate General of the Treasury.

3. Methods

In accordance with Regulation 1071/2013 of the ECB, the Banque de France, along with the other national central banks (NCBs) in the Eurosystem, produces an aggregated balance sheet for MFIs with their registered office located in the national territory (excluding their foreign branches) on a monthly basis. This MFI balance sheet is the cornerstone of the monetary statistics production system at the national and European levels.

Liabilities are broken down with the aim of identifying liquidities that could be included in the monetary aggregates: currency in circulation, overnight deposits, deposits with agreed maturity, deposits redeemable at notice, repurchase transactions, debt securities, money market fund shares/units, money market instruments, capital and reserves, and other resources.

Assets are broken down into loans, holdings of debt securities, money market instruments and shares and other equity, fixed assets and other assets.

Under the provisions of Regulation (EC) 1071/2013 of the European Central Bank of 24 September 2013 (ECB/20013/33), deposits and loans must be reported at the gross nominal amount outstanding at the end of the month for statistical purposes. Nominal amount means the amount of principal that a debtor is contractually obliged to repay a creditor. NCBs are still allowed to continue presenting loans net of provisions, as long as they have information that makes it possible to adjust for the changes in outstanding stocks stemming from net provisions. This can be obtained either by adjusting the outstanding amounts for the changes in the stock of provisions, or by valuing the outstanding amounts at the price agreed at the time of acquisition (which may be different from the repayable value if loans are transferred before maturity).

Furthermore, most of these data are broken down by original maturity, residence and the counterparty sector. This leads to a distinction between claims and liabilities vis-à-vis euro-area residents and residents of the rest of the world, and a distinction between claims and liabilities vis-à-vis MFIs and non-MFIs.

The NCBs compile the aggregated MFI balance sheet monthly on the basis of data collected from the MFIs. The statistics in the monetary balance sheet are transmitted to the ECB within fifteen working days of the end of the reference month. In order to ease the reporting burden of MFIs, monthly data collection may be restricted to a subset of MFIs, provided that their total balance sheet accounts for at least 95% of total balance sheet for the MFI sector.

Supplementary data are collected quarterly. The purpose of these data is to provide a detailed breakdown of the main balance sheet items by currency, country, sector and purpose.

The twelve countries participating in the Monetary Union have been fulfilling these requirements since mid-1998. This means that we now have a **consolidated balance sheet for the MFIs** in the euro area, which is used to calculate the euro area monetary aggregates as a simple sum of the monetary components on the balance sheet.

In France, the monthly statistics are collected only from credit institutions with business that meets at least one of the following conditions: a total balance sheet of more than EUR 2 billion, outstanding cash loans to households

above EUR 500 million, outstanding leases to resident non-financial corporations above EUR 500 million, outstanding leases to resident households above EUR 200 million. In addition, the quarterly financial statements that the Autorité de contrôle prudentiel et de résolution requires all credit institutions to file are used to estimate the monthly balance sheet of institutions that are not required to report on a monthly basis and to obtain quarterly breakdowns.

National indicators are obtained by aggregating the basic items for each financial network. This aggregation includes the data collected for the reference month in question, as well as the latest information available for institutions reporting on a quarterly basis. Further information about the specific features of the French financial system help to refine the tracking and analysis of residents' investment and borrowing patterns (e.g. securitisation, breakdown of lending by purpose and breakdown of deposits by interest rate category, passbook savings accounts, etc.).

4. Revisions

The items on the Banque de France monetary balance sheet are subject to revisions only under very exceptional circumstances.
The process for revisions of credit institutions' data is organised as follows:

- The results for a given month are first revised when the results for the following month are published to take account of institutions that transmitted their reports late and whose results were estimated when first published, as well as corrections of any errors;
- The results are revised a second time, when the reports for the last month of a quarter are aligned with the quarterly reports. This alignment makes it possible to integrate the latest available data relating to institutions that are only required to report on a quarterly basis and to refine the information provided by those that report on a monthly basis. Changes are generally made effective when the results for the end of the next quarter are published;
- Under exceptional circumstances, and no more than once a year, a final revision is made to take account of the reconciliation of monetary statistics with the final financial accounts.

Revisions for money market funds are made on the same basis as revisions for credit institutions. However, revisions for money market funds are due solely to the integration of data from funds that transmit their reports late and to correct anomalies.

5. Flow statistics

Monetary and financial flows are the variations in the balance sheet of the monetary financial institutions sector stemming from economic transactions, such as deposit-taking, net issuance and acquisitions of securities, and granting and collecting loans. They are calculated by adjusting variations in stocks at the end of the month for effects that do not arise from economic transactions.

$$F_t = (E_t - E_{t-1}) - C_t - A_t - X_t$$

Where

- C_t , ***reclassifications and other statistical effects***

These effects include changes affecting the population of MFIs (entries, departures, mergers and takeovers), reclassification of assets and liabilities (defeasance, securitisation) and correction of reporting errors.

- A_t , ***revaluations and write-offs***

Contact : DGS-DSMF
1415-CONTACTSI-UT@banque-france.fr

The effects concerned here are those stemming from variations in the market value of securities and loan write-offs that lead to a decrease in the outstanding amounts of loans shown in the financial statements.

Revaluations of credit institutions' trading book securities are calculated on the basis of security-by-security reporting of the portfolio.

No revaluation calculations are required for the other categories of securities portfolios since outstanding amounts are reported at their acquisition price after neutralising any provisions

- X_t , ***the revaluations linked to exchange rate fluctuations*** affecting the amount converted into euros of foreign currency denominated operations. This correction is made by the ECB and is detailed in the *Handbook for the compilation of flows statistics on the MFI balance sheet (2006)*[1].

Calculating growth rates

The monthly growth rate of a time series at date *t* is defined by: F_t / E_{t-1}

where:

- F_t : monthly flow for the period t
- E_{t-1} : outstanding amount observed at the end of the month $t - 1$.

The annual growth rate in percent at date *t*, denoted a_t, is calculated as follows:

$$a_t = \left[\prod_{i=0}^{11} \left(1 + \frac{F_{t-i}}{E_{t-i-1}} \right) - 1 \right] * 100$$

The three-month growth rate, denoted q_t, is calculated as follows:

$$q = \left[\prod_{i=0}^{2} \left(1 + \frac{F_{t-i}}{E_{t-i-1}} \right) - 1 \right] * 100$$

The annualised growth rate over three months, denoted QA_t, is calculated as follows:

$$qa_t = \left[\prod_{i=0}^{2} \left(1 + \frac{F_{t-i}}{E_{t-i-1}} \right)^4 - 1 \right] * 100$$

If data on reclassifications and revaluations are available, the ECB and the Banque de France prefer this calculation method based on flows and stocks, because it provides a more accurate measurement of monetary changes.

However, some of the data presented do not include any adjustments, as in the case of deposits. In this case, the annual percentage rate of change, denoted g_t, is derived from gross outstanding amounts using the following formula:

$$g_t = \left(\frac{E_t}{E_{t-12}} - 1 \right) * 100$$

[1] http://www.ecb.int/pub/pdf/other/handbookcompilationflowstatisticsmfibalance200602en.pdf

It is easy to check that both calculations produce the same result ($a_t = g_t$) if no reclassifications or revaluations occurred in the previous twelve months.

Calculating contributions to growth

The calculation of contributions to growth is also based on a methodology that retranscribes the changes in the aggregates as best as possible. For a time series (x), its contribution to growth, denoted c_t, of the dependent time series (y) is defined as follows:

$$c_t = \left(\frac{\sum_{t=1}^{12} F_t(x)}{\sum_{t=1}^{12} F_t(y)} \right) * g_t(y)$$

Where: $\sum_{t=1}^{12} F_t(x)$: sum of the 12-month flows of the explanatory variable;

$\sum_{t=1}^{12} F_t(y)$: sum of the 12-month flows of the dependent variable;

$g_t(y)$: growth rate of the dependent variable calculated using the above-mentioned methodology.

Thus, if y is the sum of k components x_s, with s ranging from 1 to k, its growth rate at t is the sum of the k contributions at t of the components x_s.

6. Notional stocks statistics

In addition to the outstanding amounts and flow statistics, notional stocks are calculated. The idea is to facilitate the work of data users, by allowing them to have stock histories directly related to the annual growth rates. These notional amounts are calculated as follows:

$$E_{N,t-1} = \left(\frac{E_{N,t}}{1 + F_t / E_{t-1}} \right)$$

Where: $E_{N,t}$ notional stock at date t
E_t outstanding amount at date t
F_t flow at date t

7. Seasonal adjustment method

The resident MFI balance sheet items that make up the monetary aggregates and loans to the resident private sector in France are adjusted for seasonal effects using the Jdemetra+ software. Thanks to this software, developed by the national central banks of Belgium and Germany in cooperation with Eurostat, time series can be seasonally adjusted using the X13-ARIMA and TRAMO SEATS procedures. In addition to being adjusted for seasonal variations, the series are adjusted to take into account possible calendar effects (number of working days over the period, position of Easter in the year) and possible outliers.

8. Taking account of securitisation in loan statistics

The method applied by the BdF consists in correcting the "accounting" outstanding loans of credit institutions by adding the securitised loans. These securitised outstanding loans are reported on a monthly basis by credit institutions.