Quarterly national accounts

Publication

As of May 2019, two estimates of the quarterly national accounts are released for each quarter:

- The **first estimate** is released approximately at 30 days after the end of the quarter. It covers quarterly growth in gross domestic product (GDP) as well as transactions on goods and services (output, value added, consumption, investment, foreign trade, changes in inventories). It is an advance estimate: all of the indicators are not available over the entire quarter. Econometric techniques are used to forecast missing information.

- The second publication, called **detailed figures** released approximately at 60 days after the end of the quarter. It updates the preliminary estimate of GDP and goods and services transactions. Furthermore, it provides an early estimate of households' and non-financial corporations' accounts.

Insee publishes not only quarterly growth rate figures but also the "statistical overhang" for the current year. The statistical overhang of a variable is the annual growth rate which would be obtained if this variable was to remain at its level of the last known quarter. For example, when the 2nd quarter of a given year (N) is the last known, the statistical overhang of the variable is equal to the growth rate between N-1 and N that would be obtained if the third and fourth quarters stayed at the same level as the 2nd.

Compilation procedure

The quarterly national accounts are designed to provide, within the year, a comprehensive set of macroeconomic information which is relatively detailed and consistent with past annual accounts. The information (in value, volume, and price) is seasonally and working-day adjusted in order to highlight significant cyclical movements.

The quarterly national accounts share the same conceptual framework as the annual accounts, the European system of accounts (ESA 2010). Annualized quarterly accounts are consistent with the data of past annual accounts. As well as for annual accounts, volumes of the quarterly accounts are chain-linked volume in previous year prices. The year 2020 serves as the reference year for the computation of chain-linked volumes. For a given aggregate, the only difference between the annual and the annualized quarterly accounts is that the latter is working day adjusted.

The quarterly accounts are compiled from monthly and quarterly indicators (see Appendix). A document of the Insee Méthodes collection available on the web site insee.fr describes general principles and every indicator used (Insee Méthodes No. 126, "Methodology of quarterly national accounts", May 2012). This document outlines the whole set of methodologies and indicators used in the base 2005; but as a matter of fact, for most operations, there is little or no change in methods or indicators from one base to another. The methodology is the same for the first estimate and for the detailed figures. The numbers of forecasted indicators and the number of published series for the last quarter distinguishes the two estimations. In particular, between these estimations, the last month of turnover indexes and the last month of health insurance payments are released. The missing indicators are mainly extrapolated using statistical processes (ARIMA).

For some series, whose weight is generally marginal, no cyclical data is available. The annual accounts are then nowcasted by an extrapolation of the current year, most often based on ad hoc assessments (such as the forecasts of the Social Security Commissions) and the quarterly accounts result from a "quarterly smoothing" of the annual series. This smoothing consists in estimating a quarterly series that minimizes the quarter on quarter variability of the series.

The *First estimates* need additional extrapolations

Successive publications of the French quarterly national accounts are estimated by using the same methodology; the availability of monthly and quarterly statistical indicators within a shorter schedule is the only difference. Some indicators are not known for the estimate at 30 days:

- The third month of the industrial production index, released around 40 days after the end of the quarter;
- Trade in goods and services for the third month of the quarter;
- The quarterly indicator on household housing investment;
- Turnover indexes (from businesses' VAT forms)

Revisions

From one quarterly publication to another

With each successive publication, the quarterly accounts may be revised due to :
- replacement of extrapolations by indicators which were not initially available ;
- revisions of raw indicators, on the last quarter or earlier ;
- revisions in the seasonal adjustment coefficients ;
- once a year, in May, revisions of the annual accounts;
- about every five years, a benchmark revision

Integration of annual accounts

In principle, if the quarterly profile of series may be modified since their origin, annual aggregations of their raw data are not as they are benchmarked on their annual counterpart up to the last published provisional account. Once a year, the final accounts (year N-3), semi-final (year N-2) and provisional (year N-1) are published in May of year N and revise annual estimates of macroeconomic aggregates. The quarterly national accounts include these data when publishing the first estimate of first quarterly for the year N.

The revisions of the annual accounts of the year (N-1) derive from three main sources :
- the re-estimation of models of calendar adjustment ;
- integration of the two latest annual points: final accounts and semi-final of the ongoing campaign. This modifies the dynamic of macroeconomic aggregates on the end of period ;
- the benchmarking on some annual data unknown until: in particular the general government accounts, financial corporations, NPISHs and agricultural industries, some accounts of household consumption.

Benchmark revision

Furthermore, national accounts regularly carry out benchmark revision. After the 2010 benchmark and the 2014 benchmark, the national accounts switch on May 31, 2024 to the 2020 benchmark.

This is an important source of revisions of macroeconomic aggregates published until then; on the recent years and the whole period published (retropolation). Compared to the previous benchmark, the national accounts in 2020 benchmark enable a level recalibration of source data and the Balance of Payments aggregates. This changes of benchmark year had led us to revise certain estimation methods to incorporate new European recommendations aimed to improving comparability between countries.

Substantial changes were thus added to the more usual revisions due to the integration of the final and semi-final annual accounts.

For more information about the change to 2020 benchmark:

Annual national accounts (2020 Base)

Particularities of the general government account

Several approaches

The general governement quarterly account (GG) can be presented through various approaches. The 'public finance statistics' framework, which is produced within the framework of the European regulation, favors an 'expenditures/receipts' approach, in which the GG accounts are described synthetically, with the major expenditure items on one side, receipt items on the other. This approach registers the actual monetary flows first and excludes some of the imputed flows of the national accounts. The economic summary table (EST) presents a different breakdown, in the central framework of the national account (approach 'central framework'). The latter lists successively a series of accounts (production, operating, allocation and use of income, then capital account).

By different ways, these two approaches allow to obtain the same balance, the general governement'snet lending (if the balance is positive) or the net borrowing (if negative). The financial approach of the measure, which the Banque de France is in charge of for general govermnent as for the other economic agents, gives information about the way the balance is financed, by financing instruments. This approach is consistent with the measure of the GG quarterly debt, which the INSEE, the DGFiP and the Banque de France are in charge of. Financial flows impact the debt without affecting the net borrowing (changes in financial assets and in other payable and receivable financial accounts). Thus net borrowing and change in debt are not easily connected. Theoretically, the financial and non financial approaches of the net borrowing point to the same balance, but practically deviations arise, because these approaches are based on different statistical sources.

Precautions of use

As for other national accounts aggregates, the quarterly measure of the GG account is an economic statistic plagued with imprecisions and undergoes possible revisions. The principles which are selected for their compilation are the general principles for the compilation of the quarterly accounts. They primarily require to have sub-annual statistical indicators which are re-processed: fitting-calibration based on the annual accounts with a major use of econometrics, seasonal adjustment (SA) and working day adjustment (WDA).

Fitting based on the national accounts allows to have, regarding raw and SA data, equality between the corresponding national account and the total of the four quarters. Conversely, annualised SA-WDA data series contain minor deviations compared to raw annual data series, depending on the specific schedule for each year.

Arbitrations (such as the choice of indicators involving the same field) and methodological choices (like the choice of the registry date) are a common occurrence when compiling accounts. The quarterly indicators cover the accounts only partly and non covered annual data have to be extrapolated so that the quarterly account is complete (the quarterly profile then ensues from the smoothing of the annual data series). All these factors imply revisions, as for other relevant national accounts aggregates.

■ Appendix: Main items

Foreign trade
Sources: customs' statistics; balance of payments; unit value indexes for external trade in agriculture, price indexes for imports and exports of industrial goods, foreign exchanges of electricity.

Production
Sources: industrial production index (industry except water, gas and electricity); agricultural and transportation statistics; turnover index from VAT forms, industrial producer price index.
For the other activities (services except transportation, energy, water and waste), production is obtained indirectly from total demand.

Gross Fixed Capital Formation
Sources: vehicle registrations; turnover index (from VAT forms) in industry, wholesale trade and services; new construction statistics, statistics from public-works trade federations (FNTP).

Households consumption
Sources: retail-trade surveys by Banque de France; statistics from public administrations (e.g. health insurance (CNAM), communication's regulation authority (Arcep)), professional unions' statistics (for example, the French institute of fashion), panelist (GFK); turnover index (from VAT forms); consumer price indices.
Households' expenditure in goods are published every month.

Gross Fixed Capital Formation
Sources: vehicle registrations; turnover index (from VAT forms) in industry, wholesale trade and services; new construction statistics, statistics from public-works trade federations (FNTP).

Intermediate consumption : mostly computed from the output figures for the corresponding industry and technical coefficients.

Changes in inventories (industry except energy, water and waste, agriculture) : obtained as a balancing item from resources minus uses other than inventories (intermediate consumption, final consumption, GFCF, exports).

Taxes
Sources: monthly records of central-government's revenue collection and local taxes (Directorate of Public Finances [DGFIP]); central agency for social security (ACOSS) for taxes earmarked for social security (such as the CSG, explained below).

Wages, salaries and work duration
Sources: quarterly statistics form payroll employment (DARES-INSEE), Survey on Labor Activity and Employment Status (ACEMO) from DARES (Ministry of Labour, Employment and Health), ACOSS, DGFIP (Directorate of Public Finances).
Statistics on leaves for industrial accidents, sickness and maternity from the national health-insurance (CNAM) and overtime (ACOSS).

Social contributions and benefits
Sources: ACOSS (contributions to general social-security); statistics from national health insurance, pensions, and family-benefits; Pôle Emploi (unemployment contributions and benefits); other social-protection agencies, DGFiP.

Quarterly Sector Accounts
Household accounts, non-financial corporations are subject to a detailed publication. Information about other institutional sectors (general government, financial corporations, non profit institutions serving households) are more fragile and certain transactions or balances can not be published before the corresponding annual account are released (May of year N +1).