

Years 2020 - 2022

GDP AND GENERAL GOVERNMENT NET BORROWING

- In 2022 GDP at current prices grew by 6.8% (to 1,909,154 million euro) compared with the previous year. The chained volume measure of GDP increased by 3.7%.
- Gross fixed capital formation rose in volume by 9.4%, final consumption expenditure by 3.5% and exports by 9.4%. Imports of goods and services increased by 11.8%.
- National demand (excluding changes in inventories) has contributed to GDP growth by 4.6 percentage points. The contributions of changes in inventories and of net exports were negative by 0.4 and by 0.5 percentage points respectively.
- Value added in volume increased by 10.2% in construction and by 4.8% in services, while it decreased in agriculture, forestry and fishing (-1.8%) and in mining and quarrying, manufacturing and other industrial activities (-0.1%).
- General Government net borrowing was -153,447 million euro: -8.0 % of GDP, compared with -9.0 % in 2021. This ratio has been revised for the years 2020 and 2021 as a result of the change introduced in the accounting treatment of tax credits (see the section on revisions).
- Primary balance (General Government net borrowing net of interests) was -3.7% of GDP (-5.5% in 2021).

CHART 1. GDP IN VOLUME

Years 2007-2022, billion euro (chain-linked volumes, reference year 2015) and annual percentage changes

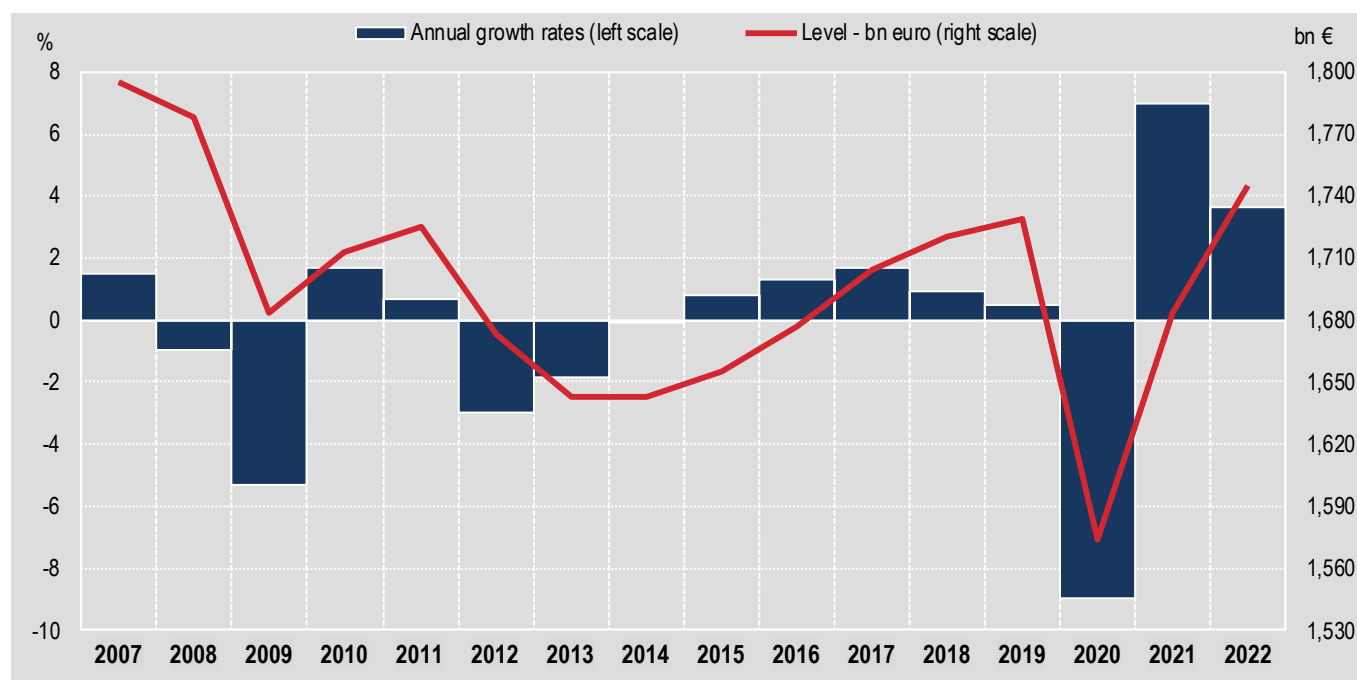


CHART 2. GENERAL GOVERNMENT BALANCES

Years 2007-2022, annual percentage values on GDP

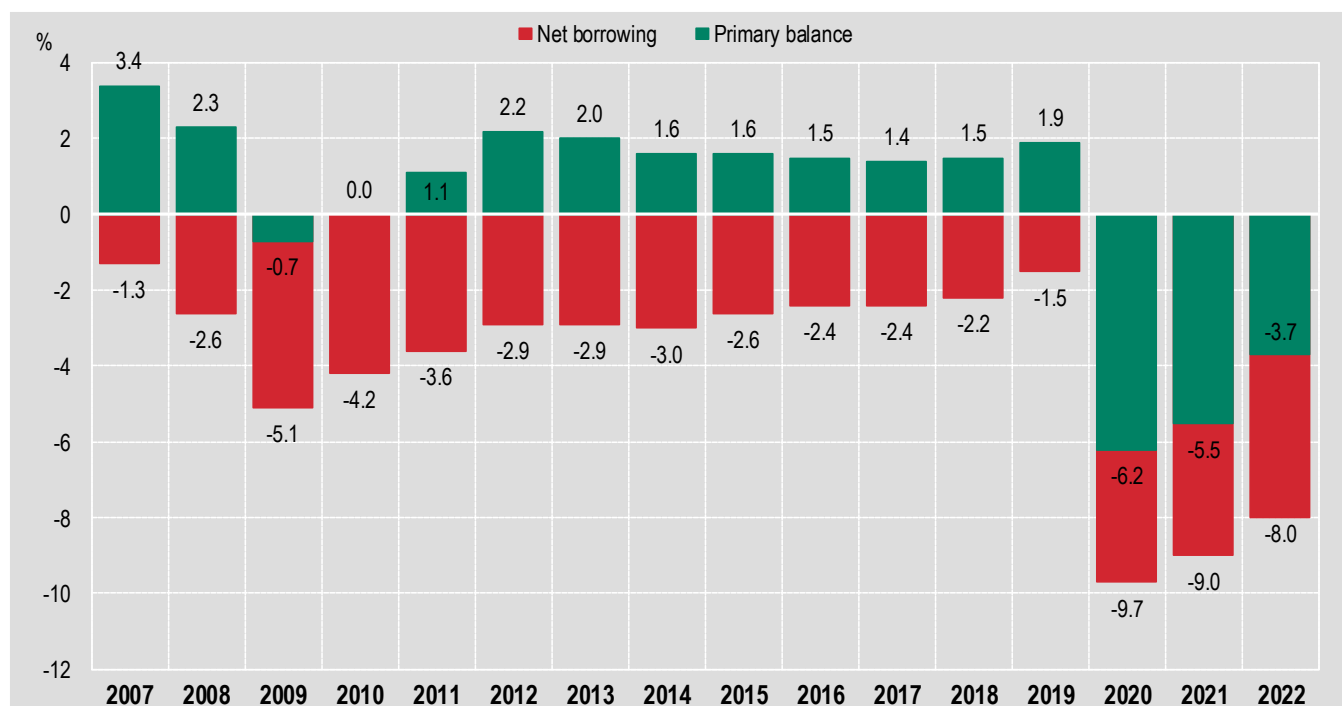


TABLE 1. GDP AND EXPENDITURE COMPONENTS

Year 2022, million euro (current prices, chain-linked volumes - reference year 2015) and annual percentage changes

AGGREGATES	Current prices	Percentage changes 2022/2021	Chained volumes	Percentage changes 2022/2021
Gross Domestic Product at market prices	1,909,154	+6.8	1,745,403	+3.7
Imports	738,658	+35.9	566,611	+11.8
Final Consumption Expenditure	1,523,302	+10.6	1,347,801	+3.5
- Households final consumption expenditure	1,142,205	+12.4	1,017,730	+4.6
- Government final consumption expenditure	371,527	+5.2	321,545	0.0
- NPISH final consumption expenditure	9,570	+15.3	8,885	+9.8
Gross Fixed Capital Formation	415,703	+13.9	375,366	+9.4
Changes in inventories	-2,736	-	-	-
Acquisitions less disposals of valuables	2,300	+21.4	1,216	+17.2
Exports	709,243	+21.4	591,384	+9.4

The sum of components may differ from the total due to rounding effects.

Table 2. CONTRIBUTIONS TO GDP GROWTH

Years 2018-2022, previous year prices

AGGREGATES	2018	2019	2020	2021	2022
National demand (excluding changes in inventories)	+1.1	+0.2	-7.7	+6.3	+4.6
- Final consumption expenditure	+0.6	0.0	-6.2	+3.0	+2.7
- Households final consumption expenditure and NPISH	+0.6	+0.1	-6.2	+2.7	+2.7
- Government final consumption expenditure	0.0	-0.1	0.0	+0.3	0.0
- Gross fixed capital formation and acquisitions less disposals of valuables	+0.6	+0.2	-1.4	+3.3	+1.9
Changes in inventories	+0.1	-0.4	-0.5	+0.4	-0.4
External balance of goods and services	-0.3	+0.7	-0.8	+0.2	-0.5
Gross domestic product at market prices	+0.9	+0.5	-9.0	+7.0	+3.7

The sum of individual contributions may differ from the total - i.e. the rate of change of GDP - due to rounding effects.

Table 3. GROSS VALUE ADDED AT BASIC PRICES

Years 2018-2022, annual percentage change on chain-linked volumes (reference year 2015)

AGGREGATES	2018	2019	2020	2021	2022
Gross Value Added	+0.9	+0.5	-8.4	+6.8	+3.9
Agriculture, forestry and fishing	+1.9	-1.6	-4.6	-1.1	-1.8
Mining and quarrying, Manufacturing and Other industrial activities	+2.0	-0.1	-11.2	+12.6	-0.1
of which: Manufacturing	+1.7	-0.4	-13.4	+14.1	+0.3
Construction	+1.2	+2.7	-5.8	+20.7	+10.2
Services	+0.6	+0.6	-7.9	+4.7	+4.8
Wholesale and retail trade; repair of motor vehicles and motorcycles; transportation and storage; accommodation and food service activities	+0.4	+1.8	-17.7	+10.5	+10.4
Information and communication	-0.6	+2.6	-0.4	+3.5	+3.5
Financial and insurance activities	-0.4	+0.8	+0.7	-0.8	-3.2
Real estate activities	+1.0	+1.1	-3.1	+2.0	+4.5
Professional, scientific and technical activities; administrative and support service activities	+3.6	-1.4	-2.5	+7.2	+3.0
Public administration and defence; compulsory social security; education; human health and social work activities	-0.4	-0.6	-4.2	+1.4	+1.3
Arts, entertainment and recreation, repair of household goods and other services	-0.3	+0.1	-16.6	+2.4	+8.1

CHART 3. HOUSEHOLD DOMESTIC FINAL CONSUMPTION EXPENDITURE BY PRODUCT

Years 2007-2022, annual percentage change on chain-linked volumes (reference year 2015)

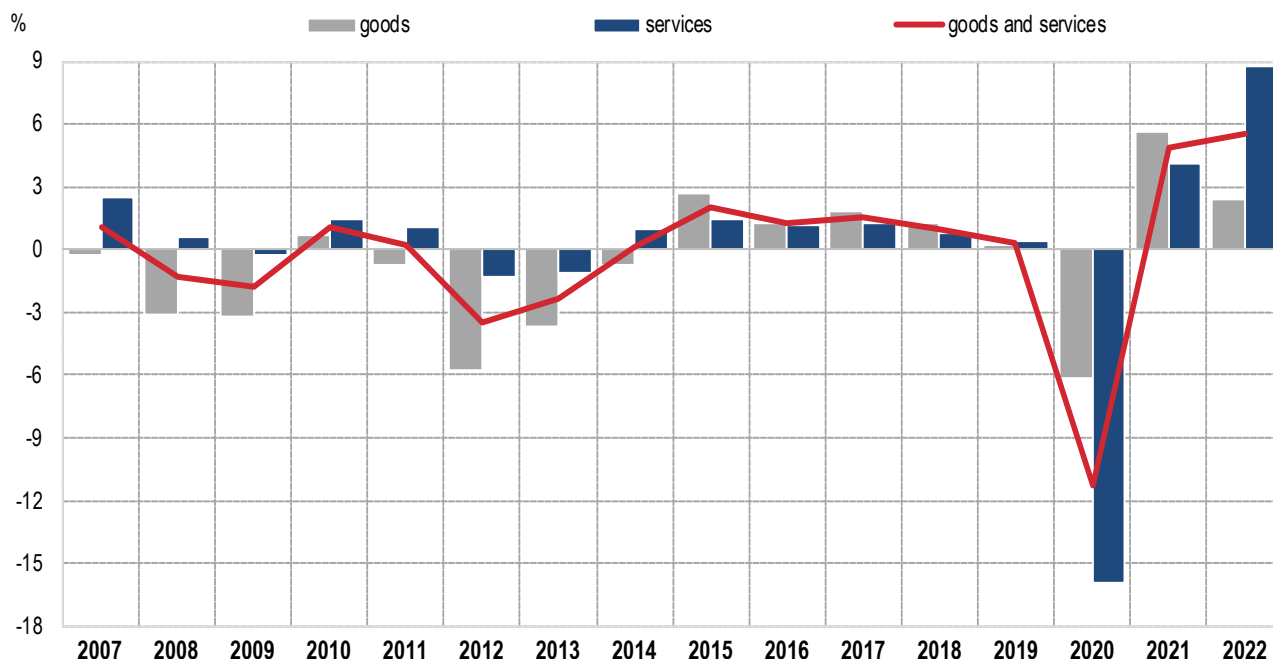


CHART 4. GROSS FIXED CAPITAL FORMATION BY ASSET

Years 2007-2022, annual percentage change on chain-linked volumes (reference year 2015)

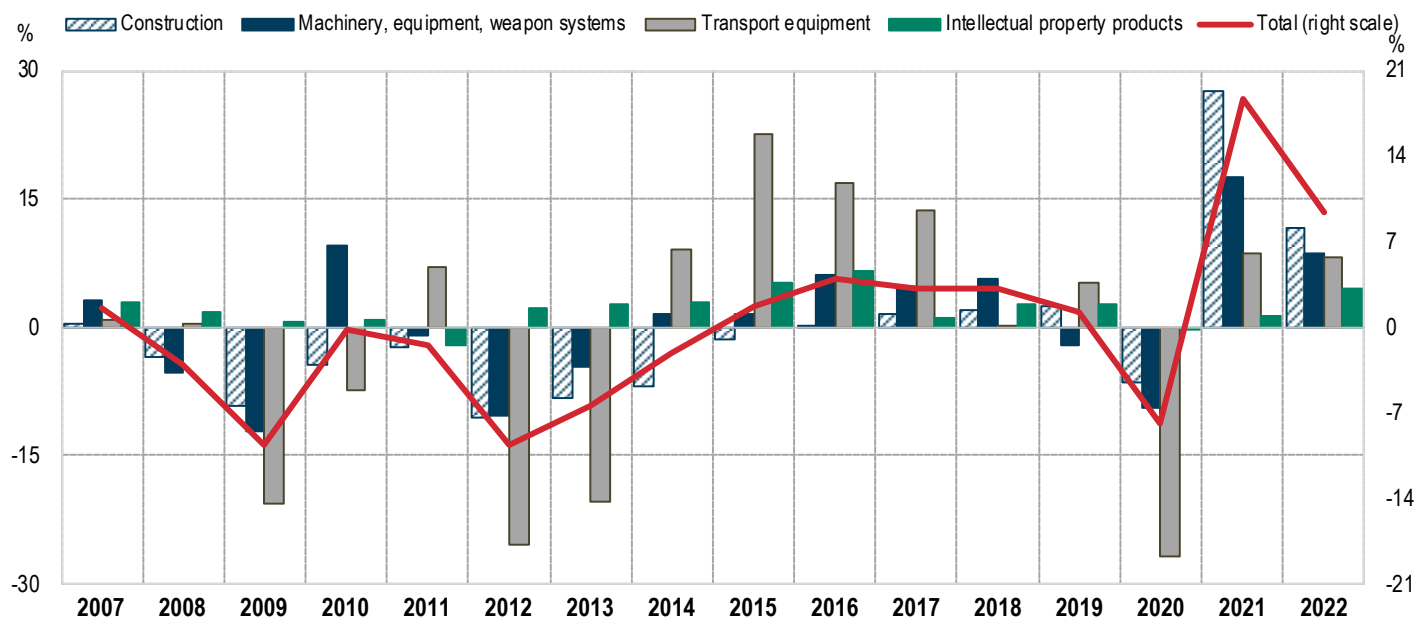


CHART 5. FULL TIME EQUIVALENT EMPLOYEES, WAGES AND SALARIES PER FTE EMPLOYEE

Years 2018-2022, annual percentage change



TABLE 4. GENERAL GOVERNMENT MAIN AGGREGATES AND RATIOS

Years 2019-2022

MAIN AGGREGATES AND RATIOS	2019	2020	2021	2022
Net lending (+) or Net borrowing (-)	-27,083	-160,383	-161,210	-153,447
Net lending (+) or Net borrowing (-) / GDP (%)	-1.5	-9.7	-9.0	-8.0
Primary balance (a)	33,317	-103,074	-97,517	-70,241
Primary balance/GDP (%)	+1.9	-6.2	-5.5	-3.7
Total receipts from taxes and compulsory social contributions	759,187	708,436	775,473	829,653
Tax burden (a)	42.3	42.7	43.4	43.5
Debt	2,409,943	2,572,749	2,678,098	2,762,464
Debt/GDP (%)	134.1	154.9	149.8	144.7

Debt is reported by Bank of Italy, Statistics, "The Public Finances: Borrowing Requirement and Debt - December 2022" 15 February 2023.

(a) see glossary

The revision of GDP estimates for 2020 and 2021

Below are reported the revisions with respect to the previous release of GDP and main aggregates for the two preceding years (2020 and 2021) resulting from the routine revision process of national accounts¹ are reported.

As regards 2020, GDP growth rate was unchanged (Table 5). As for 2021, GDP growth rate was revised from +6.7 to +7.0%. Upwards revisions occurred for the rate of change of fixed capital formation (from +16.5 to +18.6%), exports (from +13.4 to +14.0%) and imports (from +14.7 to +15.2%), while downwards revisions occurred in the rate of change of households final consumption expenditure (from +5.2 to +4.7%) and NPISH final consumption expenditure (from +3.7 to +3.3%).

TABLE 5. REVISIONS TO ANNUAL PERCENTAGE CHANGE OF GDP AND ITS EXPENDITURE COMPONENTS

Years 2020-2021, chain-linked volumes (reference year 2015), vintage comparison (March 2023 versus September 2022)

AGGREGATES	2020			2021		
	March 2023 estimate a	September 2022 estimate b	Revisions a-b	March 2023 estimate a	September 2022 estimate b	Revisions a-b
	Gross domestic product at market prices	-9.0	-9.0	0.0	+7.0	+6.7
Imports	-12.1	-12.1	0.0	+15.2	+14.7	+0.5
Final Consumption Expenditure	-7.9	-8.0	+0.1	+3.9	+4.2	-0.3
Households final consumption expenditure	-10.3	-10.4	+0.1	+4.7	+5.2	-0.5
- Government final consumption expenditure	+0.0	+0.0	0.0	+1.5	+1.5	0.0
- NPISH final consumption expenditure	-17.9	-17.9	0.0	+3.3	+3.7	-0.4
Gross Fixed Capital Formation	-7.9	-8.0	+0.1	+18.6	+16.5	+2.1
Exports	-13.5	-13.5	0.0	+14.0	+13.4	+0.6

The revision of the estimates of General Government account 2019-2021

The estimates of the General Government account for the years 2019-2021 were revised, in addition to the usual process of consolidating basic information, mainly to incorporate major changes introduced by the *Manual on Government Deficit and Debt - Implementation of ESA 2010 - 2022 edition* (MGDD 2022).

The Manual is an indispensable complement to the European System of Accounts (*European System of National and Regional Accounts, 2010*, ESA 2010), and provides methodological and interpretative guidance on the recording within the system of government accounts of specific transactions or measures implemented by government authorities. The MGDD is updated periodically according to a schedule agreed upon at the European level, and is the result of in-depth discussions (with majority voting) in various technical committees. National representatives of Statistical Offices, Central Banks and Ministries of Economy of the various EU countries actively participate in these discussions.

In particular, the new MGDD 2022 clarifies certain aspects relating to the accounting treatment of tax credits, with regard to three characteristics: transferability to third parties, deferrability over time, and use in offsetting other tax and contribution debts.

These aspects, which were not sufficiently developed in the previous version of the manual (MGDD 2019), impact the method of recording some of the bonuses introduced in Italy in the aftermath of the pandemic (in particular the building bonuses).

The new MGDD states that the three aforementioned characteristics, insofar as they contribute to defining the likelihood of the utilisation of the credit in its entirety, are to be considered diriment in order to distinguish between the two types of tax credits under ESA 2010: those that are 'non-payable' and those that are

¹ The routine revision process consists of a semi-annual cycle of yearly estimates, regularly released at the beginning of March and at the end of September (see the methodological note).

'payable'.

If there are limits to the credit's usability (i.e., within the amount of the tax liability for income tax alone in the reference year), the credit is defined as 'non-payable' and therefore has to be recorded in the government accounts as a reduction in tax revenue at the time of its utilisation. If, on the other hand, there is a reasonable certainty that, over time, the credit will be used in its entirety, the tax credit is defined as 'payable' and must be recorded as General Government expenditure, for the full amount accrued, in the year in which the subsidised expenditure is incurred.

It should be noted that the overall impact of the relief measure on General Government deficit is the same whether it is recorded as lower tax revenue or as higher expenditure. On the other hand, the time profile of this impact changes: when the measure is classified as 'non-payable', the impact is diluted over the years in which the tax credit is used; when the measure is classified as 'payable', the impact on General Government net borrowing is instead concentrated exclusively in the first year.

In light of the new interpretative framework and following the outcome of the methodological investigations conducted jointly by Istat and Eurostat, the accounting treatment of the so-called '110% Superbonus' and 'Facade bonus' has therefore changed starting from the 2020 estimate year. Both tax credits are now classified as 'payable' tax credits, and recorded in the consolidated General Government account as expenditure for the full amount, consistent with the time of recording under the 2022 MGDD, i.e. when the subsidised investment expenditure is incurred. In previous estimates, both subsidies were classified as 'non-payable' tax credits and therefore recorded as lower revenue in the year the credit was used (hence, as lower tax revenue).

This change resulted in a revision of the deficit/GDP ratio for the years 2020 and 2021, compared to the estimate provided in September 2022, by -0.2 and by -1.8 percentage points, respectively.

TABLE 6. REVISIONS TO GENERAL GOVERNMENT ACCOUNT

Years 2019-2021, million euro current prices, vintage comparison (March 2023 versus September 2022)

AGGREGATES	2019			2020			2021		
	March 2023 estimate	September 2022 estimate	Revisions a-b	March 2023 estimate	September 2022 estimate	Revisions a-b	March 2023 estimate	September 2022 estimate	Revisions a-b
	a	b		a	b		a	b	
Market and for own final use output	44,616	44,616	0	38,739	38,330	+409	43,741	43,023	+718
Current taxes on income, wealth, etc.	258,133	258,133	0	250,652	250,727	-75	267,698	267,492	+206
Taxes on production and imports	257,578	257,578	0	227,154	227,081	+73	260,115	258,539	+1576
Social contributions receivable	242,224	242,224	0	229,686	229,684	+2	246,062	244,988	+1074
Other current revenues	36,511	36,481	+30	34,794	34,776	+18	35,108	35,363	-255
Total current revenues	839,062	839,032	+30	781,025	780,598	+427	852,724	849,405	+3319
Total capital revenues	4,719	4,719	0	5,253	5,252	+1	10,676	7,861	+2815
Total revenues	843,781	843,751	+30	786,278	785,850	+428	863,400	857,266	+6134
Compensation of employees	172,921	172,921	0	173,160	173,126	+34	176,752	176,548	+204
Intermediate consumption	146,899	146,899	0	149,016	149,008	+8	158,083	157,228	+855
Social benefits other than social transfers in kind	361,203	361,203	0	399,172	399,169	+3	397,876	397,905	-29
Other current expenditures	127,867	127,867	0	133,280	133,389	-109	145,337	146,315	-978
Total current expenditures	808,890	808,890	0	854,628	854,692	-64	878,048	877,996	+52
Total capital expenditures	61,974	61,970	+4	92,033	88,803	+3230	146,562	108,172	+38390
Total expenditures	870,864	870,860	+4	946,661	943,495	+3166	1,024,610	986,168	+38442
Net lending (+) or Net borrowing (-)	-27,083	-27,109	+26	-160,383	-157,645	-2738	-161,210	-128,902	-32308
GDP	1,796,649	1,796,649	0	1,661,020	1,660,621	+399	1,787,675	1,782,050	+5625
Net lending (+) or Net borrowing (-) /GDP	-1.5	-1.5	0.0	-9.7	-9.5	-0.2	-9.0	-7.2	-1.8
Tax burden (a)	42.3	42.3	0.0	42.7	42.7	0.0	43.4	43.4	0.0

(a) See glossary

Acquisitions less disposals of valuables: valuables are non-financial goods that are not used primarily for production or consumption, do not deteriorate (physically) over time under normal conditions and are acquired and held primarily as stores of value.

Basic price: is the amount receivable by the producer from the purchaser for a unit of a good or service produced as output minus any tax payable, and plus any subsidy receivable, by the producer as a consequence of its production or sale. It excludes any trade margins and transport charges invoiced separately by the producer.

Chain-linked values: measure of national accounts aggregates in volume (referred to data net of price movements). For each aggregate and each year, a volume index is calculated as the ratio between its value calculated at previous year prices and its value at current prices in the preceding year. Then, the volume indices are chained by successively multiplying them starting from a value set at 100 for the first year and then shifting the base to the reference year (currently 2015). The result is a chain-linked index, that multiplied for the current value of the reference year (and divided by 100) produces the volume measure of the aggregate.

Changes in inventories: are measured by the value of the entries into inventories less the value of withdrawals and the value of any recurrent losses of goods held in inventories. They consist of changes in: material and supplies, work in progress, finished goods, goods for resale.

Compensation of employees: is the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during an accounting period. Compensation of employees is made up of wages and salaries and employers' social contributions, actual and/or imputed.

Current balance of the General Government: the difference between General Government current revenue and current expenditure.

Exports: consist of transactions in goods and services (sales, barter, gifts or grants) from residents to non-residents. Exports of a good occurs when economic ownership changes between residents and non-resident. This applies irrespective of corresponding physical movements of goods across frontiers. They are valued *free on board (FOB)* that is the value of the goods at the exporter's customs frontier. Export of services consist of all services rendered by residents to non-residents.

Final consumption expenditure of NPISHs: consists of the expenditure incurred by resident non-profit institutions serving households (NPISHs) on individual consumption goods and services. It includes:

- the value of the goods and services produced by NPISHs other than own-account capital formation and other than goods and services sold to households and other units;
- expenditures by NPISHs on goods or services produced by market producers that are supplied to households for their consumption without any transformation.

Full time equivalents (FTEs): is an employment measure obtained by transformation of part-time and multiple jobs into full-time equivalent units. FTEs are net of hours paid for by CIG (Wage Supplementation Fund).

General Government: consists of institutional units whose main function is to produce and supply non-market goods and services, intended for individual and collective consumption, and to redistribute national income and wealth. These units are financed by compulsory payments made by units included in other sectors of the economy (corporation, non-profit institutions, households).

General Government gross debt: also known as **public debt**, is calculated according to the definition adopted in the Excessive Deficit Procedure of the European Union (Council Regulation (EC) No. 479/2009), as the sum of General Government financial liabilities in the following categories: currency and deposits, debt securities, loans; liabilities are valued at face value. Debt is consolidated, thus excluding liabilities of which the corresponding financial assets are held by the sector of General Government. The Bank of Italy calculates the monthly General Government debt on the basis of statistical rules established at European level ("Maastricht debt").

Government final consumption expenditure: consists of expenditure incurred by General Government on both individual and collective goods and services to be supplied freely to households for consumption purposes. It includes:

- the value of goods and services produced by General Government, other than own account capital formation and sales;
- purchases by General Government of goods and services produced by market producers that are supplied to households without any transformation

Gross domestic product at market prices (Gdp): final result of the production activity of resident producer units. It can be defined in three ways: as the sum of gross value added of all industries plus taxes and less subsidies on products; as the sum of the final uses of goods and services units (final consumption and gross capital formation), minus the value of imports of goods and services. It also corresponds to the sum of primary income distributed by resident producer units to the production factors.

Gross fixed capital formation: consists of resident producers' acquisitions, less disposals, of fixed assets during a given period plus certain additions to the value of non-produced assets (e.g. land) realized by the productive activity of producer or institutional units. Fixed assets are material and immaterial (e.g. software) produced assets used in production for more than one year.

Household final consumption expenditure: consists of expenditures incurred by households on individual goods and services for the direct satisfaction of individual needs. A distinction is made between:

- domestic final consumption expenditure, incurred on the economic territory of resident and non-resident units;
- national final consumption expenditure, incurred by resident households on the economic territory and abroad.

Imports: consist of transactions in goods and services (purchases, barter, and gifts) from non-residents to residents. Imports of goods occur when economic ownership changes between non-residents and residents. In supply and use account, imports are valued *free on board (FOB)* that is the value of the goods at the exporter's custom frontier. Imports of services consist of all services rendered by non-residents to residents.

Net lending (+)/ net borrowing (-): is a national accounts balancing item. It is the last balancing item of the non-financial accounts - namely the balancing item of the capital account. If positive (lending), it is a surplus loaned out, that is to say the amount available to a sector for financing, directly or indirectly, other sectors; if negative (borrowing), it is the financing of a debt, namely the amount that a sector is obliged to borrow from other sectors. The net lending (+) or borrowing (-) of the total economy is the sum of the net lending or borrowing of the institutional sectors. It represents the net resources that the total economy makes available to the rest of the world (if it is positive) or receives from the rest of the world (if it is negative). The net lending (+) or borrowing (-) of the total economy is equal but of opposite sign to the net borrowing (-) or lending (+) of the rest of the world.

Net lending (+)/ net borrowing (-) of General Government Sector: corresponds to the General Government surplus (+) / deficit (-) and is calculated as total revenue less total expenditure. It is used in the context of the Excessive deficit procedure (EDP) and Government finance statistics.

Price deflators: ratio of the nominal (or current-price) measure of an economic aggregate to the corresponding real (or chain-linked value) measure. It measures the part of the nominal growth due to price changes.

Primary balance of the General Government: the balance between revenues and expenditures (Government net borrowing or net lending) excluding interest payments.

Resources and Use Account: is an overview in tabular form of an accounting identity, under which, for the economy as a whole, total resources (gross domestic product and imports) are equal to total final uses (final consumption, changes in inventories, gross fixed capital formation, acquisitions less disposals of valuables, and exports).

Tax burden: total tax revenues (current taxes on income and wealth, taxes on production and imports, capital taxes and social security contributions) as a percentage of GDP.

Taxes: consist of compulsory, unrequited payments, in cash or in kind, which are levied by General Government, or by the institutions of the European Union. Three type of taxes are recorded:

- current taxes on income and wealth levied periodically on the income and wealth and some periodic taxes that are assessed neither on that income nor that wealth.
- taxes on production and imports levied in respect of the production and import of goods and services, the employment of labour, the ownership or use of land, buildings or other assets used in production.
- capital taxes levied at irregular and very infrequent intervals on the values of the assets or net worth owned by institutional units or on the values of assets transferred between institutional units as a result of legacies, gifts between persons, or other transfers.

Terms of trade: ratio of percent change of export prices to percent change of import prices.

Value added at basic prices: the production value of goods and services less the purchases of goods and services consumed in the production process, where the production is evaluated at basic prices, i.e. net of taxes on products and including subsidies on products. Intermediate consumption is evaluated at purchasing prices. Value added is the sum of primary incomes distributed by resident producer units and of the consumption of fixed capital.

Wages and salaries: is the total remuneration in cash and in kind, including income taxes and other payments payable by the employee, including those withheld by the employer and paid directly to social insurance schemes, tax authorities, etc. on behalf of the employee.

Introduction and legal framework

The system of national accounts describes in quantitative terms and in the context of an accounting framework the whole set of economic and financial activities of a country or its specific territorial subdivisions, for a period coinciding with the calendar year and for shorter time intervals (quarters).

As for any organized economic unit, be it a large enterprise or a single family, also for a country taken as a whole it is possible to build periodic cost and revenue statements in order to record, in aggregate form and systematic way, all the actions undertaken by economic agents taking part in the process of formation, distribution and use of resources.

National accounts estimates are produced in accordance with the provisions of the European System of National and Regional Accounts Manual (ESA 2010), which represents the application at European level of the System of National Accounts (SNA 2008) of the United Nations. The methodological provisions act as binding rules for EU member states, ensuring comparability of the estimates. ESA 2010 was introduced by Regulation (EU) of the European Parliament and of the Council No 549/2013 on the European system of national and regional accounts², which includes a mandatory transmission programme of data.

The recording method of economic and financial flows adopted by national accounts follows the rules of quadruple entry, since most operations involve two institutional units and each operation has to be recorded twice by both intervening parties. The system is organized in an ordered set of accounts describing the performance of the economy, showing how the income is formed, distributed and used, how savings are accumulated, what are the forms of financing of the activities and what is the position of the country with respect to the rest of the world. The networks, the interdependencies and the behavioural relationships among sectors operating in the context of the country are also represented.

In a first step, all flows and stocks are measured in money terms (that is at current prices), which by definition incorporate the underlying price levels. When comparing different periods (years), it is essential to decompose the change of aggregates expressed in value terms, separating the component derived from price changes from the component derived from changes in volume (also called “real” or “at constant prices”). For all the variables subject to this decomposition, this result is obtained by the application of deflation techniques, resulting in estimates of the aggregates expressed first at prices of the previous year and then in “chain-linked” terms. The calculation allows the derivation of price indices (deflators) and of aggregates expressed in volume, that are comparable over the years. Particularly relevant is the measure of GDP at chain-linked values that represents the main reference variable summarizing the evolution of the economy in real terms.

All the estimation processes that contribute to the compilation of national economic accounts are included in the National Statistical Programme (current edition: NSP 2020-2022 – updating 2021-2022) approved with Decree of the President of the Republic of 15 December 2022, published by the Official Journal of the Italian Republic - general series - No. 44 of 21st February 2023.

Data compilation: process, tools and techniques

In Italy, national accounts are compiled building on a system of statistical sources and administrative data adapted to match ESA definitions. The accounts measure a broad set of variables that describe the economic system, its evolution over time and its relationships with the rest of the world. The annual estimates of GDP at current prices are obtained starting from the estimates of demand components (final consumption, gross fixed capital formation, intermediate consumption and exports) and of supply components (domestic production and imports). Estimates of the two sides of the economy, carried out mainly on the basis of independent approaches, are integrated within a system of supply and use tables (SUT) which allows to analyse and reconcile the differences between demand and supply until they are reduced to statistical discrepancies that can be handled through a mathematical balancing process.

In the current compilation process of national accounts, there is no independent estimate of GDP/GNI obtained through the income approach, that is based on the sum of the remunerations of the production factors. In fact, the

² The main features of the first version of national accounts compiled in accordance with the criteria laid down by ESA 2010 have been described in the information note “*I nuovi conti nazionali in SEC 2010 – Innovazioni e ricostruzione delle serie storiche (1995-2013)*” (October 2014). A brief description of the changes introduced in the general revision of September 23 2019 is available in the note “*La nuova revisione dei Conti Nazionali a cinque anni dall’Introduzione del SEC 2010*” (<https://www.istat.it/it/archivio/232520>).

available statistical sources are inadequate in deriving a direct estimate of gross operating surplus and mixed income. These components are estimated in a second step, when compiling national accounts by institutional sector, as the difference between final estimates of value added and the other distributed primary incomes (in the first place compensation of employees) that can be measured from direct sources. The resulting income shares distributed to the production factors are a very important indicator of the reliability and economic plausibility of value added estimates.

As a rule, the estimation processes are performed at the highest possible level of disaggregation to ensure both a high degree of reliability of the estimates and an adequate detail to represent the economic phenomena under analysis and their evolution over time. The methods applied in the compilation process provide comprehensive estimates of GDP and national income, including the non-observed components of the economy³.

As regards volume estimates (also called “at constant prices”), the deflation of aggregates previously estimated at current prices is performed applying different methods to the supply side and to the demand side. For the supply side of market producers, value added at prices of the previous year is estimated by applying the double-deflation method, which entails: a) the estimation of the current values of output and intermediate consumption; b) their deflation through Paasche-type price indexes of output and input respectively, obtaining output and intermediate consumption at prices of the previous year; c) the calculation of value added at prices of the previous year as the difference between these two aggregates. On the demand side, each component of expenditure is deflated using price indices appropriate to the types of goods and services. These indices are mainly based on consumer prices, output prices, as well as import and export prices.

Output of non-market services is, by convention, equal to the value of the costs of production. In the absence of specific price indices, output at previous year's prices is calculated using the input method, i.e. by the sum of the individual cost components (compensation of employees, fixed capital consumption, taxes on production and intermediate consumption) appropriately deflated. For compensation of employees, which accounts for the bulk of non-market output, deflation is based on the change in hours worked. Exclusively for the education services and for hospital services only within the health industry, the output in volume is calculated by applying to the current value of production of the previous year the changes of specific volume indices; accordingly, the value added in volume is calculated through the double deflation method.

Since aggregates expressed at prices of the previous year are not suitable for time comparisons, they must be chain-linked and referred to a base year (presently 2015). The resulting values are based on Laspeyres type of chained volume indexes, which are subsequently expressed in money terms by multiplying them by the value at current prices in the base year.

Main sources used for the estimates

In order to compile the estimates of aggregates included in the system of national accounts, data derived from a large set of sources are used. Sources of Istat own production include both business surveys and household surveys, and statistical registers built integrating survey and administrative data. These are supplemented by specific administrative archives (such as some INPS archives), as well as information drawn from external sources, both public and private. Data drawn from surveys or other sources are in part already defined in a consistent way with the definitions of national accounts, while those that follow different definitions must be corrected and appropriately reclassified to comply with the recording rules established by ESA.

Here follows a synthetic list of main sources used to compile the final version of national accounts, usually accomplished more than two years after the end of the reference year (in March of year t for data referring to year $t-3$).

As regards estimates of the supply side, the most relevant sources are those providing census-type information on enterprises: the statistical register of active enterprises (ASIA-Enterprises) and the information system on economic results of enterprises (Frame-SBS in the following). This micro database includes information on economic results for the whole population of active market enterprises (excluding agriculture and financial intermediation). It is built through a complex integration procedure of data from administrative archives, treated statistically and combined with data drawn from the survey on small and medium enterprises (PMI) and from the survey on the financial statements of large enterprises (SCI). Information on the financial statements of companies operating in financial intermediation are provided by the supervisory authorities, that is the Bank of Italy, the insurance supervisory

³ See the methodological note accompanying the press release “The non observed economy in National Accounts” normally released (in Italian) in October of each year.

authority (Istituto per la vigilanza sulle assicurazioni - IVASS) and the supervisory commission on pension funds (Commissione di vigilanza sui fondi pensione - COVIP). Estimates for the primary sector (Agriculture, Forestry and Fishing) are based on several sectoral sources, complementing the information derived from the survey on economic outcomes of agricultural holdings (RICA-REA) and the survey on the structure and output of agricultural holdings (SPA).

For the non-profit sector a dedicated database has been built starting from the statistical register of private non-profit institutions and public institutions, integrated with information drawn from the sample survey on the non-profit sector and from a set of administrative archives (UNIEMENS INPS, IRAP, UNICO, VAT). Concerning the General Government a very analytical approach is utilised, based on the collection and treatment of financial statement data of the whole set of institutional units included in this sector, both at the central and at the local level. For some government units (e.g. the State, municipalities, regions, local health care units, universities, social security institutions) data are collected through a centralized system, while for other units a specific statistical survey of financial statements in summary form is used (RIDDCUE survey). For the estimation of taxes, source data are integrated with those provided by the Tax and revenue agency (Agenzia delle entrate) and by the Finance Department of the Ministry of Economy and Finance (MEF). For the most recent year (t-1), information provided by the public sector working balance compiled by the Ministry of Economy and Finance is used, together with cash flow data collected by the Information System on the Operations of Government Bodies (SIOPE), extensively exploited for local entities.

As regards the demand side, estimates of private consumption are based primarily on data provided by the household expenditure survey. For part of the goods purchased by households, as well as for some capital goods, the commodity-flow method is utilized, calculating the value of final uses available for consumption and for capital formation in an indirect way, starting from the resources (defined as the sum of production and imports, less exports). For gross fixed capital formation, estimates obtained with the commodity-flow method are complemented by information on firm activities derived from Frame-SBS and specific sources, such as registers of vehicles and of shipping, the Building Permits Survey, data on military expenditure from the Ministry of Defence, and the results of R&D surveys. As regards foreign trade (imports and exports of goods and services), the data derive from the survey on traded goods (Intrastat and Extrastat components) conducted by Istat and from information on the trade of services extracted from the Balance of Payments compiled by the Bank of Italy.

As regards labour input estimates, information collected by the Labour force survey is integrated with a broad database of administrative data (particularly social contribution statements) submitted to a statistical treatment. Information from statistical registers compiled in Istat are also used: the statistical register of active enterprises (ASIA-Enterprises), the statistical register of agriculture enterprises (ASIA-Agriculture), the statistical register of private non-profit institutions and public institutions, base population register and thematic register on labour.

Estimates for year t-2 are broadly based on provisional data, also of a structural kind, and on short-term indicators. Estimates for year t-1 are directly calculated starting from quarterly estimates based on indicators derived from Istat sources and, to a lesser extent, from other sources, administrative and other.

Output: main analytical measures

The economic accounts provide a picture of the main macroeconomic variables of demand and supply in which GDP is the reference variable.

Variables on the demand side are final consumption expenditure of households, of non-profit institutions serving households (NPISH) and of General Government, gross fixed capital formation, valuables, changes in inventories and exports. Variables on the supply side are value added, net indirect taxes and imports. These aggregates are expressed both in value (at current prices) and in volume (at prices of the previous year or at chain-linked values).

Measures of labour input are the number of persons employed, the number of jobs, worked hours and and full-time equivalent units.

Value added, output, incomes, wages and salaries and measures of labour input are made available for up to a maximum of 64 economic activity groups (aggregations of the divisions of two-digit NACE Rev.2).

Exports and imports are divided into goods and services.

Household expenditure on the economic territory is made available by expenditure function (62 purposes of the COICOP classification identified by 3-digit or 4-digit code) and by group of products (durable, non-durable and semi-durable goods, and services). Final consumption expenditure of resident households is obtained adding their expenditure in the rest of the world to their expenditure on the economic territory, and subtracting expenditure on the economic territory of non-resident households.

Gross fixed capital formation is available by type of asset, material and immaterial: dwellings, non-residential buildings and other structures, transport equipment, computer hardware, communication equipment, other machinery and equipment, weapons systems, cultivated biological resources, research and development, mineral exploration, entertainment, literary or artistic originals, software and databases. Gross fixed capital formation, depreciation and fixed capital stock are also disseminated by industry.

Data revision policy

“Revision” means the change of any previously disseminated statistical data, while “revision policy” is the set of rules that define the timing of the release of revised data and the length of the revision period: the revision policy adopted by Istat is aligned with European recommendations.

Revisions are classified as routine, extraordinary and other non-scheduled revisions. Revisions are defined as routine when they mainly derive from the update of data due to the availability of more up-to-date sources of information (see Tables below).

National accounts data are published twice a year, at the beginning of March and at the end of September. In March of every year (hereafter defined as year t) final data for year $t-3$ are disseminated, together with provisional data for years $t-2$ and $t-1$. The September release fulfils the need to take into account with as much timeliness as possible information for years $t-1$ and $t-2$ that becomes available after the first annual release in March. Moreover, it allows the alignment between the estimates of the national accounts and those of the Balance of payments.

Finally, estimates included in the General Government consolidated account are subject to a revision extended back to year $t-4$, in accordance with European rules concerning data relevant for the excessive deficit procedure (EDP, Council Regulation No 3605/93).

Revisions are defined as extraordinary when they are triggered by methodological changes in the treatment of basic data, extraordinary changes in the classification and/or definition of variables. In the context of national accounts, or by extraordinary revisions – usually introduced every five years – affect the whole time series of data, starting from the reference year for which the new estimate of the level of the aggregates is performed (defined as benchmark estimate). The last extraordinary revision of national accounts was disseminated in September 2019.

The revision took on board new available sources and introduced methodological innovations and improvements aimed at enhancing the quality of national accounts. As regards timing, the revision was coordinated with similar operations taking place in most European countries.

The previous general benchmark revision of national accounts, implementing the transition to the new ESA (from ESA95 to ESA 2010) with the ensuing methodological changes, has been published in September 2014.

If it is deemed necessary to revise some aggregates outside of the scheduled timetable, following the correction of errors and/or inconsistencies or revisions due to changes in the General Government sector perimeter, the new estimates are treated as non-scheduled revisions and the modified time-series are re-published in the data warehouse [I.Stat](https://www.istat.it). Users are duly informed through the institutional website.

The following table summarizes the main changes in the statistical sources used for the estimates related to years $t-2$ and $t-3$ compared with the version of annual national accounts published on the web site (www.istat.it) on 23 September 2022.

Aggregates	Reference years	New statistical sources and updates
Value added of agriculture	2021	Provisional results of surveys of crops and animal production. Provisional results of estimative surveys run by regional and/or provincial agriculture representative offices. Provisional data on technical means of production (seeds, fertilizers, plant protection products, feeding stuff).
	2020	Final R&D data for the non-profit sector (market units). Annual separate accounts (ARERA).
Value added of industry and market services	2021	Provisional data of company financial statements. Final data (under the reporting scheme in force) for banks, other financial intermediaries, insurance and pension funds.
	2020	Final R&D data for the non-profit sector (non market units).
Final consumption expenditure of NPISH	2021	Social Security Institute (INPS) data on employees. Survey on Employment, wages, social security contributions (Oros).
	2020	Updating of estimates derived from the commodity flow method. Revision of data on car registrations. New indicators for the calculation of dwelling services expenditure, fuels and energy, transportation services, domestic services, insurance and financial services. Final data on expenditure for hospital services from the Ministry of Health. Data on students by level of education and on hotel stays. Data on expenditure for recreational services from the Italian Society of Authors and Publishers (SIAE) and the Custom Agency.
Household final consumption expenditure	2021	Provisional data on expenditure domestic services, insurance, fuels and energy. Provisional data on hotel stays.
	2020	Updated estimates from the commodity flow method. New data on car registrations.
Gross capital formation	2021	For changes of inventories provisional data of company financial statements.
	2021	Final data on the foreign trade of goods: values and average unit values. Revision of the balance of payments.
Imports and exports of goods and services	2020	Final data from statistical register of private non-profit institutions and public institutions. Final data from the annual account of General Government employees compensation. Updating of the General Government sector perimeter (List of units in sector S13).
	2021	Provisional data from Business register (ASIA 2021). Social Security National Institute provisional data on employees, outworkers, domestic workers and employees in agriculture. Provisional data from the annual account of General Government employees compensation. Provisional data from the Ministry of education. Data from Multipurpose survey on households - aspects of daily life. Updated data on hours compensated by the Wage Supplementation Fund (INPS). Results of the quarterly survey on job vacancies and hours worked. Survey on employment, wages and salaries and social charges (OROS). Labour force survey (LFS). Social Security Institute data on outworkers, domestic workers, workers in agriculture (employees and self-employed).
Compensation of employees	2020	Final version of budget data of local units of General Government on personnel costs.
	2021	Social Security Institute (INPS) data on employees. Provisional data on financial statements of corporations Final data (under the reporting scheme in force) for banks, other financial intermediaries, insurance and pension funds. Provisional budget data of General Government on personnel costs.

The following table summarizes the main changes in the statistical sources used for the estimates related to years t-2 and t-3 compared to the version of the General Government consolidated account published on the web site (www.istat.it) on 22 October 2022.

GG subsectors	New statistical sources and updates
State	<ul style="list-style-type: none"> ■ State budget recorded on a cash and legal commitments basis, provided by the State General Accounting Department (RGS) of the Ministry of Economy and Finance (MEF); ■ State sector working balance (RGS); ■ Analytic information provided by various MEF departments: treasury management of flows with the European Union due to Community programmes (RGS); revenue of state and local taxes centrally managed, by type of tax (Finance Department); interests and cash flows arising from public debt management (Treasury Department); ■ Cassa Depositi e Prestiti S.p.A.: data on interest payments and interest earnings on loans provided to General Government.
Other central units	<ul style="list-style-type: none"> ■ Constitutional bodies, other central government bodies producing economic services and regulating economic activities, research bodies, government bodies providing social care, recreational, cultural and sectoral regulation services, publicly-owned enterprises whose legal form is private financial statements, income statements, balance sheets and notes to the financial statements, Istat surveys on budget flows, Istat survey on information, data and document for the classification of economic units within institutional sectors established by ESA (RIDDCUE)
Local Government	<ul style="list-style-type: none"> ■ Regions: financial statements of Regions and autonomous provinces, integrated with specific detailed information provided by specific entities. General Government database (BDAP); ■ Provinces and metropolitan areas: financial statement certificates – General Government database (BDAP) – accounting schemes; ■ Municipalities, associations of municipalities and mountain communities: financial statement certificates – General Government database (BDAP) – accounting schemes.
Other local units	<ul style="list-style-type: none"> ■ Local health agencies, hospital agencies, public research hospitals, university polyclinics: budget flows collected by the healthcare information system managed by the Ministry of Health; ■ Local bodies providing social care, recreational, cultural and sectoral regulation services: RIDDCUE survey on budget flows, profit, balance sheets and notes to the financial statements; ■ Universities: survey carried out by the Ministry of Education, University and Research, Unified report of final statements of universities (up to 2016) and profit and loss accounts and balance sheets (since 2017). ■ Other local bodies producing economic services and regulating economic activities, publicly-owned enterprises whose legal form is private: RIDDCUE survey on budget flows, Istat survey on Chambers of Commerce. Profit and loss, balance sheets and notes to the financial statements.
Social security institutions	<ul style="list-style-type: none"> ■ INPS and INAIL financial statements and Istat survey on budget flows of social security institutions. For some specific flows, information from financial statements is integrated with extra-budgetary information or additional sources.

Concerning the State, for the year t-1 (2022) all the information that for the year t-2 is reported in the above-mentioned final documents, is available at a provisional level. For local health units, estimates are based on the communications made by the Regions to the Ministry of Health. For all other units, the estimates for the year t-1 are made by applying to the value of each economic item of year t-2, the related annual rate of change. Rate changes are calculated on cash data collected by the Ministry of Economy and Finance for the compilation of the Working Balance and on the general government transactions information system (SIOPE). Data collected are previously adjusted for the effects of any concentrations of receipts or payments (e.g. arrears for employment contracts signed in the previous year or payments for trade credits) that, by definition, should not affect the evolution of flows recorded on accrual basis.

Coverage and geographic detail

The national accounts provide a picture of the economy of a country as a whole. All units that have their centre of predominant economic interest on the economic territory of the country are covered. These units are defined as resident units, irrespective of their nationality, legal form or presence on the economic territory at the time they carry out a transaction.

The main geographic reference of annual economic accounts is the whole economic territory.

Timeliness

The first release of annual economic accounts and of the General Government consolidated account takes place two months after the end of the reference year (generally the 1st of March). Subsequent estimates are released approximately nine months after the end of the reference year (generally the 21st of September).

Dissemination

Information on national accounts is available at <http://www.istat.it/en/national-accounts>.

For less recent information, click on the button “Archive” at the bottom of the page.

Time series of national economic accounts according to ESA 2010 are produced and disseminated in million euro at current prices, at prices of the previous year and at chain-linked values with 2015 as the base year. Time series of the General Government consolidated account are produced and disseminated in million euro at current prices.

The main time series are disseminated in Excel format as attachment to the two yearly press releases (“GDP and General Government net borrowing” and “Annual national accounts”).

The complete set of time series is disseminated through the [I.Stat](#) data warehouse in the section “National Accounts\Annual national accounts” immediately after the publication of the press release on the website. [IstatData](#) is the new Istat’s data dissemination platform that will gradually replace the I.Stat data access system. Until the data transfer is completed, the two systems will coexist. The data warehouse can be accessed from the “national-accounts” page or directly from the homepage. The data warehouse displays data in multidimensional tables that allow the drafting of customised figures and tables for many economic aggregates by acting on variables, reference periods and the arrangement of table heads and sides.

In the data warehouse I.stat under the section “National Accounts\General Government statistics”, the annual account and the key indicators of General Government are made available.

The complete set of time series of General Government accounts (comprehensive of subsectors) will be disseminated through the [I.Stat](#) data warehouse in section “National Accounts\General Government statistics” on the 21 of April 2023, after the conclusion of the validation process by the European Commission and simultaneously with the publication of the press release on “Notification of General Government deficit and debt according to the excessive deficit procedure”.

[I.Stat](#) displays time series according to ESA 2010 starting from 1995 for values at current prices and chain-linked values, from 1996 for values at prices of the previous year. In addition, in the section “National Accounts\Annual national accounts\” are stored series already disseminated: “Annual accounts in the 2014 version” and “Annual accounts in the 2005 and 2011 versions”.

For technical and methodological information

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