



HELLENIC STATISTICAL AUTHORITY

PRESS CONFERENCE

17 October 2017

National Accounts – GDP calculation method

- Production, expenditure and income approach
- Data sources
- Revisions



GDP – Gross Domestic Product



IS

the main measure of a country's economy



DEPICTS

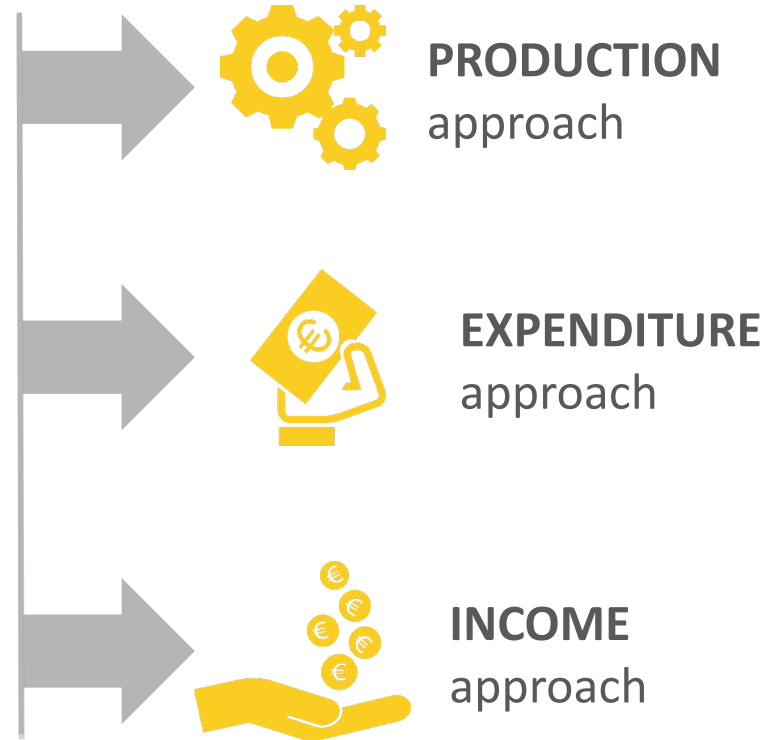
the **total value** of all **final goods and services** (tangible and intangible) **produced** in a country during a specific time period.



How is GDP calculated? (3 approaches)

GDP at market prices
is the **final result**
of the **production activity**
of **resident producer units**
(ESA 2010, §8.89).

Calculated on the basis
of **3 approaches:**



Production Approach



Output of goods and services (P.1)

-

Intermediate **Consumption** (P.2)

+

Taxes on products (D.21)

-

Subsidies on products (D.31)

=

Gross Domestic Product

at market prices (B.1*g)



Gross Value Added in 10 industries (2016*)



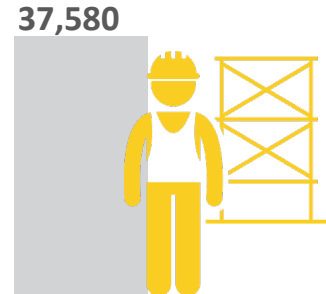
Agriculture, forestry and fishing



Mining and quarrying, manufacturing, electricity, gas, steam and air conditioning supply water supply, sewerage, waste management and remediation activities



Construction



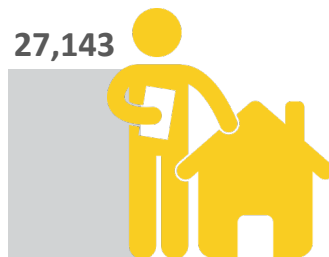
Wholesale and retail trade, repair of motor vehicles and motorcycles, transportation and storage, accommodation and food service activities



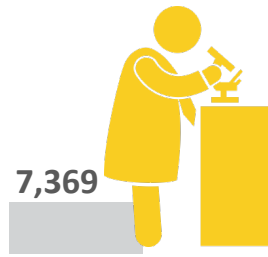
Information and communication



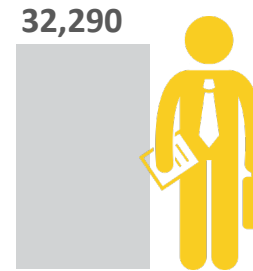
Financial and insurance activities



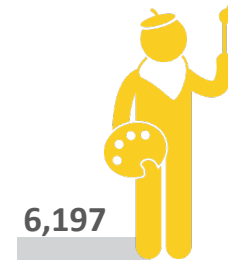
Real estate activities



Professional, scientific and technical activities, administrative and support service activities



Public administration and defence, compulsory social security, education, human health and social work activities



Arts, entertainment and recreation, repair of household goods and other services

* March 2017 data



Expenditure Approach

(P.3)

(+)
Final consumption expenditure
of Households
(+)
Final consumption expenditure
of NPISH
(=)
**Private final consumption
expenditure**
(+)
Final consumption expenditure
of General Government
(=)
**Total final consumption
expenditure**

Total final consumption expenditure (P.3)



Expenditure Approach

(P.51g)
(+)
Gross fixed capital
formation (investment)

(P.52)
(+)
Changes in inventories

(P.53)
(+)
Acquisitions less
disposals of valuables

Total final **consumption expenditure** (P.3)

+

Gross capital formation (P.5)

+

Exports (P.6)

-

Imports (P.7)

=

Gross Domestic Product

at market prices (B.1*g)



Income Approach

The transaction **Gross Operating Surplus/Mixed Income** derives as a residual value by deducting compensation of employees and other net taxes on production from the gross value added at basic prices, which is calculated on the production account.

Most of the countries follow the above method.

Compensation of employees (D.1)

+

**Gross operating surplus/
mixed income (B.2g/B.3g)**

+

**Taxes on production
and imports (D.2)**

-

Subsidies on production (D.3)

=

Gross Domestic Product
at market prices (B.1*g)



Balancing



PRODUCTION
approach



EXPENDITURE
approach



INCOME
approach

DIFFERENT GDP RESULTS

REGULATION EU 549/2013 ESA 2010



**SUPPLY AND
USE TABLES**



CPA 2008

130 PRODUCTS

NACE Rev. 2

80 DIVISIONS



BALANCING



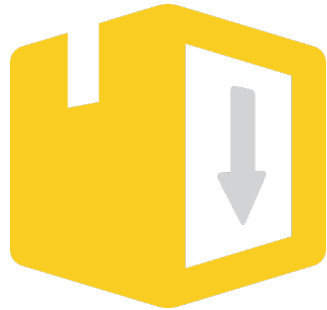
ESTIMATES

of main aggregates and GDP



Example of a supply and use table by product

PRODUCT A



Components of Supply-Use Balances

Output (main and secondary)

Imports

Taxes on products (e.g. VAT)

Subsidies on products

TOTAL SUPPLY

Intermediate Consumption

Final Consumption (market and non-market)

Gross Fixed Capital Formation (investment)

Changes in Inventories

Exports

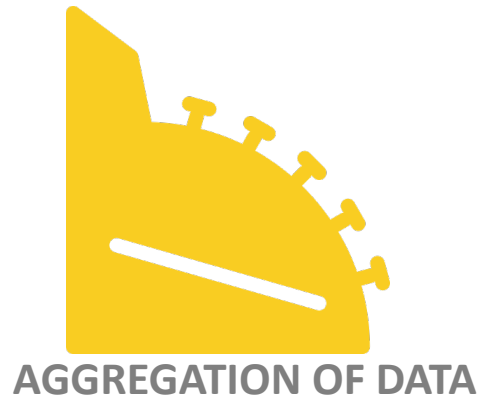
TOTAL USES



Calculation of GDP

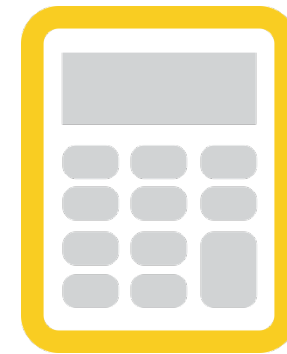


BALANCING
the balances
of all products



AGGREGATION OF DATA

FINAL BALANCE
of supply and use



CALCULATION OF GDP
at market prices, from the side
of the production and
expenditure approach



Non-observed economy

In accordance with ESA 2010 (§11.26), the value of production activities that are not directly observed are included within the national accounts production boundary.

The following **three types of activity** are included:



ILLEGAL

where the parties are willing partners in an economic transaction



HIDDEN & UNDERGROUND

where the transactions are unreported to avoid official scrutiny



INFORMAL

where no records are kept



Gross National Income (GNI)

GROSS DOMESTIC PRODUCT
(at market prices)

+

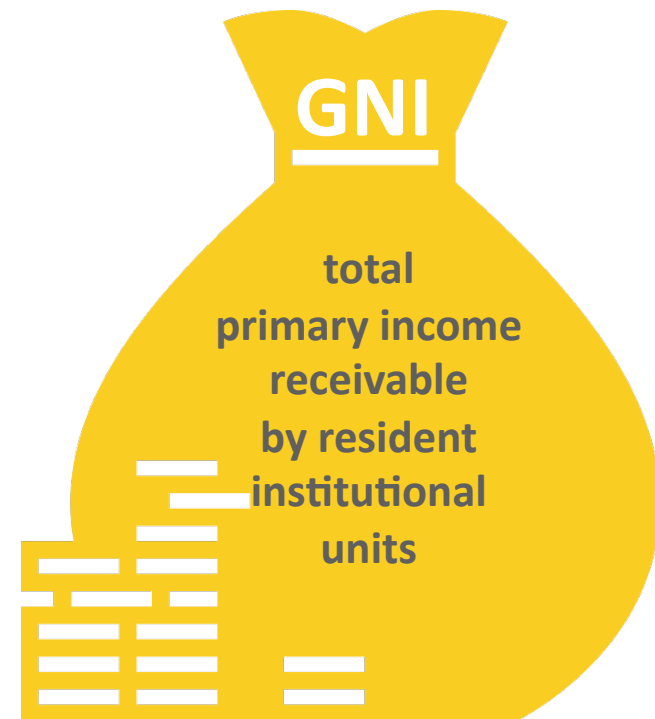
Primary income receivable
from the rest of the world

-

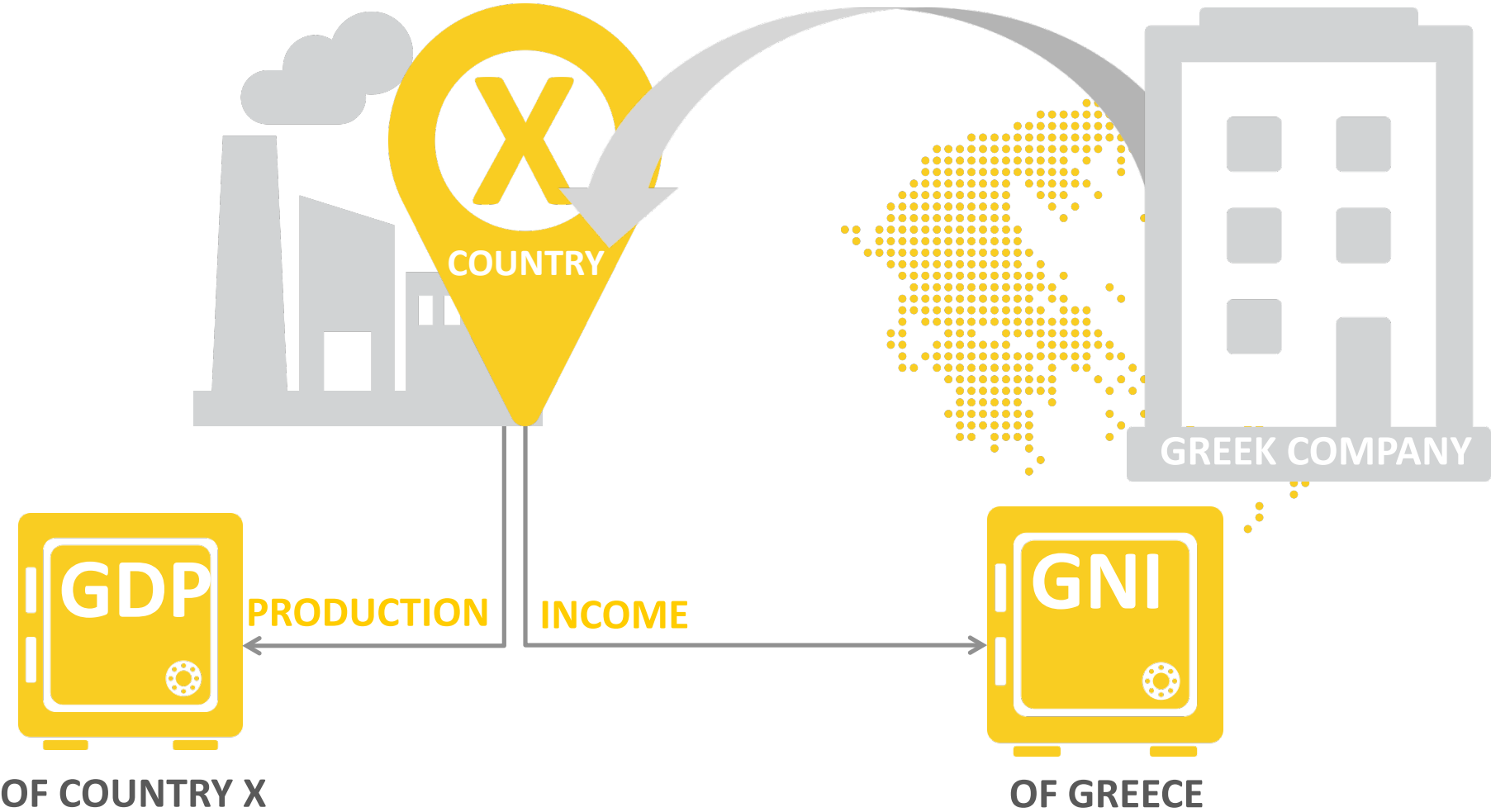
Primary income payable
to the rest of the world

=

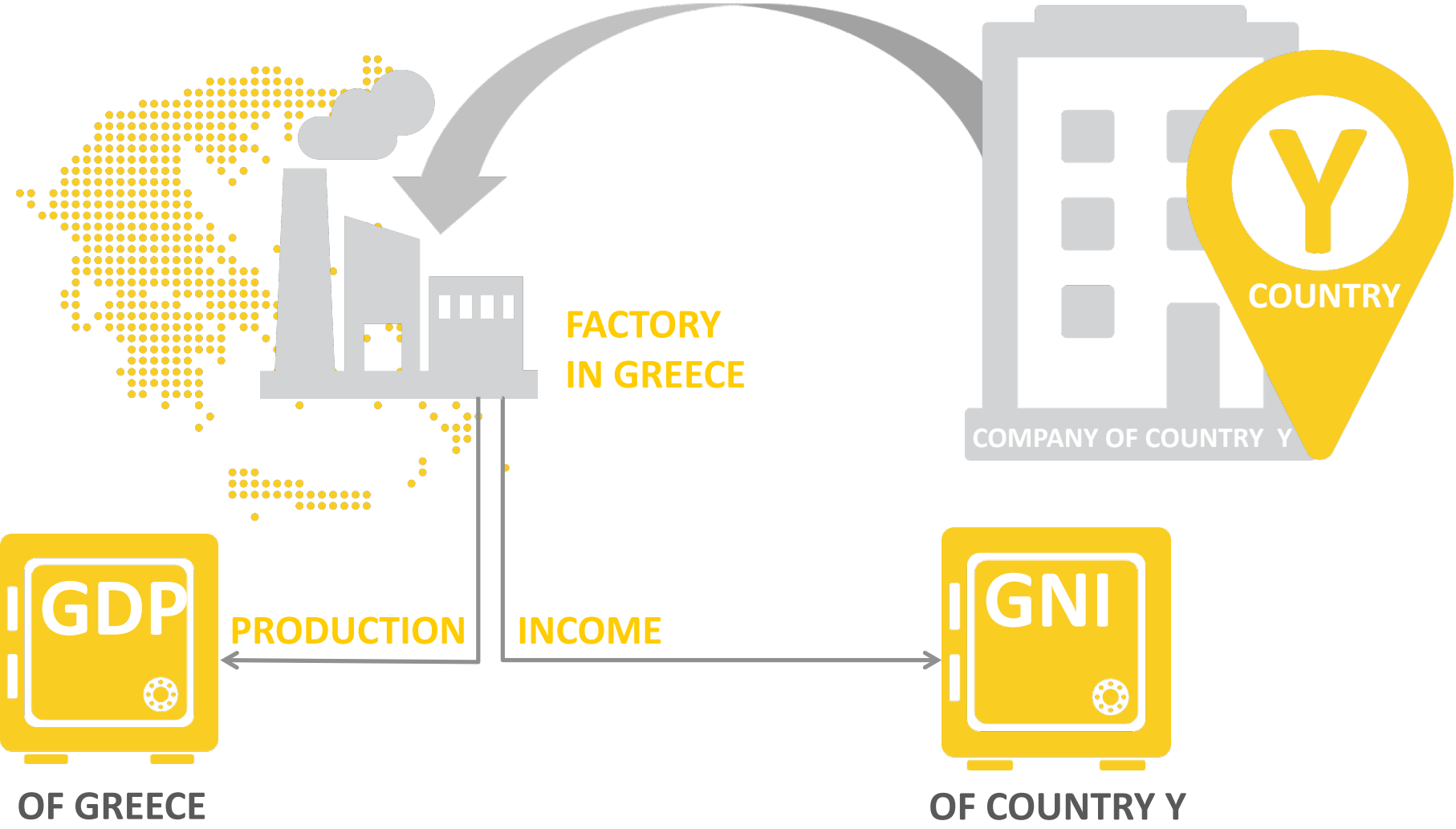
GROSS NATIONAL INCOME
(at market prices)



Example 1



Example 2



Data sources

The main sources used for the compilation of National Accounts are:

- ▶ Business Register of ELSTAT,
- ▶ Structural Business Surveys (SBS),
- ▶ Short-term indices (STS),
- ▶ Household Budget Survey (HBS),
- ▶ Consumer Price Index (CPI),
- ▶ Online survey of ELSTAT on the agencies of General Government,
- ▶ State budget– outturn,
- ▶ Survey on Non-Profit Institutions (NPISHs),
- ▶ Trade with third countries (Extrastat),
- ▶ Intra-EU trade (Intrastat),
- ▶ Balance of payments – Bank of Greece,
- ▶ Population & Housing Census,
- ▶ Labour Force Survey (LFS),
- ▶ Annual agricultural survey, livestock/crops surveys, farm structure survey, forest data,
- ▶ Administrative data (subsidies, taxes, etc.)
- other



Data checks

The **accuracy and reliability of the results depend** on the **accuracy of individual data** deriving from the various sources, as well as on the **completeness of the data** which are used for the measurement of macroeconomic aggregates.

ASSESSMENT OF THE SOURCE DATA

Adjustments on the basis of
ESA 2010 concepts



COMPILATION OF SUPPLY AND USE TABLES (SUT)

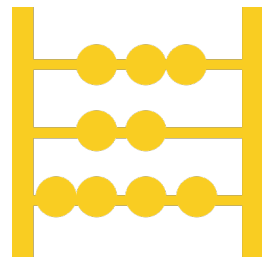
Comparison of different
statistical sources



RUN THE PROCEDURE AGAIN where necessary



ADDITIONAL CALCULATIONS
Depict of non-observed
economic activities

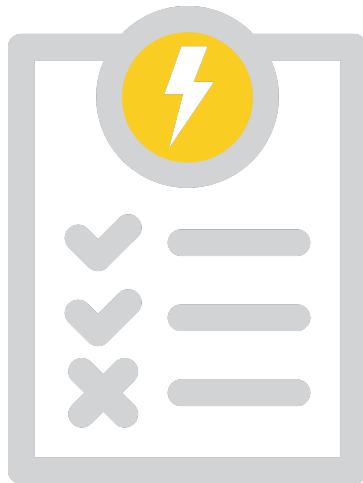


CHECKS IN DIVISIONS
of economic activity through the
production and income accounts



When it is calculated: Quarters

FLASH ESTIMATE
for quarter t



45 DAYS AFTER
the end of
quarter t ($t+45$)



TRANSMITTED TO
EUROSTAT
CONFIDENTIAL



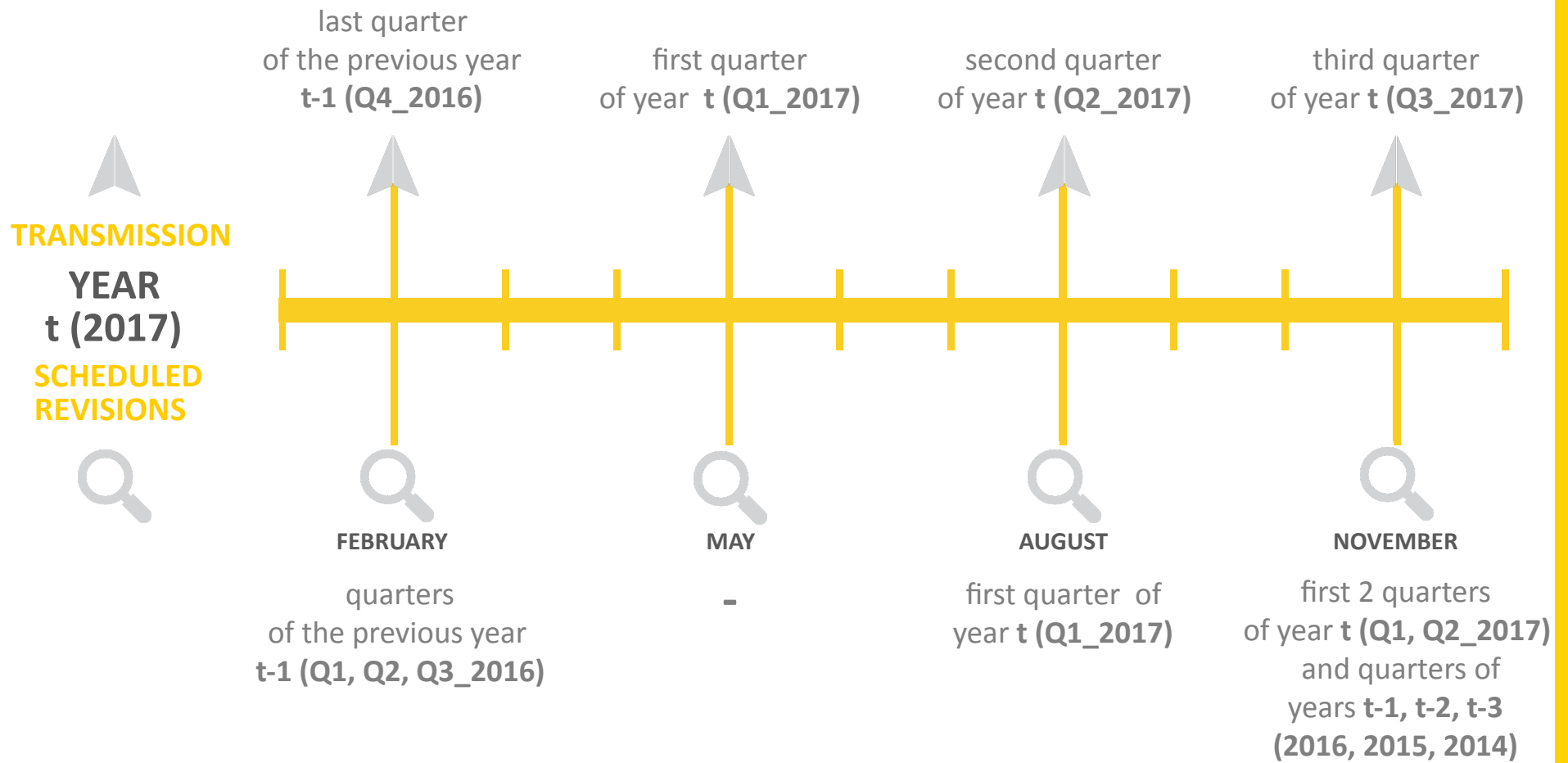
PROVISIONAL DATA
of quarter t



60 DAYS AFTER
the end of
quarter t ($t+60$)

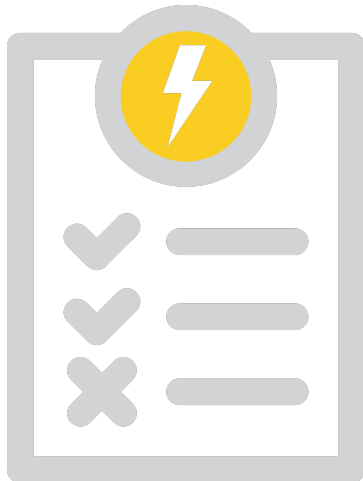


When it is calculated: Quarters



When it is calculated: Years

1st Estimate (flash)
GDP of year t-1 (2016)



60 DAYS AFTER
the end of year t-1 (2016)

2nd Estimate
GDP of year t-1 (2016) +
revisions of years
t-2, t-3 (2015, 2014)



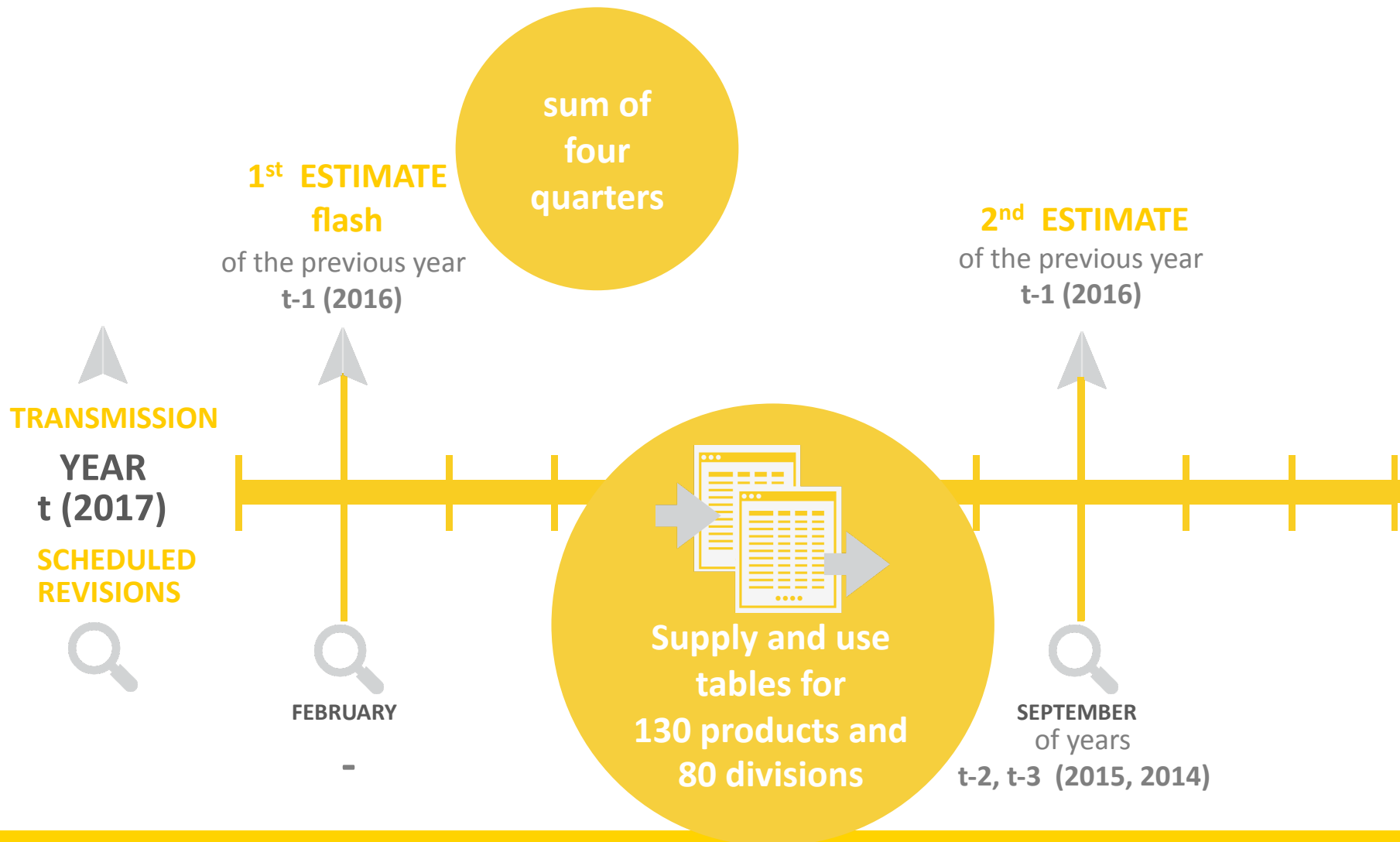
9 MONTHS AFTER
the end of year t-1 (2016)

DIFFERENT



METHODOLOGY

When it is calculated: Years



Revisions



Regular revisions:

Use of updated data from data sources

Benchmark revisions:

When there are new data sources, different methods or new ESA or NACE Regulations



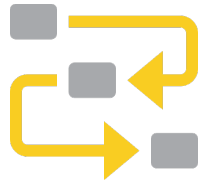
REVISION POLICY

Transmission programme of **ESA 2010** Regulation

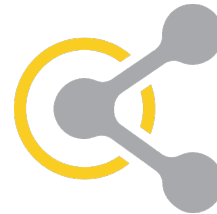


The role of EUROSTAT

COMPETENT FOR



METHODOLOGY
and data
validation



DISSEMINATION
of European
Statistics

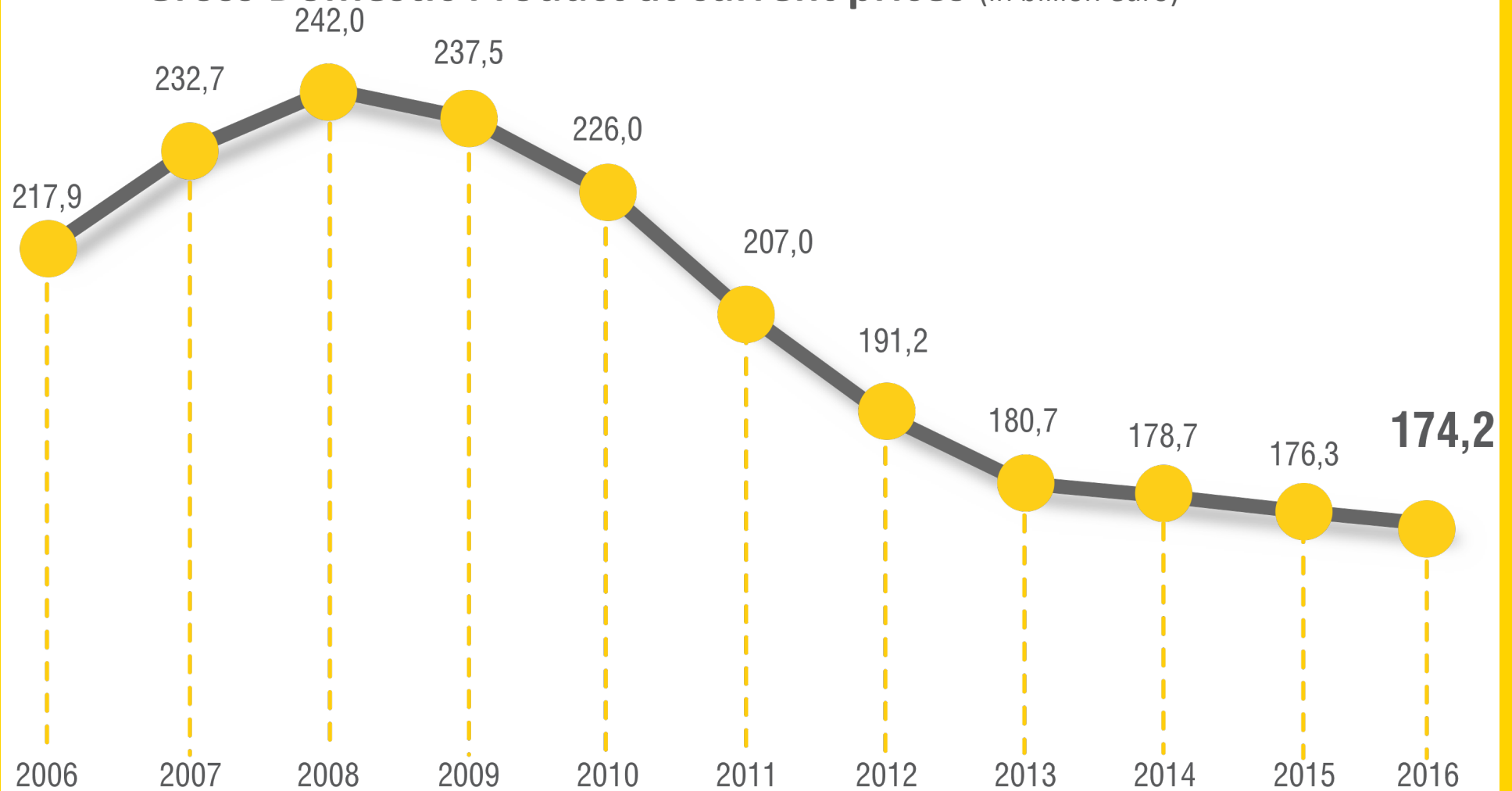
Eurostat
carries out compliance checks for
ESA 2010 Regulation
in all EU Member States

GNI Committee
evaluates the quality of the annual
GDP/GNI results

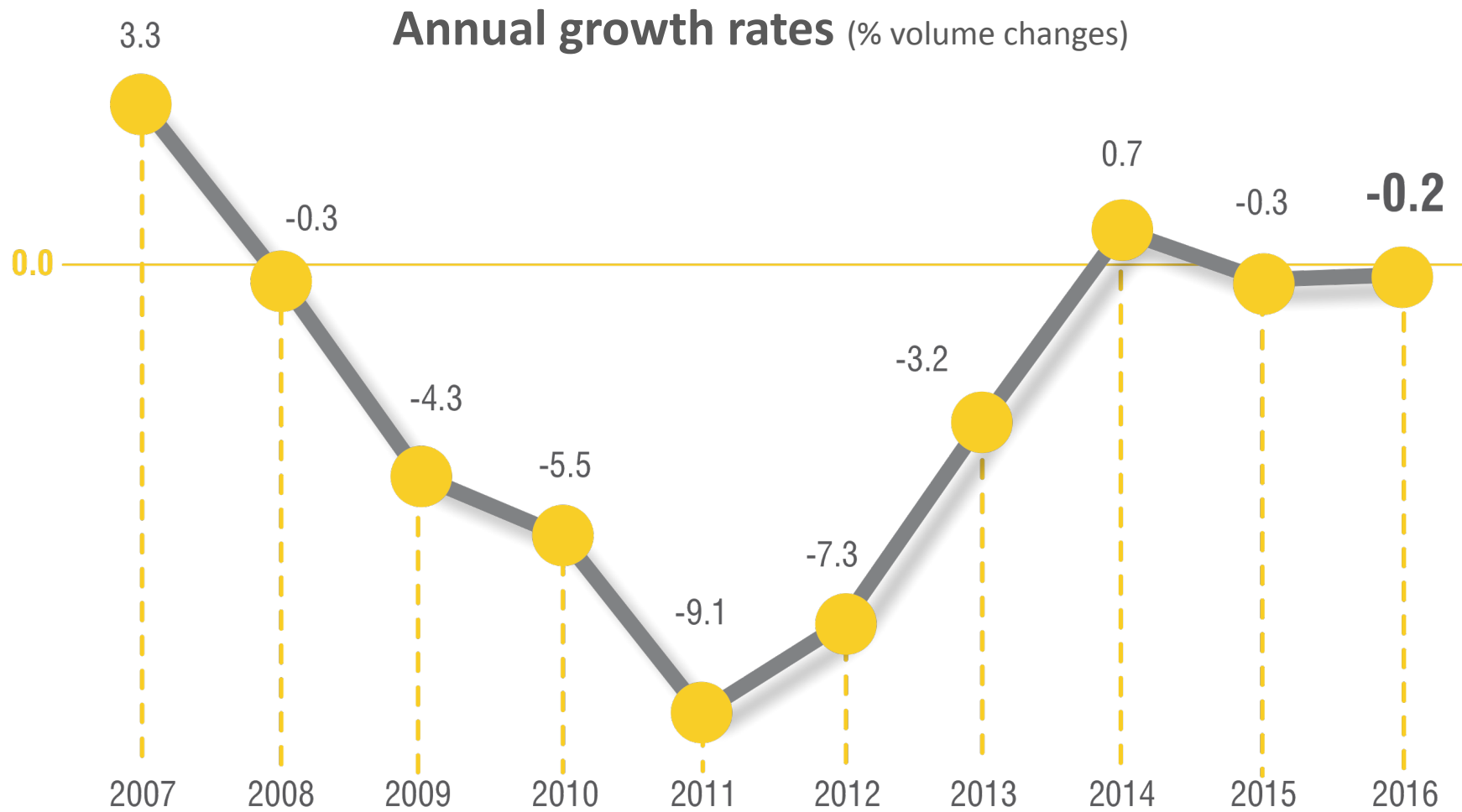


GDP

Gross Domestic Product at current prices (in billion euro)



Evolution of GDP – in volume

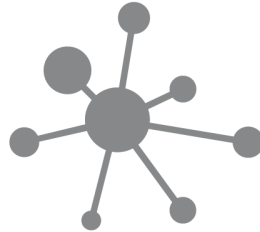




Hellenic Statistical Authority



www.statistics.gr



 @statisticsGR

 **LinkedIn**



 infographic
ΕΛΣΤΑΤ

Available on the website of ELSTAT

<http://www.statistics.gr/en/press-conference-oct-2017>

Statistics – Economy, Indices – Annual National Accounts – Gross Domestic Product

<http://www.statistics.gr/en/statistics/-/publication/SEL15/>

Statistics – Economy, Indices – Quarterly National Accounts – Gross Domestic Product

<http://www.statistics.gr/en/statistics/-/publication/SEL84/>

