Box 4
Improved timeliness of the euro area quarterly GDP flash estimate: first experiences

On 29 April 2016, Eurostat published for the first time a preliminary flash estimate for euro area and EU GDP with timeliness of 30 days after the end of the reference quarter (first quarter of 2016). This new development meets a long-standing request from users for more timely information about economic growth in Europe. It aims at establishing a release calendar of 30, 60 and 90 days after the end of the reference quarter for national accounts statistics. Moreover, it aims to fulfil the commitment made by the European Statistical System (ESS) to provide policymakers with reliable, comparable and timely statistics.[16] The GDP flash estimate released 45 days after the end of the reference quarter (published since May 2003) has been considered to be an intermediary step towards that aim.[17] This flash estimate is used to analyse the conjunctural developments in the euro area and provides important input for the ECB's economic analysis, macroeconomic projections and short-term forecasting. It will continue to be published by Eurostat in parallel until the new preliminary GDP flash estimate is better established and more countries start publishing their national preliminary flash estimates. Neither flash estimate, however, provides information on revisions to the previous quarters' results, although revisions to the preliminary GDP flash estimate can be observed with each subsequent release.

The underlying methodology for the preliminary GDP flash estimate for the euro area (and the EU) is the same as that applied for compiling the GDP flash estimate at 45 days.[18] The quarter-on-quarter growth rate of euro area GDP is estimated from national data by aggregating the national seasonally and calendar adjusted quarter-on-quarter growth rates using the annual weights of country GDP in current prices for the previous year. The euro area GDP is then derived by applying the estimated euro area growth rate for the current quarter to the level of GDP for the previous quarter, thus also allowing the year-on-year GDP growth rate to be compiled. The main difference with regard to the GDP flash estimate at 45 days is in the availability of national data to users. Most euro area countries do not yet publish

16 See The ESS Vision 2020, p. 5.

17 Initially only four euro area countries (Germany, Greece, Italy and the Netherlands) provided Eurostat with national GDP flash estimates at 45 days. Eurostat used related indicators to estimate GDP for the missing large euro area countries. To some extent, this served as the basis for countries to develop national flash estimates themselves. Although the GDP flash estimates are not part of the ESA 2010 legal framework, nor were they under ESA 95, the increased use of statistical methods and the sharing of experience between countries have also played a role.

18 The methodology is explained in Eurostat's paper "Euro area and European Union GDP flash estimates at 30 days", *Statistical working papers*, 2016 edition. This methodology replaced that for compiling the GDP flash estimate at 45 days after the end of the reference quarter in 2013.

the GDP flash estimates at 30 days but provide them to Eurostat on a confidential basis as input for compiling the euro area and EU preliminary GDP flash estimates. At present only six euro area countries: Belgium, Spain, France, Latvia, Lithuania and Austria (representing 39% of euro area GDP in 2015) publish GDP flash estimates at 30 days. The euro area GDP preliminary flash estimate for the first quarter of 2016 was based on 11 euro area countries and covered 94% of total euro area GDP, of which 55% was provided on a confidential basis.[19] The table below provides an overview of the national GDP release practices, as well as the extent of compliance with the ESA 2010 legal requirement to provide data at 60 days after the end of the reference quarter. This overview suggests that there are some trade-offs in terms of timeliness, level of detail and quality for compiling quarterly national accounts which need to be considered when analysing the data.

Table

GDP and components released under the quarterly national accounts framework

	Preliminary GDP flash (at 30 days)		GDP flash (at 45 days)			Second GDP release (at 60 days)		
	GDP growth	GDP components	GDP growth	GDP growth estimate or revision?	GDP components	Day of release	GDP growth estimate or revision?	GDP components
Belgium	published	-	-	-	-	t+60	revision	yes
Germany	-	-	published	estimate	-	t+54	revision	yes
Estonia	-	-	published	estimate	-	t+68	revision	yes
Ireland	-	-	-	-	-	**t+70**	**estimate**	**yes**
Greece	-	-	published	estimate	-	t+60	revision	yes
Spain	published	-	-	-	-	t+55	revision	yes
France	published	yes	-	-	-	t+60	revision	yes
Italy	-	-	published	estimate	-	t+65	revision	yes
Cyprus	-	-	published	estimate	-	t+68	revision	yes
Latvia	published	-	-	-	-	t+60	revision	yes
Lithuania	published	-	-	-	-	t+60	revision	yes
Luxembourg	-	-	-	-	-	**t+85**	**estimate**	**yes**
Malta	-	-	-	-	-	**t+70**	**estimate**	**yes**
Netherlands	-	-	published	estimate	yes	-	-	-
Austria	published	yes	-	-	-	t+60	revision	yes
Portugal	-	-	published	estimate	-	t+60	revision	yes
Slovenia	-	-	-	-	-	t+60	estimate	yes
Slovakia	-	-	published	estimate	-	t+68	revision	yes
Finland	-	-	published	estimate	-	t+60	revision	yes
Euro area	**published**	**-**	**published**	**revision**	**-**	**t+68**	**revision**	**yes**

Source: ECB compilation based on the websites of the national statistical institutes and Eurostat.
Notes: GDP flash releases refer to Q1 2016 data. Second GDP releases refer to Q4 2015 data. Beyond the releases listed in the table, some euro area countries (e.g. Belgium and France), as well as some non-euro area countries (e.g. the United Kingdom) publish third GDP releases about three months after the end of the reference quarter. They include revisions to the previous estimates for GDP and the main aggregates. Eurostat discontinued the third euro area GDP database update in September 2014, when ESA 2010 entered into force. In addition, quarterly sectoral accounts (early release published at about 110 days and final release two weeks later) might provide revisions to the second euro area GDP release; however these are currently not aligned with the quarterly national accounts for the euro area.

The main difficulty in the national estimation of GDP flash estimates at 30 days arises from the limited availability of source data for the third month of the quarter; the coverage of the source data used in compiling the national GDP of the subsequent estimates improves significantly. For the national preliminary

[19] ECB estimate based on information provided by Eurostat about the first release of the preliminary GDP flash estimate and its News Release of 29 April 2016.

GDP flash estimates, the third month is usually estimated or partially estimated by applying statistical modelling techniques that make use of available monthly information (e.g. short-term statistics, business surveys, price statistics and preliminary estimates of the source data). Several estimation methods are applied at the national level for the GDP flash estimate: direct approaches (e.g. autoregressive distributed lags, dynamic factor models), indirect approaches (temporal disaggregation techniques), pure forecasting models (autoregressive integrated moving average (ARIMA) models, structural time-series models) or multivariate models (vector autoregression (VAR), structural models). The choice depends on the national source data availability for the third month – at about 28 days – after the end of the reference quarter while, at the same time, applying the same compilation practices as in the regular quarterly national accounts (i.e. non-flash estimates) to ensure closeness or a high level of consistency with the final results.

While it is still too early to assess the reliability of the newly available euro area preliminary GDP flash estimate, according to Eurostat's tests[20] it has met predefined recommended quality acceptance criteria. They showed the following results for the euro area preliminary GDP flash estimate[21]:

- **Unbiased estimate** of the euro area GDP growth at 45 days with an average revision within +/-0.05 percentage point and no more than 66.7% of revision in the same direction. Against this criterion, the results for the euro area were 0.0 percentage point of average revision and equal distribution of the upward and downward revisions, accordingly.
- **Maximum average absolute revision** for the euro area of 0.1 percentage point in comparison to the flash GDP growth at 45 days and 0.13 percentage point in comparison to the GDP growth published around 65 days after the end of the reference quarter. The actual results for the euro area were in both cases 0.06 percentage point.
- **Sufficient coverage** defined as 70% of total GDP for the euro area. For the quarters used for the test estimates, the coverage was on average 83% of total GDP for the euro area, consistently reaching 94% in the last three quarters.

When examining the data for the first quarter of 2016, the preliminary GDP flash estimate for the euro area indicated quarter-on-quarter growth of 0.55%, which was revised down by 0.03 percentage point to 0.52% with the release of the GDP flash estimate at 45 days. This could be attributed to two main factors: first, revisions attributable to better national source information and, second, a marginally larger coverage of the euro area (97% of the euro area GDP).

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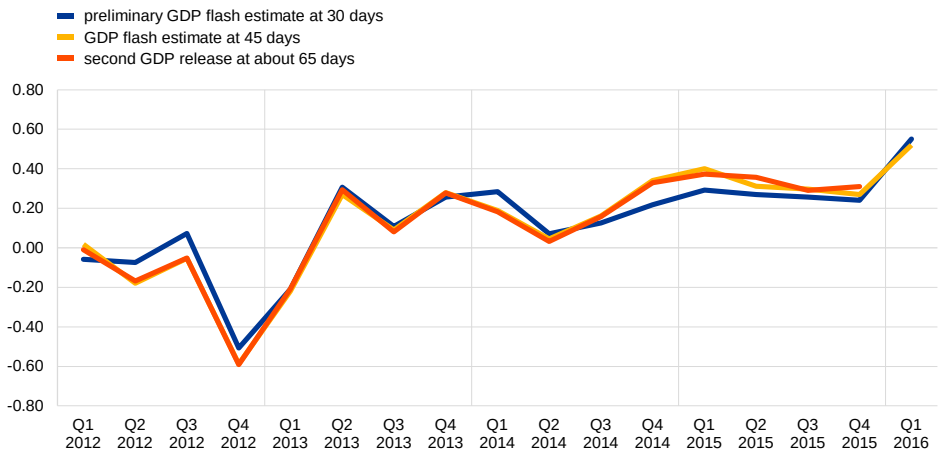
20 The euro area test estimates were performed over the past two years for both the quarter-on-quarter and year-on-year growth rates based on eight quarters of real-time tests for Q1 2014 - Q4 2015 and eight quarters of "reconstructed" estimates for Q1 2012 - Q4 2013.

21 Information provided by Eurostat in its paper "Euro area and European Union GDP flash estimates at 30 days", *Statistical working papers*, 2016 edition.

Chart

Revisions to euro area GDP growth

(quarter-on-quarter growth rates; calendar and seasonally adjusted chain-linked volumes)



Source: Eurostat.

The improved timeliness of the estimates of quarterly GDP growth for the euro area from 45 to 30 days after the end of the reference quarter is an important step for policymakers. Various processes serving monetary policy preparation, such as macroeconomic projections and analytical assessments will benefit. The earlier availability of information on GDP developments in the euro area and euro area countries will enable a more thorough analysis of the implications of these developments for the near-term outlook.