

**Box 4****Revisions to quarterly national accounts data for the euro area**

The successive releases of quarterly national accounts for the euro area by Eurostat include revisions to data previously published. These revisions improve the reliability of national accounts estimates but, at the same time, draw attention to the fact that national accounts data for recent quarters should be interpreted with some caution. This box discusses the main sources and the extent of revisions to euro area national accounts.

Several sources of revisions may be identified. First, some euro area countries do not yet report national accounts on a quarterly basis. Eurostat uses information from annual national accounts as it becomes available. Second, the geographical coverage of official national data increases over time. Quarterly data for individual euro area countries are not published at the same point in time. As a result, Eurostat estimates quarterly national accounts for the euro area as a whole on the basis of data available at the time. This information is complemented with estimates for countries that have not yet published data for the most recent quarters. Third, national accounts estimates in the individual countries are based on a wide range of information sources. The information set used for the compilation of national accounts increases over time, which is typically reflected in revisions to past data. Fourth, seasonal and working day adjustment factors are regularly revised, implying related changes to the published numbers. Overall, new and revised estimates at the country level usually imply revisions of euro area figures, both for the latest reported quarter and previous ones.

The table below shows the size of the revisions to quarter-on-quarter growth of real GDP and its components and some average characteristics observed for revisions since the first quarter of 1999.

**Revisions between first and current estimates**

(in percentage points of quarter-on-quarter growth unless otherwise indicated; seasonally adjusted)

	Most recent quarters					Sample period: 1999 Q1 – 2001 Q1			
	2000				2001	Average growth	Revisions		
	Q1	Q2	Q3	Q4	Q1		Average of absolute revisions	Number of revisions <sup>1)</sup>	Maximum revisions
GDP	0.2	-0.1	-0.1	-0.1	0.0	0.8	0.2	5/3	0.4
Private consumption	0.6	-0.1	-0.2	-0.1	0.1	0.6	0.2	4/4	0.6
Government consumption	-0.1	0.3	-0.1	-0.1	0.0	0.4	0.1	2/5	0.4
Gross fixed capital formation	-0.5	0.7	-0.4	-0.2	0.6	0.9	0.6	5/3	1.2
Exports	-0.3	-1.2	-0.1	-0.4	0.0	2.3	0.8	4/4	2.3
Imports	-0.6	-1.6	-1.3	-0.7	0.3	2.0	1.0	5/4	2.5
Net trade <sup>2)</sup>	-0.1	0.2	0.4	0.1	-0.1	0.2 <sup>3)</sup>	0.2	6/3	0.7
Changes in inventories <sup>2)</sup>	0.2	-0.4	-0.3	-0.1	0.0	0.1 <sup>3)</sup>	0.3	2/6	0.7

Sources: Eurostat and ECB calculations based on rounded growth rates.

1) The first figure indicates the number of upward revisions and the second the number of downward revisions.

2) Contribution to quarter-on-quarter GDP growth.

3) Average of absolute values.

**Revisions to overall real GDP have been limited in recent quarters**

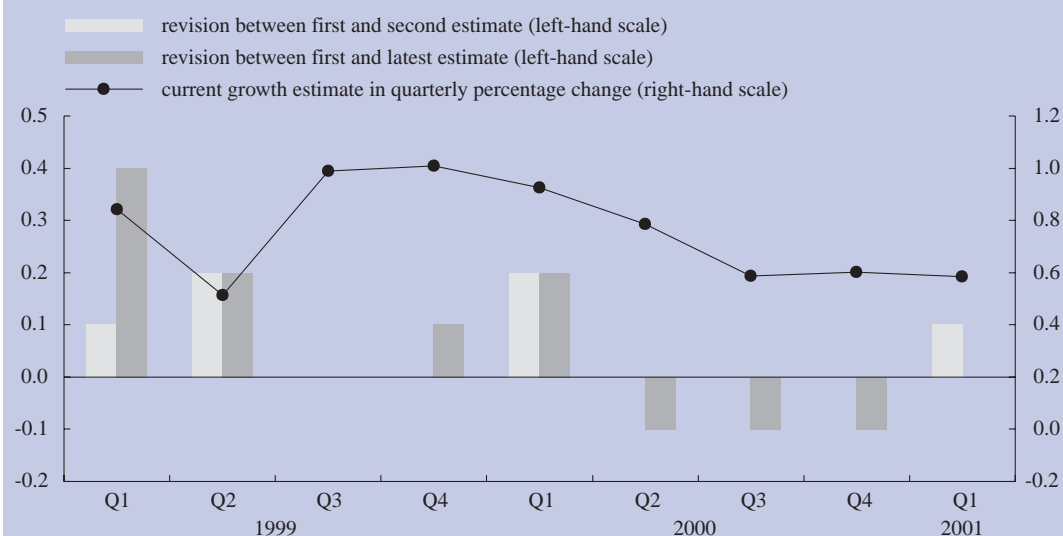
Data on quarter-on-quarter real GDP growth in the euro area have been revised upwards or downwards by 0.2 percentage point on average since the first quarter of 1999. In the four quarters up to the first quarter of this year, revisions have been smaller, between zero and 0.1 percentage point. Of course, further revisions to these data may occur in future releases, as a more comprehensive information set becomes available. However, two factors may have contributed to improving the accuracy of early GDP estimates. First, the geographical coverage has been higher in recent releases, especially for Eurostat's first estimate, at around 80%, compared with 60-70% previously (for the second estimate, data covering around 95% of the euro area are available). Data on real GDP for more euro area countries are now available within 70 days after the end of the quarter of reference, as specified in the September 2000 Action Plan on EMU Statistical Requirements (see the article entitled "Assessment of general economic statistics for the euro area" in the April 2001 issue of the Monthly

Bulletin for a presentation of the Action Plan and an example of publication lags in euro area countries). Second, the revisions due to the use of new definitions and methods implied by the introduction of ESA 95 by national statistical institutes as of the beginning of 1999 become smaller as the implementation process is completed in most countries.

GDP growth estimates do not seem to be biased as the number and the size of upward and downward revisions have been broadly equal. Moreover, there seems to be no systematic link between the sign and the size of revisions and actual GDP growth (see the chart below).

### Estimates of GDP growth

(percentage point difference unless otherwise indicated)



Sources: Eurostat and ECB calculations based on rounded growth rates.

### Revisions to the components of real GDP remain substantial

Revisions to the components of real GDP have been larger on average than those for overall GDP. This is partly accounted for by lower geographical coverage (at around 60% for Eurostat's first release and 85% for the second), notwithstanding the fact that for some components fluctuations are typically larger than those for GDP as a whole. In addition, estimates of GDP components tend to be generally less reliable. However, as for GDP as a whole, no specific bias has been observed.

As regards estimates of growth in *private consumption*, revisions have been generally limited to below 0.2 percentage point. In some cases, however, revisions have been larger, such as in the first quarter of 2000, where the difference between the first and current estimate (at 0.6 percentage point) is as large as the average quarter-on-quarter growth rate in private consumption observed since the beginning of 1999. Revisions to data on *gross fixed capital formation* have averaged 0.6 percentage point in absolute values (the average quarter-on-quarter growth rate in investment is 0.9%). Revisions to growth in *exports and imports* have been even larger, averaging 0.8 and 1.0 percentage point respectively. When compared with their average growth rate, these revisions are of a similar size to those of investment. Revisions to the contribution of net trade to GDP growth have been more limited, since euro area exports and imports comprise large shares of intra-area trade which tend to cancel each other out when the balance is compiled, although relatively large revisions have been observed in some quarters. Finally, revisions to the contribution of *changes in inventories* to GDP growth have been significant, frequently in the range of 0.2 to 0.4 percentage point. Early inventory estimates are

particularly unreliable as little statistical information is available and they are often compiled so as to balance the discrepancies appearing between the expenditure and output measures of GDP.

Overall, revisions to data on euro area real GDP growth have been limited, especially in the most recent releases. However, revisions to the components of GDP tend to be larger. Besides having accurate estimates of GDP growth, knowing its composition is essential as it affects the analysis of the prospects for growth and inflation. Further improvement can be expected in the future as the geographical coverage of the first estimate rises with increased availability of timely national estimates in line with the requirements of the EMU Action Plan.