

Box 5

REVISIONS TO EURO AREA GDP GROWTH

Initial (or “flash”) estimates of GDP in the euro area are released within 45 days of the reference quarter. They are followed by a sequence of later estimates, which are based on additional or more complete data sources and may also incorporate methodological improvements. Among those later estimates, this box examines (a) the third estimate, released within 100 days of the reference quarter, (b) the “annual revision”, an estimate that may incorporate important new information from, in particular, annual data sources and is typically released towards the end of the subsequent year and (c) the current (i.e. the most recently available) estimate.¹

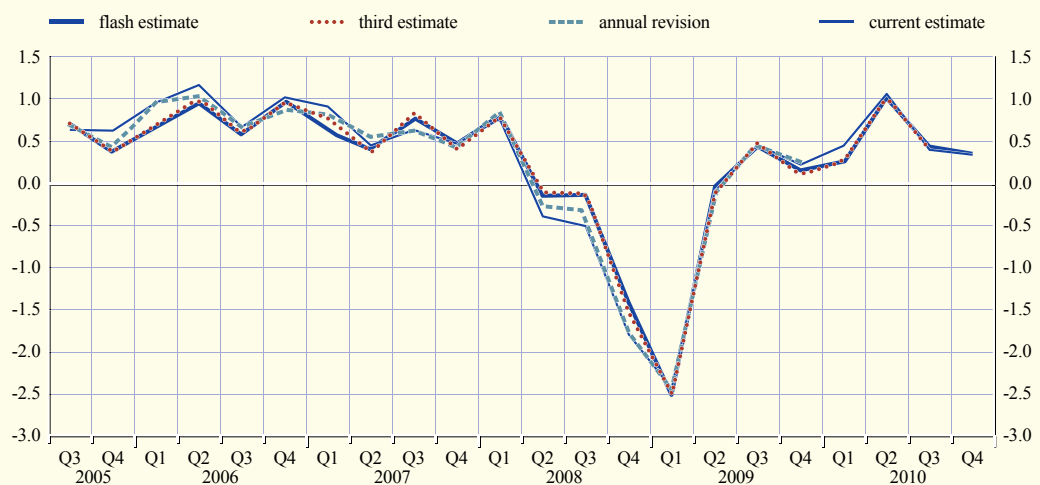
The box examines the revisions to euro area GDP volume data implied by those estimates, focusing on figures for the period of the financial crisis, as shown in Chart A. On the basis of the current estimate, the average revision to euro area GDP growth (relative to the flash estimate) was slightly larger for periods during the crisis than before and after, as shown in Chart B (left panel).² However, the changes in GDP were also larger during the crisis, i.e. in relation to GDP growth revisions remained equally small throughout the period under review (see Chart B, right panel).

It is also worth noting that revisions and GDP growth are positively correlated throughout the sample – when growth was negative between the second quarter of 2008 and the second

- 1 A more comprehensive article on revisions to euro area GDP, covering the period of relatively stable growth preceding the financial crisis, can be found in the April 2009 issue of the Monthly Bulletin.
- 2 The sample extends from the third quarter of 2005 to the fourth quarter of 2010. To ensure a comparable set of revisions it starts after the introduction of chain-linked volumes in national accounts.

Chart A Euro area GDP growth

(quarter-on-quarter percentage changes; seasonally and working day-adjusted)

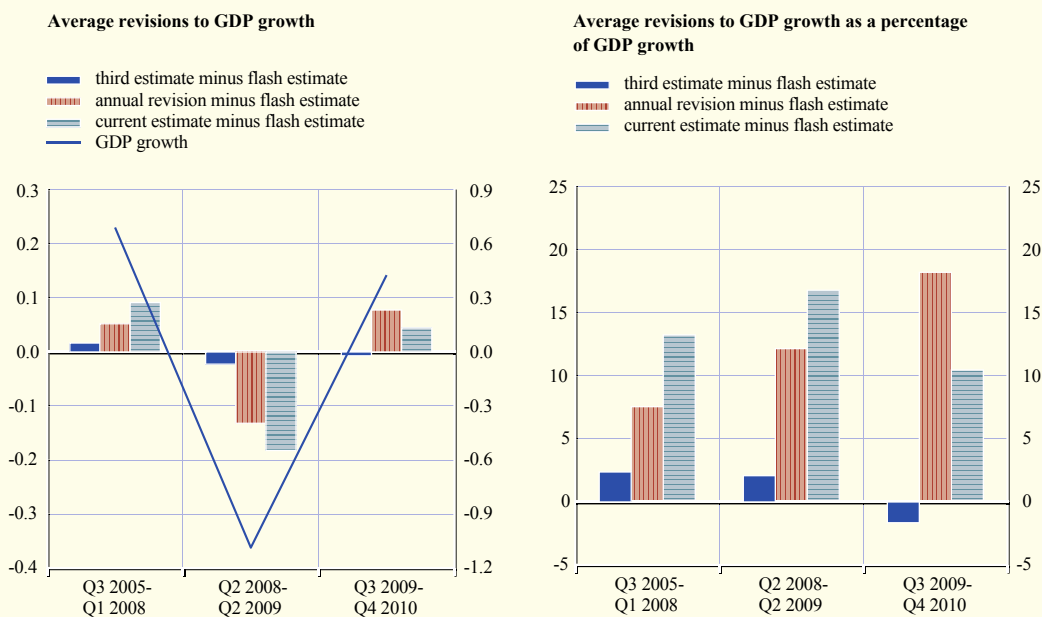


Sources: Eurostat and ECB calculations.

Chart B Average revisions to euro area GDP growth and average revisions as a percentage of euro area GDP growth

(GDP growth (right-hand scale): quarter-on-quarter percentage changes, seasonally and working day-adjusted; revisions (left-hand scale): percentage points)

(percentages)



Sources: Eurostat and ECB calculations.

quarter of 2009, for example, revisions were also negative (see Chart B, left panel). Furthermore, for data before the crisis there was a sequence of upward revisions, while for data between the second quarter of 2008 and the second quarter of 2009 there were repeated downward revisions. Such a pattern is not uncommon, as it takes time for the flow of information and statistical procedures to confirm a change in the business cycle.³

The role of adjustment factors

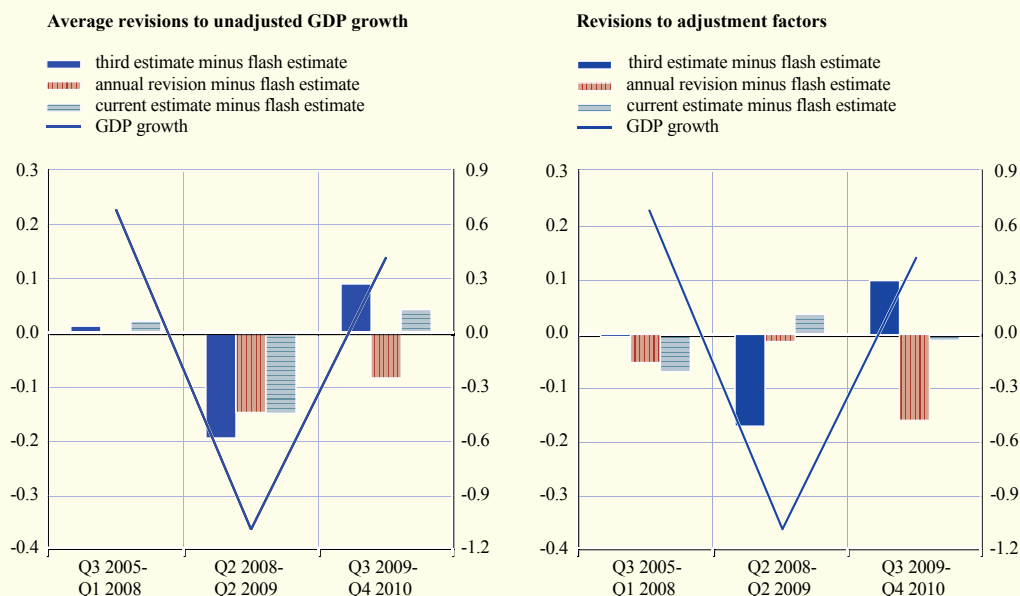
The larger changes in GDP during the crisis have made the computation of adjustment factors for seasonal and calendar effects more complex.⁴ Since the second quarter of 2008, the revisions to adjustment factors have been as large as the revisions to unadjusted data. In fact, the large changes in GDP with the onset of the crisis also had an impact on seasonal adjustment for some quarters preceding the crisis, at least in revisions following the third estimate (see Chart C, right panel). Moreover, revisions to unadjusted data were large for periods during the crisis and later, as can be seen in Chart C (left panel). By contrast, the revisions to unadjusted data for the almost three years before the crisis were very small, which could be attributed to the fact that statisticians were able to base their estimates on relatively steady economic developments.

³ It is not surprising, therefore, that for the period after the crisis, for which data are less mature, this pattern is less clear. For example, the annual revision for 2010, which will include more comprehensive data sources for that year, will be available only towards the end of 2011.

⁴ As the adjusted country data are aggregated to form the adjusted euro area figures, the reading of the euro area data is potentially complicated by the use of different methodologies for the adjustment across the euro area countries. However, this should be mitigated by the fact that there are common rules for seasonal adjustment.

Chart C Average revisions to unadjusted euro area GDP growth and to adjustment factors

(GDP growth (right-hand scale): quarter-on-quarter percentage changes, seasonally and working day-adjusted; revisions (left-hand scale): percentage points)



Sources: Eurostat and ECB calculations.

Notes: Adjustment factors refer to seasonal and working-day adjustment. The revisions to adjusted data are equal to the revisions to unadjusted data minus the revisions to the adjustment factors.

Conclusions

There are three conclusions from this information. First, revisions to initial estimates were equally small for periods before, during and after the crisis when measured against the corresponding GDP growth rates. This suggests that flash estimates have remained reliable. Second, the revisions to seasonal and calendar adjustment factors were much larger for periods during and after the crisis, which reflects the greater uncertainty surrounding developments during the crisis. Third, revisions appear to be positively correlated with growth rates.