# Taking Account...

## BEA economists discuss revisions at IARIW event

At the 32nd general conference of the International Association for Research in Income and Wealth (IARIW) in August, Bureau of Economic Analysis (BEA) economists Brent R. Moulton and Dennis J. Fixler discussed revisions to gross domestic product (GDP) statistics, with a closer look at revisions for the most recent recession.

The presentation explained that revisions are part of the regular estimation process—not the result of errors. The process aims to improve the initial GDP estimates by incorporating more accurate source data.

When BEA calculates the advance estimate of GDP, it doesn't yet have complete source data. Thus, BEA has to make trend-based projections for the missing data. As new and more complete data become available, that information is incorporated into the second and third GDP estimates in subsequent months.

About 45 percent of the components in the advance estimate are based on initial or early estimates from various monthly and quarterly surveys that are subject to revision later for various reasons, including late respondents that are eventually incorporated into the survey results. Another roughly 14 percent of the components of the advance estimate is based on historical trends.

For the second GDP estimate, new data for the third month and revised data for earlier months are incorporated. For the third estimate, even more data are available; only 17 percent of the GDP estimate is based on data from the first set of monthly and quarterly surveys. Subsequent annual revisions and benchmark revisions allow for even more accurate data to be incorporated.

The manufacturing output estimation process demonstrates how the revisions process incorporates more accurate data. For its earliest GDP estimates, BEA relies on the Census Bureau's monthly M3 report, which features voluntary reporting, 4,300 reporting units with more than $500 million in shipments (representing 60 percent of manufacturing) in 89 industries, with no product detail. But for annual revisions, BEA relies on the Census Bureau's more accurate Annual Survey of Manufactures, which features mandatory reporting, 50,000 reporting units (representing all 328,500 manufacturing establishments) in 471 industries, with 1,384 product classes.

BEA studies show the earliest quarterly GDP estimates successfully indicated the following:

- The direction of change in GDP 97 percent of the time
- The acceleration or deceleration of growth 72 percent of the time
- The relative magnitude of growth—whether it was above, near, or below trend more than 80 percent of the time
- The cyclical peaks before 5 of the 6 recessions between 1969 and 2006
- The cyclical troughs of 4 of the 6 recessions
- Revisions in both current-dollar and real GDP and their major components are roughly similar to each over 1983–2009

The presentation also discussed GDP revisions for the recession that began in late 2007 and ended in the summer of 2009. For this period, the revisions were larger than usual, and the earliest estimates understated the extent of the decline, exposing gaps in the source data used for early estimates. Via the normal revisions process, actual data replaced assumptions, and source data were updated. For the fourth quarter of 2008, for example, the GDP growth was revised from –3.8 percent in January of 2009 to –6.2 percent the next month. Via annual revisions, the estimate for the quarter was revised to –8.9 percent in July 2011. The total revision from advance to latest (5.1 percentage points) is the largest downward GDP revision on record at BEA.

From the first estimate of the full contraction period (2007:IV to 2009:II) to the estimate, the cumulative contraction in real GDP was revised from –3.7 percent to –4.7 percent.

Presentations for the conference, which was hosted by BEA in Boston, can be viewed at www.iariw2012.com.