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Subject to Revision

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The overall state of the economy is often judged by economic statistics such as inflation, unemployment and, of course, gross domestic product (GDP). Many of these economic statistics undergo substantial revisions. This is especially true for GDP, which is revised twice in the first three months after its initial release. In the month after each quarter, the Bureau of Economic Analysis (BEA) releases an advance estimate of GDP. In the two subsequent months, the BEA updates this estimate with preliminary and then final estimates. The initial estimates garner quite a bit of attention in the financial world, but how well do they reflect the true state of the economy? How well do they predict final GDP?

The advance estimate of GDP is calculated with incomplete data from the quarter including business inventories, housing, retail sales and automobile sales. The preliminary estimate is released a month later and incorporates more data from the last month of the quarter. Even final GDP is subject to annual revisions, which have resulted in changes to prior GDP growth rates by more than 1.5 percentage points.[1]

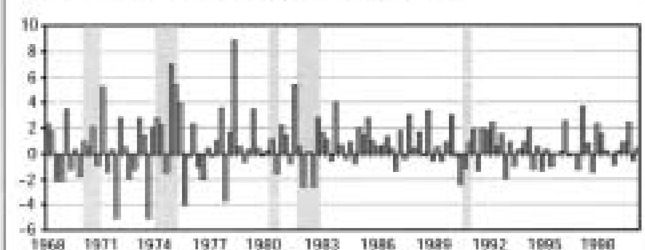
Economists Karen Dynan and Douglas Elmendorf report that, from 1968 to 2001, the average revision of GDP growth from the advance to the final estimate was 0.67 percentage points. During the same period, revisions around peaks and troughs of the business cycle varied greatly. Near business cycle peaks, revisions were—on average—similar in magnitude to those during the rest of the business cycle. Near troughs, however, estimates were revised quite a bit more. When it comes to detecting the end of a recession, therefore, current GDP estimates may not be the best indicator.

The magnitude of the revisions to GDP makes it unclear whether or not the most recent recession will conform to the rule of thumb that a recession includes at least two consecutive quarters of negative GDP growth.

Advance and preliminary GDP estimates for the third quarter of 2001 were –0.4 percent and –1.1 percent, respectively. Final GDP growth was revised down to –1.3 percent. Fourth quarter numbers were revised upward by 1.5 percentage points from the advance (0.2 percent) to the final estimate (1.7 percent). These revisions make it increasingly likely that the third quarter of 2001 was the only quarter in the recession with negative growth.

Revisions aside, from 1978 to 1991, 88 percent of the time the advance estimate correctly established the direction of quarterly change in real GDP growth.[2] Since total revisions do not tend to change the direction of the estimates, the initial numbers may be helpful when determining the direction in which GDP is heading, if not by how much. However, advance and preliminary estimates of GDP around business cycle turning points may be less accurate measures of output. One may take heart, though, that revisions to GDP appear to have gotten smaller (see accompanying figure) during two extended expansions.

Revisions from Advance to Current Estimate of GDP Growth (in Percentage Points)



1) Dynan, Karen E. and Elmendorf, Douglas W. "Do Provisional Estimates of Output Miss Economic Turning Points?" Working Paper 2001-51, Federal Reserve Board of Governors, November 2001.

2) Young, Allan H. "Reliability and Accuracy of the Quarterly Estimates of GDP." Survey of Current Business, October 1993, pp. 29-43.