

Business Cycle Dating Committee, National Bureau of Economic Research

January 7, 2008

This report is also available as a [PDF file](#).

The National Bureau's Business Cycle Dating Committee maintains a chronology of the U.S. business cycle. The chronology identifies the dates of peaks and troughs that frame economic recession or expansion. The period from a peak to a trough is a recession and the period from a trough to a peak is an expansion. According to the chronology, the most recent peak occurred in March 2001, ending a record-long expansion that began in 1991. The most recent trough occurred in November 2001, inaugurating an expansion.

A recession is a significant decline in economic activity spread across the economy, lasting more than a few months, normally visible in real GDP, real income, employment, industrial production, and wholesale-retail sales. A recession begins just after the economy reaches a peak of activity and ends as the economy reaches its trough. Between trough and peak, the economy is in an expansion. Expansion is the normal state of the economy; most recessions are brief and they have been rare in recent decades.

In choosing the dates of business-cycle turning points, we follow standard procedures to assure continuity in the chronology. Because a recession influences the economy broadly and is not confined to one sector, we emphasize economy-wide measures of economic activity. We view real GDP as the single best measure of aggregate economic activity. In determining whether a recession has occurred and in identifying the approximate dates of the peak and the trough, we therefore place considerable weight on the estimates of real GDP issued by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. The traditional role of the committee is to maintain a monthly chronology, however, and the BEA's real GDP estimates are only available quarterly. For this reason, we refer to a variety of monthly indicators to determine the months of peaks and troughs.

The committee places particular emphasis on two monthly measures of activity across the entire economy: (1) personal income less transfer payments, in real terms and (2) employment. In addition, we refer to two indicators with coverage primarily of manufacturing and goods: (3) industrial production and (4) the volume of sales of the manufacturing and wholesale-retail sectors adjusted for price changes. We also look at monthly estimates of real GDP such as those prepared by Macroeconomic Advisers (see <http://www.macroadvisers.com>). Although these indicators are the most important measures considered by the NBER in developing its business cycle chronology, there is no fixed rule about which other measures contribute information to the process.

The committee's approach to determining the dates of turning points is retrospective. We wait until sufficient data are available to avoid the need for major revisions. In particular, in determining the date of a peak in activity, and thus the onset of recession, we wait until we are confident that, even in the event that activity begins to rise again immediately, it has declined enough to meet the criterion of depth. As a result, we tend to wait to identify a peak until many months after it actually occurs.

FAQs

Q: The financial press often states the definition of a recession as two consecutive quarters of decline in real GDP. How does that relate to the NBER's recession dating procedure?

A: Most of the recessions identified by our procedures do consist of two or more quarters of declining real GDP, but not all of them. The most recent recession in our chronology was in 2001. According to data as of July 2008, the 2001 recession involved declines in the first and third quarters of 2001 but not in two consecutive quarters. Our procedure differs from the two-quarter rule in a number of ways. First, we consider the depth as well as the duration of the decline in economic activity. Recall that our definition includes the phrase, "a significant decline in economic activity." Second, we use a broader array of indicators than just real GDP. One reason for this is that the GDP data are subject to considerable revision. Third, we use monthly indicators to arrive at a monthly chronology.

Q: Could you give an example illustrating this point?

A: On July 31, 2002, the Bureau of Economic Analysis released revised figures for gross domestic product that showed three quarters of negative growth in 2001—quarters 1, 2 and 3—where previously the data had shown only quarter 3 as negative. This revision shows why the committee does not rely on a simple rule of thumb such as two consecutive quarters of negative growth, nor on GDP data alone, in making its determinations, but rather looks at a broader array of statistics. In November 2001, the committee determined the date of the peak in activity as March 2001 using its normal indicators. The two-quarter-decline rule of thumb would not have allowed the declaration of the recession until August 2002, let alone a declaration that it had begun early in 2001, as in the statement that the committee made in November 2001. It was not until eight months later that revisions in the GDP data showed declining real GDP for the first, second, and third quarters of 2001. Above we noted that the revisions through July 2008 showed only two quarters of declining real GDP.

Q: Isn't a recession a period of diminished economic activity?

A: It's more accurate to say that a recession—the way we use the word—is a period of diminishing activity rather than diminished activity. We identify a month when the economy reached a peak of activity and a later month when the economy reached a trough. The time in between is a recession, a period when the economy is contracting. The following period is an expansion. Economic activity is below normal or diminished for some part of the recession and for some part of the following expansion as well. Some call the period of diminished activity a slump.

Q: How does the NBER balance the differing behavior of employment and output?

A: The NBER considers real GDP to be the single measure that comes closest to capturing what it means by "aggregate economic activity." The committee therefore places considerable weight on real GDP and other output measures. Following the precedents established in many decades of maintaining its business cycle chronology, however, the committee considers a wide range of indicators of economic activity. There is no fixed rule for how the different indicators are weighted.

Q: In the period following November 2001, the unemployment rate rose from 5.6 percent to 6.4 percent and payroll employment fell by almost a million jobs. How can the NBER say that the economy began an expansion in November 2001?

A: The NBER defines expansions and recessions in terms of whether aggregate economic activity is rising or falling, and it views real GDP as the single best measure of economic activity. Real GDP rose substantially after November 2001. However, this growth in real GDP resulted entirely from productivity growth for an extended period. As a result, the growth in real GDP was accompanied by falling employment. Unemployment rose because of falling employment and because the labor force was rising. While the NBER has traditionally placed substantial weight on output measures, one could

instead define expansions and recessions in terms of whether the fraction of the economy's productive resources that is being used is rising or falling (in which case the behavior of the unemployment rate would be a critical guide to whether the economy was in expansion or recession), or in terms of whether the quantity of productive resources being used was rising or falling (in which case employment would be a critical indicator). Either of these alternative definitions is defensible, and either might lead to the conclusion that the 2001 recession lasted much longer than 8 months and that it might not have ended yet. But if the NBER adopted either definition in dating the 2001 recession, it would have been dating the recession in a way that was inconsistent with the procedures it used to date earlier recessions.

Q: You emphasize the payroll survey as a source for data on economy-wide employment. What about the household survey?

A: Although the household survey is a large, well-designed probability sample of the U.S. population, its estimates of total employment appear to be noisier than those from the payroll survey. For a careful reconciliation of the two surveys over the business cycle, see the [Bureau of Labor Statistics study](#),

Q: How do the movements of unemployment claims inform the Bureau's thinking?

A: A bulge in jobless claims would appear to forecast declining employment, but we do not use forecasts and the claims numbers have a lot of noise.

Q: What about the unemployment rate?

A: Unemployment is generally a lagging indicator, so it is not as useful as indicators more directly related to economic activity, such as real GDP and employment.

Q. How do structural changes in the economy affect the NBER's method for dating business cycles? The Bureau notes that industrial production measures a declining part of the economy. What other substitutes for output bear watching, particularly with regard to service-sector activity?

A: At a quarterly frequency, real GDP is very informative. Real personal income and economy-wide employment are the most important monthly indicators. As described above, the committee also looks at monthly estimates of real GDP. Manufacturing, while a declining fraction of the U.S. economy, remains an important and cyclically sensitive sector and so warrants continued attention.

Q. Can you describe the monthly real GDP estimates?

A: The specific series the committee has been looking at is monthly real GDP prepared by Macroeconomic Advisers, a consulting firm. Many of the ingredients of the quarterly GDP figures are published at a monthly frequency by the government statistical agencies that produce them. Macroeconomic Advisers aggregates them, and then uses a statistical procedure to adjust the monthly estimates for each quarter to make them consistent with the Commerce Department's official quarterly figure. The monthly GDP numbers are fairly noisy and are subject to considerable revision.

Q. Has the committee ever before changed a cycle date based on new information?

A: In the past, the NBER has made some small changes to cycle dates, most recently in 1975. No changes have occurred since 1978 when the Business Cycle Dating Committee was formed and the current chairman was appointed. The committee would change the date of a recent peak or trough if it

concluded that the date it had chosen was incorrect.

Q. Typically, how long after the beginning of a recession does the BCDC declare that a recession has started?

A: Anywhere from 6 to 18 months. We wait long enough so that the existence of a recession is not at all in doubt. We concentrate on finding the date of the peak in activity. We wait until we can assign an accurate date. We are very aware of revisions in the data, in particular.

Q. How long after the expansion starts does it take the BCDC to say that the recession has ended?

A: Same answer-around 6 to 18 months.

Q. When the BCDC says that the last recession began in January 2001 and ended in November 2001, is there a specific date in November or January?

A: Conceptually, there is some such date. We actually identify the month when the peak or trough occurred, without taking a stand on the date in the month. Thus, November 2001 is both the month when the recession ended and the month when the expansion began.

Q. When did the NBER first establish its business cycle dates?

A: The NBER was founded in 1920, and published its first business cycle dates in 1929.

Q. When was your committee first formed?

A: When Martin Feldstein became president of the NBER in 1978. Robert Hall has chaired the committee since its inception.

Q. How is the committee's membership determined?

A: The President of the NBER appoints the members, who include directors of the macro-related programs of the NBER plus other members with specialties in business-cycle research.

Robert Hall, Chair -- Director of NBER's Program of Research on Economic Fluctuations and Growth

Martin Feldstein -- President of NBER and NBER Research Associate, Program in Public Economics

Jeffrey Frankel -- Director of NBER's Program on International Finance and Macroeconomics

Robert J. Gordon -- NBER Research Associate and Professor, Northwestern University

Christina Romer and David Romer -- Co-Directors of NBER's Program on Monetary Economics

Victor Zarnowitz -- NBER Research Associate and Professor Emeritus, University of Chicago

A file of historical background data is available in these formats:

[Microsoft Excel 2000 Spreadsheet](#) | [HTML \(MSIE 5+, Windows only\)](#) | [Adobe PDF](#)