

Evaluating the Classification of Economic Activity into Recessions and Expansions

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Web Appendix

A. Data Sources and Calculations

This is a summary of the economic indicators, transformations and data sources provided in the appendix of the December 11, 2008 press release of the Business Cycle Dating Committee of the National Bureau of Economic Analysis and available from their website (www.nber.org).

<i>Indicator</i>	<i>Sample Available</i>	<i>Source and Method</i>
Industrial Production	1919:1 - 2009:10	FRB index B50001
Real Personal Income less transfers	1959:1 - 2009:5	BEA Table 2.6, line 1 less line 14, both deflated by a monthly interpolation (see below) of BEA Table 1.1.9 line 1
Payroll Employment	1939:1 - 2009:10	BLS Series CES0000000001 (September and October 2009 preliminary)
Household Employment	1948:1 - 2009:10	BLS Series LNS12000000
Real Manufacturing and Trade Sales	1997:1 - 2009:9	BEA Table 2BU, line 1
Real Gross Domestic Product	1947:I - 2009:III	BEA Table 1.1.6, line 1 (2009:III advance estimate)
Real Gross Domestic Income	1947:I - 2009:III	BEA Table 1.10, line 1, divided by BEA Table 1.1.9, line 1 (2009:III advance estimate)

Websites:

- Federal Reserve Board industrial production index: www.federalreserve.gov/releases/g17/iphist/iphist_sa.txt
- Bureau of Economic Analysis, U.S. Department of Commerce, all but sales: www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N
Sales: www.bea.gov/national/nipaweb/nipa_underlying/SelectTable.asp
- BLS payroll survey: <http://data.bls.gov/cgi-bin/surveymost?ce>
- BLS household survey: <http://data.bls.gov/cgi-bin/surveymost?ln>

Interpolation of GDP deflator:

The value of the index in the first month of the quarter is one third of the past quarter's value plus two-thirds of the current quarter's value. In the second month, it is the quarter's value. In the third month, it is two-thirds of the quarter's value plus one third of the next quarter's value.

Indices

<i>Indicator</i>	<i>Sample Available</i>	<i>Source and Method</i>
Chauvet-Hamilton Index	1967:11 - 2009:2	Chauvet and Hamilton (2005)
Chauvet-Piger Index	1967:2 - 2009:9	Chauvet and Piger (2008)
Aruba Diebold Scotti Index	1960:2 - 2009:10	Federal Reserve Bank of Philadelphia
Chicago Fed National Activity Index	1967:3 - 2009:10	Federal Reserve Bank of Chicago
Purchasing Managers Index	1948:1 - 2009:10	Institute for Supply Management

Websites:

- Chauvet-Hamilton Index:
http://www.econbrowser.com/archives/rec_ind/description.html
- Chauvet-Piger Index:
http://www.uoregon.edu/~jpiger/us_recession_probs.htm
- ADS Index:
<http://www.philadelphiafed.org/research-and-data/real-time-center/business-conditions-index/>
- Chicago Fed Index:
http://www.chicagofed.org/economic_research_and_data/cfnai.cfm
- Purchasing Managers Index: <http://www.ism.ws/>

Conference Board Index of Leading Indicators

<i>Indicator</i>	<i>Sample Available</i>
Average weekly hours, manufacturing	1939:1 - 2009:6
Average weekly initial claims for unemployment insurance	1967:1 - 2009:6
Building permits, new private housing units	1960:1 - 2009:6
Index of supplier deliveries—vendor performance	1948:1 - 2009:6
Interest rate spread, 10-year Treasury bonds less federal funds rate	1954:8 - 2009:6
Manufacturer's new orders, consumer goods and materials	1959:1 - 2009:6
Manufacturer's new orders, nondefense capital goods	1959:1 - 2009:6
Money supply, M2	1959:1 - 2009:6
Stock prices, S&P 500	1921:1 - 2009:6
University of Michigan index of consumer expectations	1959:11 - 2009:6

The LexisNexis News Index:

The index is a standardized count of the number of news items that appear in the LexisNexis Academic database (see <http://www.lexisnexis.com/us/lnacademic>). In particular, the count is the number of news articles or news abstracts that LexisNexis retrieves when searching for the word “recession” within “US Newspapers and Wires” source. Our database is at a monthly frequency, beginning in July 1970 and running through June 2009. Each monthly observation is the average daily count for all days within that month, which we then standardize by removing a time trend and adjusting for seasonal variation in the number of counts.

The Principal Components Index: The Principal Components Index is constructed by performing principal components decomposition on the covariance matrix associated with the seven indicators explicitly considered by the BCDC. The sample period for the Principal Components Index is February 1967-August 2009 for the month-on-month index. The sample begins in January 1968 for the index based on the annual growth rates of the indicators, with the different start date due to the difference in the number of log-differences taken when smoothing the data.