Payroll employment turns the corner in 2010

Nonfarm payroll employment reached a low point in February 2010, and modest job growth continued throughout the rest of the year

John P. Eddlemon

After falling by 8.8 million between an employment peak in January 2008 and a trough in February 2010, nonfarm employment, as measured by the Current Employment Statistics (CES) survey, increased by 1,014,000 in the last 10 months of the year.[1] (See chart 1.) The hiring and layoff of temporary, intermittent workers for the 2010 Census had a large impact on total nonfarm employment for much of the year. However, by November, the effect had been largely offset.[2] For the remainder of this article, "nonfarm employment" will refer to total nonfarm employment, excluding temporary, intermittent 2010 Census workers. Following job losses in January and February, nonfarm employment rose for the remainder of the year. Job growth was strongest in April and October, and job gains averaged 105,000 per month after the employment trough in February. (See chart 2.)

Historically, CES employment growth has tended to lag the end of a recession. (See table 1.) The most recent recession lasted from December 2007 through June 2009, but employment continued to fall through February 2010.[3] The lag between the end of the business cycle and the trough in nonfarm employment was shorter than it was after the previous recession, but longer than the historical average. A comparison of growth 10 months after troughs in employment shows that the employment recovery which began in February 2010 was weaker than growth in previous recoveries. Through December 2010, employment increased 0.8 percent from its low point. Over the past four employment recoveries, average employment growth from the low point was 1.9 percent; only the employment recovery that began in May 1991 was weaker. (See chart 3.)

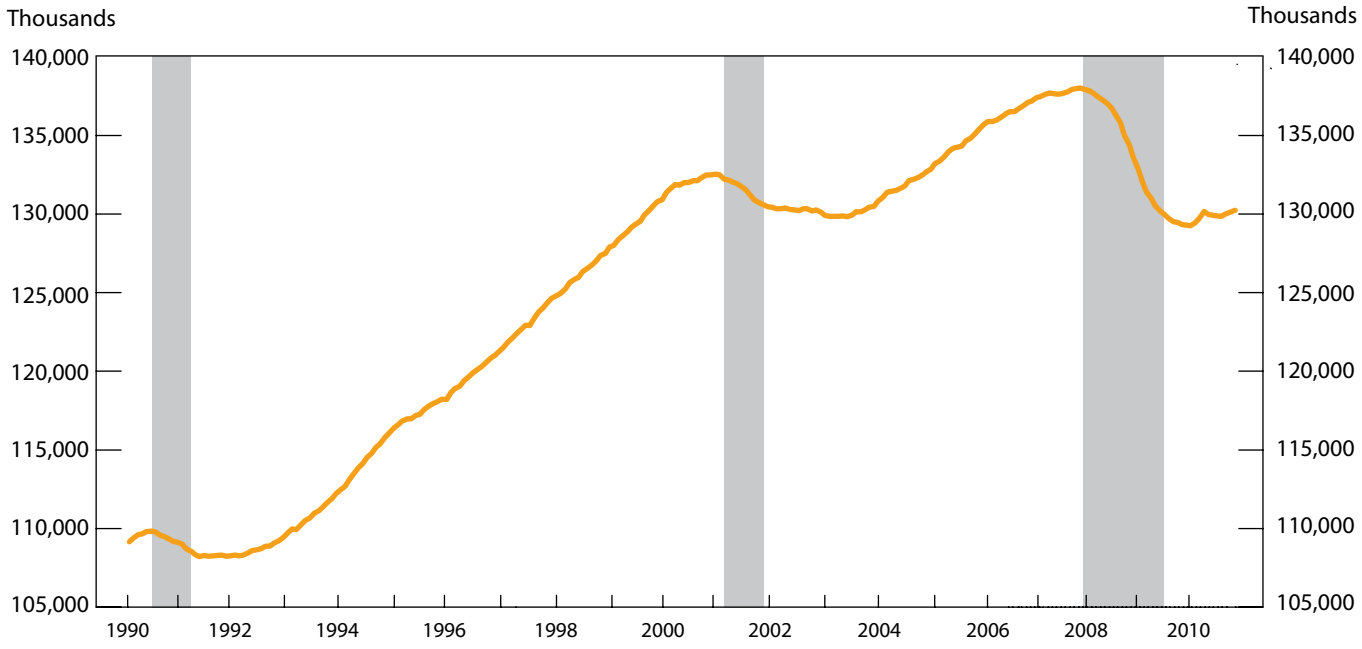
During 2010, job losses moderated in construction and financial activities, while manufacturing, retail trade, and leisure and hospitality began to add jobs. Job growth continued in education and health services and in professional and business services over the year. For most of the year, the diffusion index over a 1-month span indicated job growth across more than half of all industries in the private sector. This index measures the number of industries adding jobs compared with the number of industries losing jobs; a reading above 50 indicates that more industries are adding jobs than shedding them. The index registered 58.6 in December 2010, up from 38.4 a year earlier and an improvement over a low point of 17.0 in March 2009.

Other indicators, hours, and earnings

The recovery in employment was consistent with other economic indicators. Gross domestic product grew throughout 2010,

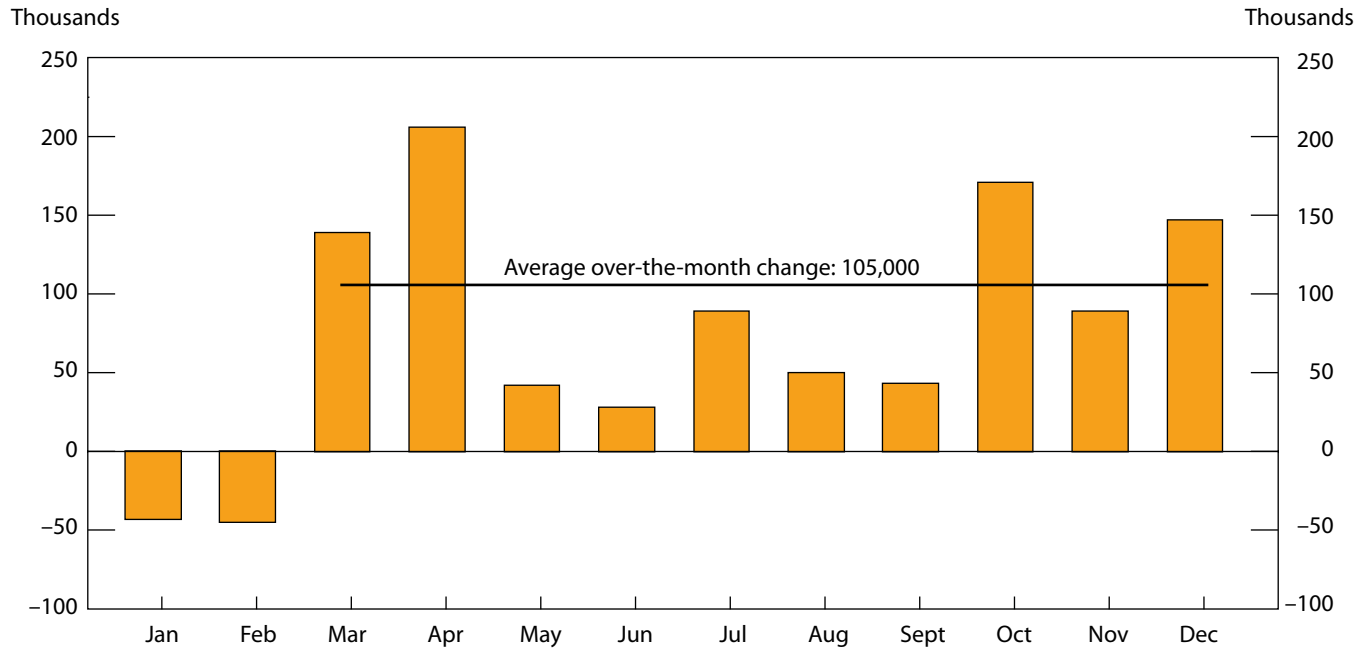
John P. Eddlemon is an economist in the Division of Current Employment Statistics, Office of Employment and Unemployment Statistics, Bureau of Labor Statistics. Email: eddlemon.john@bls.gov

Chart 1. Total nonfarm employment, seasonally adjusted, 1990–2010



Note: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

Chart 2. Over-the-month change in total nonfarm employment, excluding temporary, intermittent Census workers, seasonally adjusted, 2010



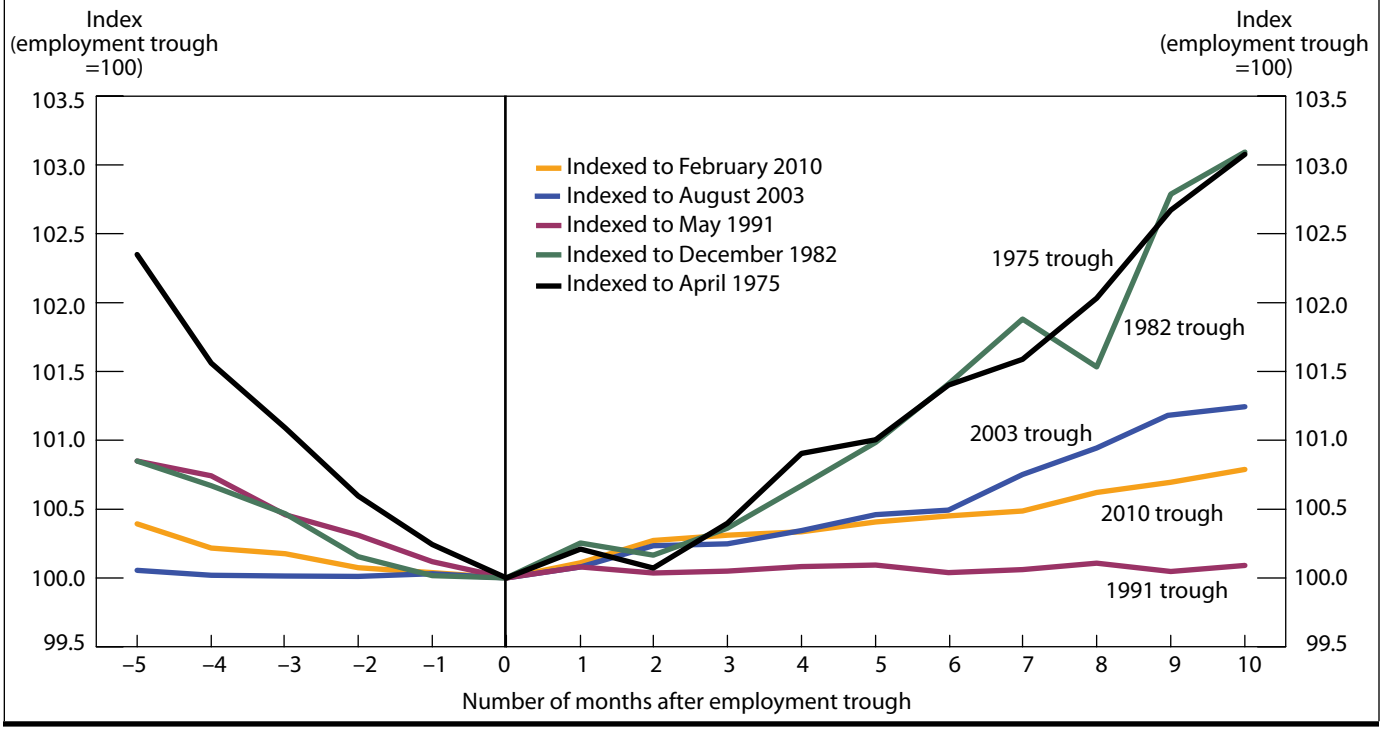
with the strongest growth occurring in the first quarter.[4] Corporate profits rose to record levels,[5] and the Conference Board's indexes of coincident and leading economic indicators increased during the year.[6] Average weekly hours of production and nonsupervisory employees in manufacturing, a component of the Conference Board's leading economic index, increased by 0.7 hour in 2010 and is up by 1.9 hours since the most recent low point in

Table 1. Business cycle troughs and total nonfarm employment troughs, 1973–2010

Business cycle	Employment trough	Number of months from business cycle trough to employment trough	Net change in employment 10 months after employment trough	Percent change in employment 10 months after employment trough
November 1973–March 1975	April 1975	1	2,354	3.1
January 1980–November 1982[1]	December 1982	1	2,746	3.1
July 1990–March 1991	May 1991	2	100	.1
March 2001–November 2001	August 2003	21	1,620	1.2
Average over past 4 cycles	. . .	6	1,705	1.9
December 2007–June 2009	February 2010	8	1,053	.8

[1] Combined January 1980–July 1980 and July 1981–November 1982 business cycles.

Chart 3. Total nonfarm employment indexed to employment troughs, seasonally adjusted, 1975–2010



March 2009. Firms typically increase the hours of their current employees before hiring new workers, so average weekly hours traditionally have been seen as a leading indicator of economic activity. Temporary help services employment, traditionally a leading indicator of nonfarm job growth, reached a trough in August 2009—6 months before nonfarm employment reached its employment trough—and continued to grow in 2010. (See chart 4.) Firms tend to utilize temporary help services workers in times of economic uncertainty in order to manage fluctuations in labor demand that may not be sustained over a longer period.

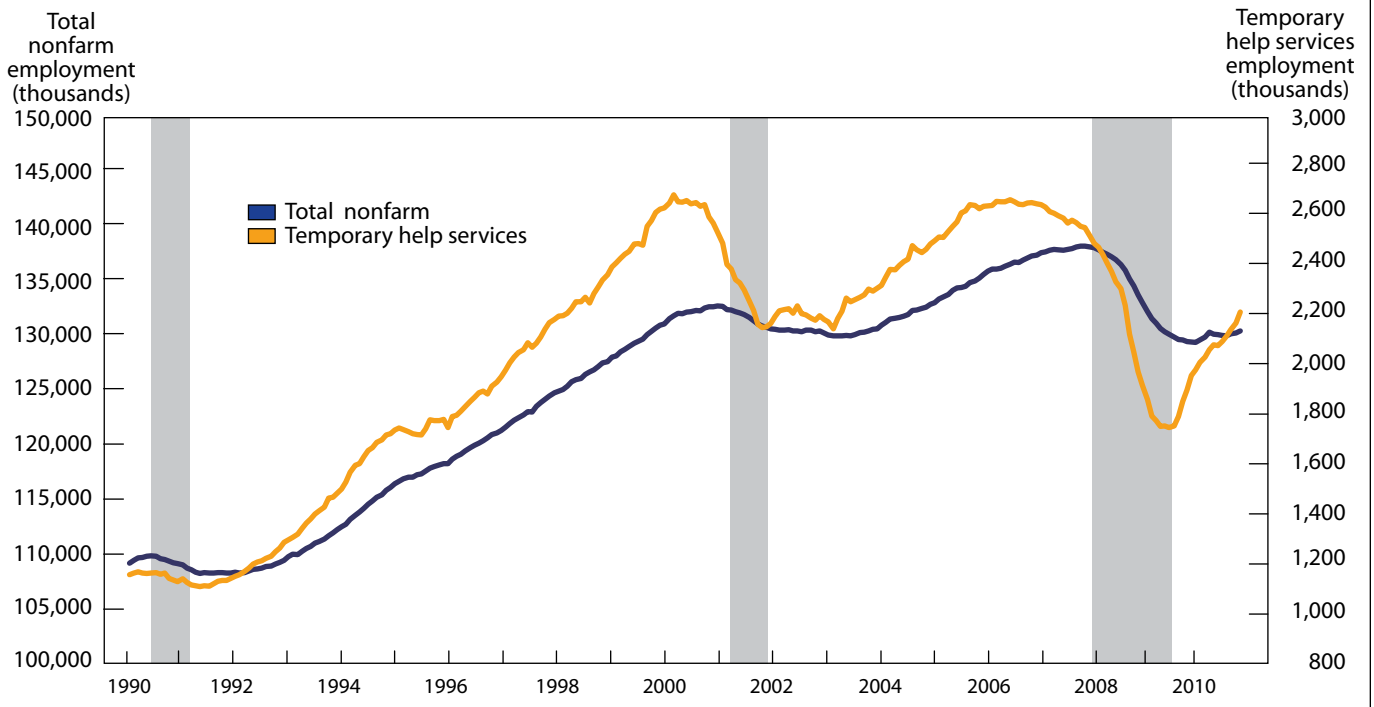
In 2010, average weekly hours for all employees in the private sector increased by 0.3 hour, to 34.2 hours, up 0.5 hour from a low in June 2009. The index of aggregate weekly hours[7] rose 2.0 percent in 2010, but in December 2010 was 7.8 percentage points below the peak in June 2007.

Average hourly earnings of all employees in the private sector increased by 38 cents, to $22.77, in 2010. Over the year, average hourly earnings for all employees rose by 1.7 percent, while the index of aggregate weekly payrolls[8] for all employees increased by 4.0 percent. As of December 2010, this index was 1.8 percent below its June 2008 high.

Job losses moderate

Construction employment fell by 149,000 in 2010, with most of the loss occurring in the first 2 months of the year. After February, employment losses averaged 4,000

Chart 4. Total nonfarm employment and temporary help services employment, seasonally adjusted, 1990–2010



NOTE: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

per month, a significant improvement over average losses of 77,000 per month the previous 2 years. In 2010, residential construction was responsible for most of the job losses. Employment in nonresidential construction was volatile on a month-to-month basis and fell by 36,000 over the year. (See chart 5.)

Although job losses in construction moderated during 2010, the housing market remained weak. Housing starts and permits[9] remained near historically low levels throughout the year, and new-home sales[10] reached an all-time low in August. The National Association of Home Builders (NAHB)/Wells Fargo Housing Market Index,[11] which measures builder confidence in the market for newly built single-family homes, stood at 16 in December 2010, up slightly from a low of 8 in January 2009, but significantly below the recent peak of 72 in June 2005.

Job losses in financial activities also moderated in 2010. The industry shed 65,000 jobs, compared with 316,000 jobs lost in 2009. (See chart 6.) In 2010, insurance carriers and related activities lost 40,000 jobs and real estate lost 16,000 jobs. Employment stabilized in credit intermediation and was essentially flat over the year. This industry includes firms, such as banks and mortgage companies, that lend or facilitate the lending of funds. Credit intermediation had shed 118,000 jobs in 2009, and the industry remained fragile in 2010 as the Federal Deposit Insurance Corporation (FDIC) seized a record 157 banks during the year—the highest yearly total of failed banks since the savings-and-loan crisis ended in 1992.[12]

Job losses end, gains begin

In 2010, manufacturing employment increased by 109,000, the largest 12-month gain since June 1997–98, when the industry added 221,000 jobs. (See chart 7.) During 2010, job growth was concentrated largely in fabricated metal products, machinery, and motor vehicles and parts. New orders[13] and industrial production,[14] both severely depressed during the 2007–09 recession, partially recovered in 2010, and many companies added new workers to their workforces. Production of autos and light trucks increased from 5.6 million units in 2009 to 7.6 million in 2010.[15] Job gains in manufacturing also became more widespread as 2010 passed. The diffusion index over a 1-month span was 37.7 at the end of 2009 and rose to 59.3 by the end of 2010. The index had fallen as low as 6.8 in January 2009.

After reaching an employment low in December 2009, retail trade added 99,000 jobs in 2010. The industry had shed 1.2 million jobs between December 2007 and December 2009. (See chart 8.)

Employment growth in retail trade was spurred by gains in retails sales,[16] which increased by $24.7 billion, or 7.8

Chart 5. **Over-the-month change in employment in residential and nonresidential construction, seasonally adjusted, 2010**

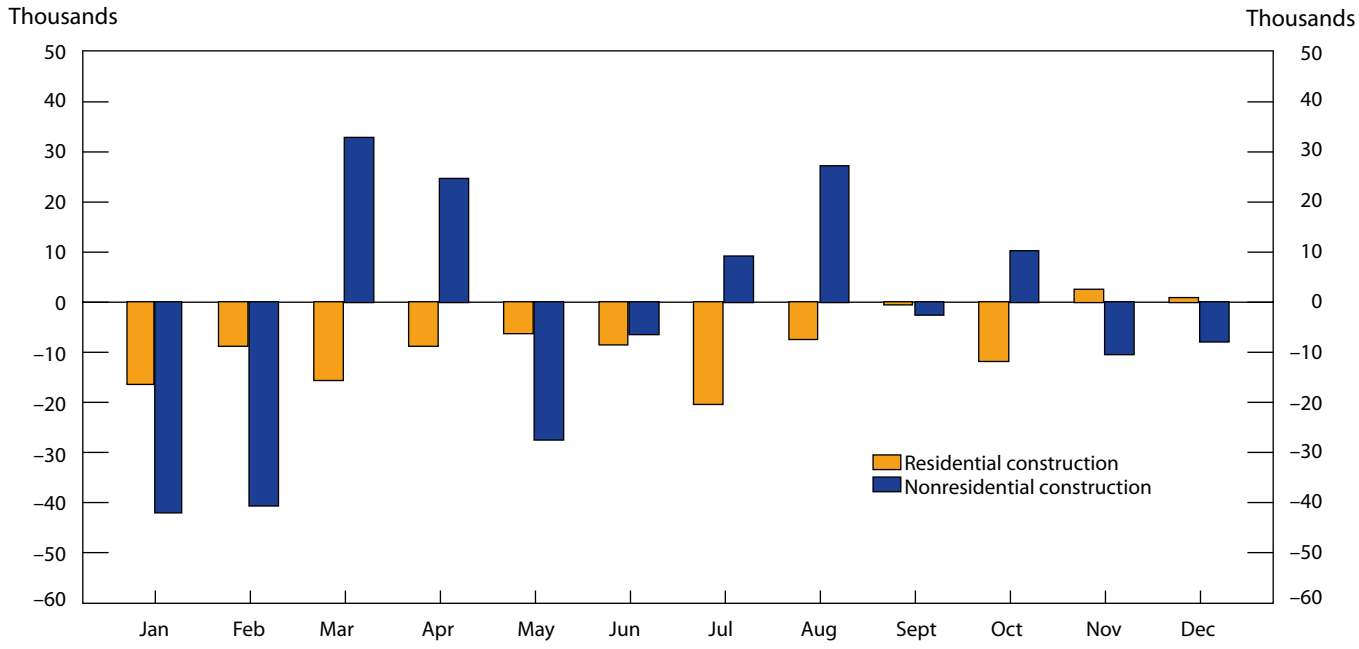
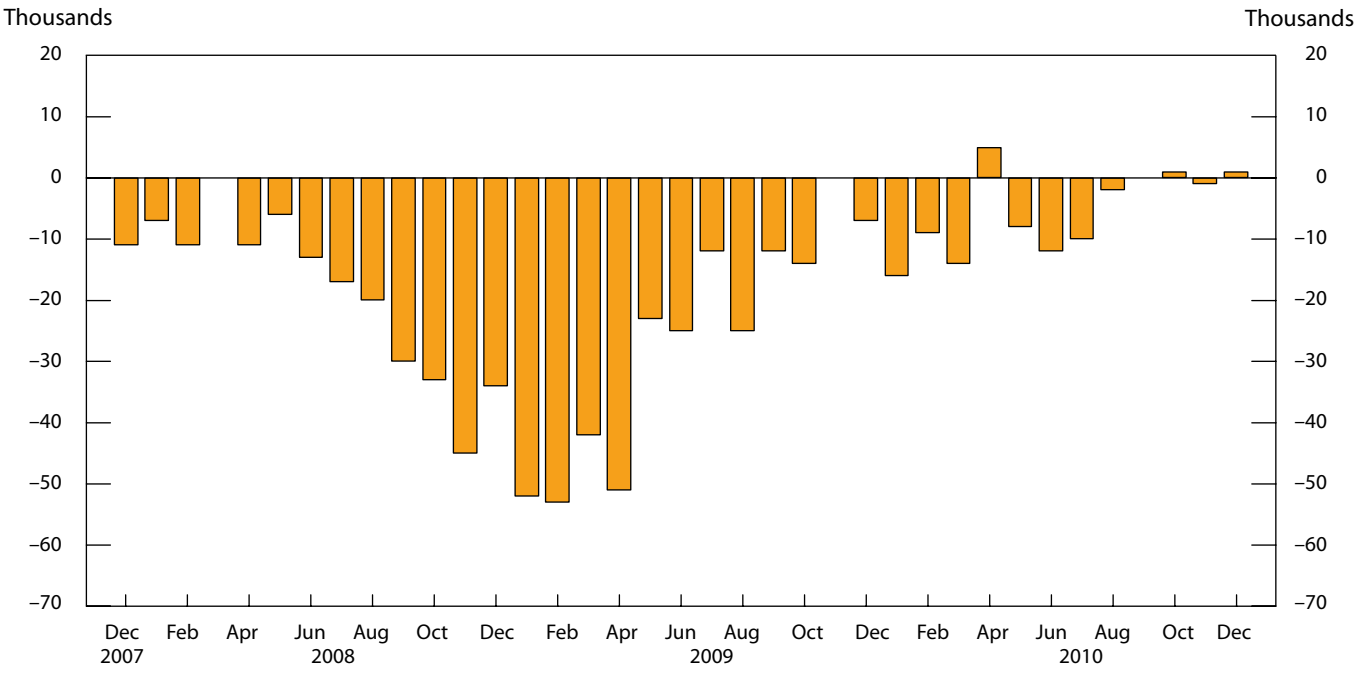
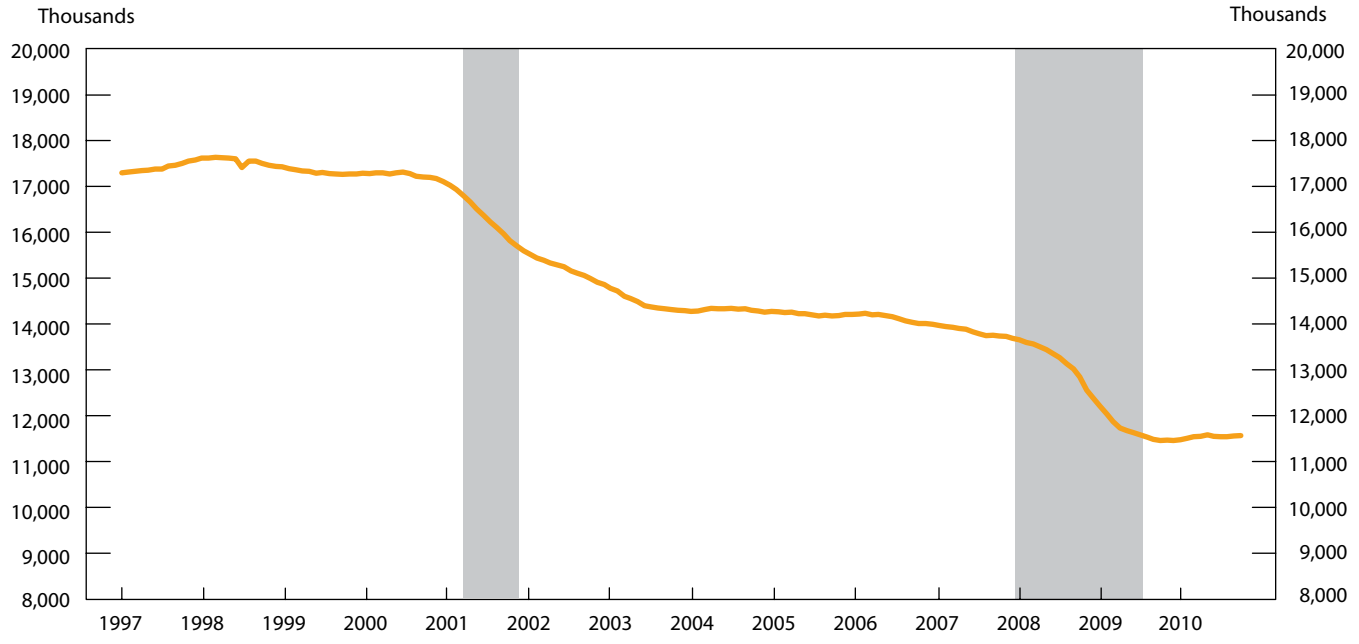


Chart 6. **Over-the-month change in employment in financial activities, seasonally adjusted, December 2007–December 2010**



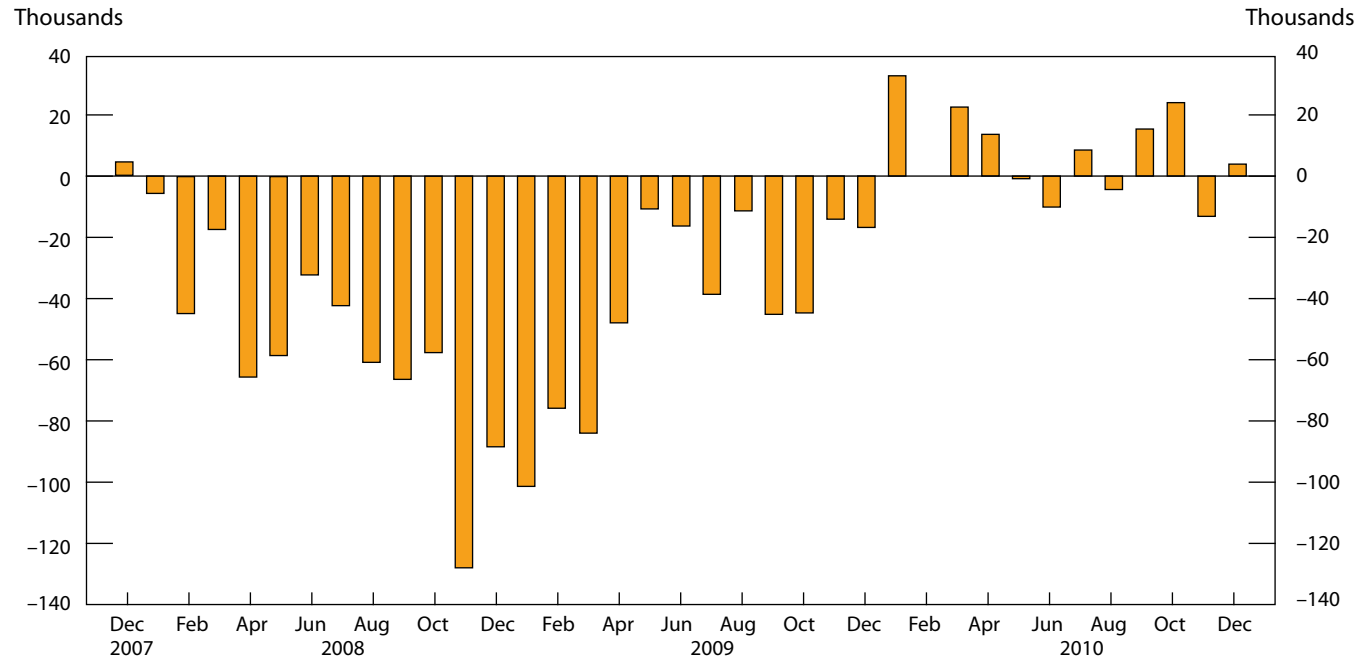
percent, in 2010. The $24.7 billion figure included a substantial increase in new-vehicle sales, with more than 1 million more new vehicles sold in 2010 than in 2009. Sales of trucks either matched or exceeded car sales from May through December.[17] Auto sales grew despite a 34-cent-per-gallon increase in the price of gas.[18] Consumer confi-

Chart 7. Manufacturing employment, seasonally adjusted, 1997–2010



NOTE: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

Chart 8. Over-the-month change in employment in retail trade, seasonally adjusted, December 2007–December 2010



dence was up 9.8 points over the year, although individual months showed varying degrees of volatility.[19]

In 2010, employment gains in retail trade were concentrated in clothing and accessories stores, general merchandise stores, and motor vehicle and parts dealers. Some industries within retail trade experienced minor job losses over the year. The largest employment decline was in building material and garden supply stores, reflecting continued weakness in residential construction.

Leisure and hospitality reached an employment low

in January 2010 and added 143,000 jobs by the end of the year. The industry had lost 325,000 jobs in 2009 and 281,000 jobs in 2008. About 80 percent of the job gains during 2010 occurred in food services and drinking places, with the remaining 20 percent split between the accommodation subsector and arts, entertainment, and recreation.

After losing 223,000 workers between March 2008 and February 2010, "other services"—repair services, personal and laundry services, and membership organizations—added 99,000 workers by the end of 2010. Membership associations and organizations accounted for about 80 percent of the jobs added during the year.

Job growth continues

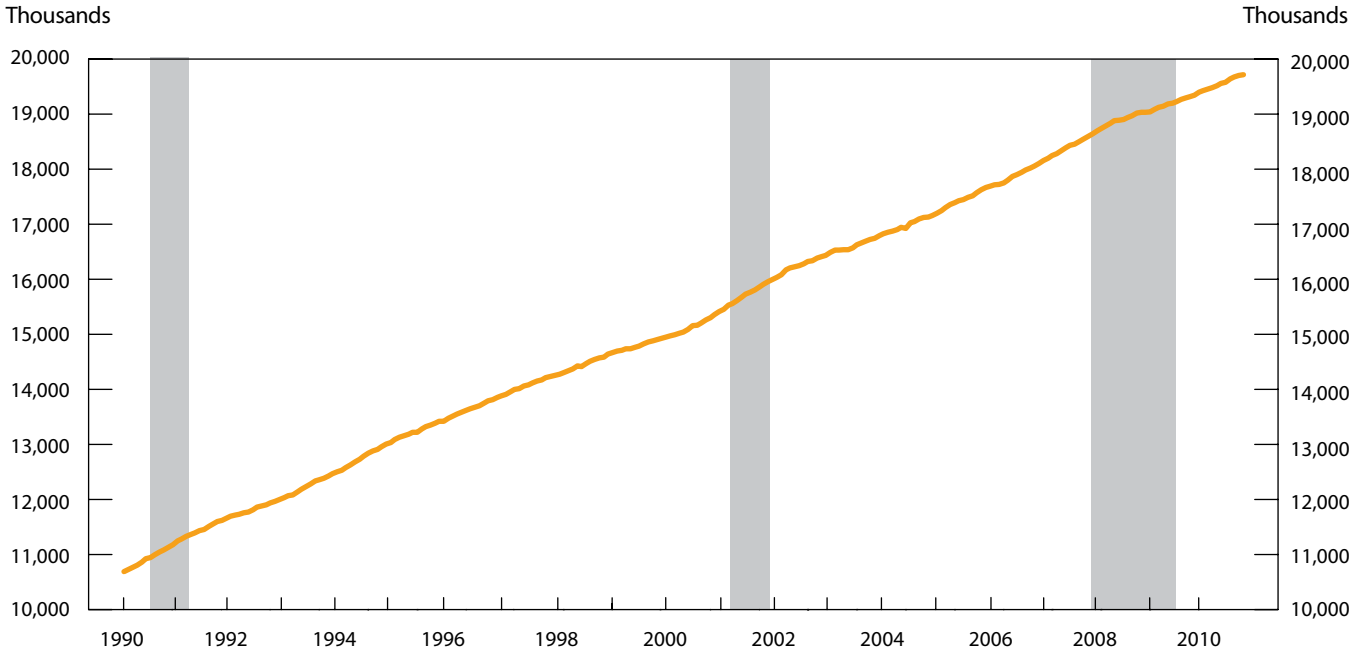
Private education and health services continued to add jobs in 2010. The industry traditionally has added jobs regardless of the economic cycle, and that trend continued throughout the most recent downturn.[20] (See chart 9.) Monthly employment gains in education and health services averaged 34,000 in 2010, the same as the average monthly gain during the previous 2 years. Health care and social assistance accounted for more than 80 percent of the jobs added in 2010.

Professional and business services added 420,000 jobs in 2010, with job gains concentrated in temporary help services. As mentioned earlier, employment trends in temporary help services are a leading indicator of labor demand. Employment in the industry reached a peak in December 2007, a month before total nonfarm employment peaked; employment in the industry reached a trough in August 2009, 6 months before total nonfarm employment reached its low. (See chart 4.) Between August 2009 and December 2010, temporary help services added 462,000 jobs.

Government

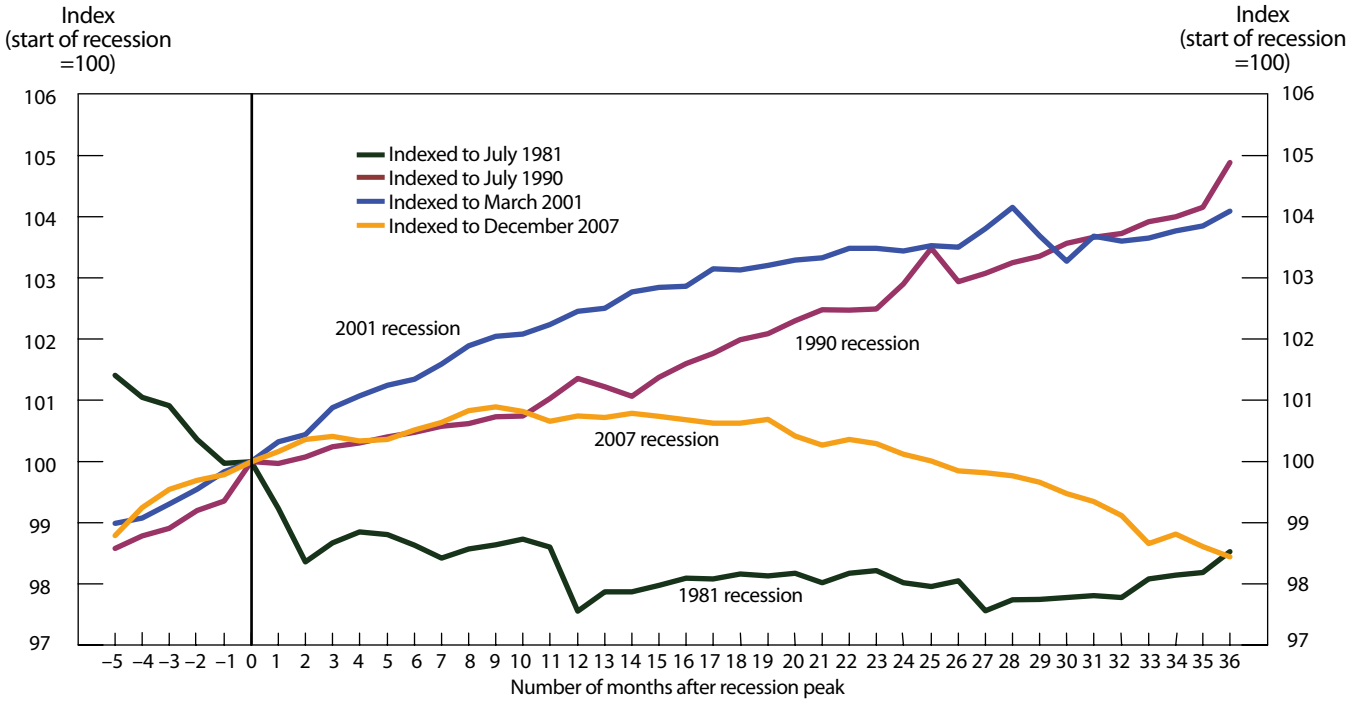
Government employment fell by 233,000 in 2010. The hiring and layoff of temporary, intermittent workers for the 2010 census contributed to large swings in Federal Government employment during the year, but the net effect for the calendar year was negligible. Job losses continued in the U.S. Postal Service as employment fell by 19,000. Since reaching an employment peak in April 1999, the Postal Service has shed 266,000 jobs. Excluding impacts attributable to hiring for the census and to Postal Service losses, Federal Government employment increased by 50,000 in 2010. State government employment was essentially flat in 2010, with job growth in edu-

Chart 9. Education and health services employment, seasonally adjusted,1990–2010



NOTE: Shaded areas represent recessions as determined by the National Bureau of Economic Research (NBER).

Chart 10. Local government employment indexed to beginnings of recessions, seasonally adjusted, 1981–2007



NOTE: Business cycle peaks are determined by the National Bureau of Economic Research (NBER).

Table 2. Most recent industry-specific employment trough and employment change from trough to December 2010

Industry	Most recent trough	December 2010 employment minus employment at trough (thousands)	Number of months by which industry trough led total nonfarm trough
Total nonfarm, excluding workers on 2010 Census	February 2010	1,053	0
Mining and logging	October 2009	73	4
Construction	[1]	...	...
Manufacturing	December 2009	109	2
Durable goods	December 2009	142	2
Nondurable goods	[1]	...	...
Wholesale trade	February 2010	36	0
Retail trade	December 2009	99	2
Transportation and warehousing	February 2010	125	0
Utilities	[1]	...	...
Information	[1]	...	...
Financial activities	[1]	...	...
Professional and business services	September 2009	519	5
Temporary help services	August 2009	462	6
Education and health services	[2]	...	...
Leisure and hospitality	January 2010	143	1
Other services	February 2010	101	0
Government	[2]	...	...

[1] Industry continued to lose jobs and did not reach an employment trough corresponding to the most recent business cycle.

[2] Industry continued to add jobs and did not reach an employment trough corresponding to the most recent business cycle.

cation offsetting losses elsewhere.

Local government, which accounts for more than half of all government employment, drove the employment decline in government, shedding 239,000 jobs over the year. Local government employment grew during the first part of the recession, reaching a peak in September 2008. (See chart 10.) Tax revenues are sensitive to the business cycle,[21] and severe declines in tax revenues following the

most recent recession took a heavy toll on local governments. Some local governments cut employment after exhausting measures such as furloughs, pay freezes, cuts in service, and larger classroom sizes. Since peaking in September 2008, local governments have shed 352,000 jobs, and 68 percent of those losses occurred in 2010. The decline in local government employment in 2010 was split equally between the education and noneducation components of local government.

FOLLOWING LOSSES IN THE FIRST 2 MONTHS of the year, nonfarm payroll employment began to recover and added jobs at a rate that was low by historical standards for the final 10 months of 2010. Construction and financial activities continued to lose jobs, but at a slower rate, while manufacturing, retail trade, leisure and hospitality, and other services began to add jobs. Employment in manufacturing and retail trade reached lows 2 months before total nonfarm employment, while mining and logging employment led total nonfarm employment by 4 months. (See table 2.) Education and health services and professional and business services added jobs prior to the start of the year and continued that trend throughout 2010. Employment trends in temporary help services continued to be a leading indicator of overall employment as the industry reached an employment trough 6 months before the trough in nonfarm payroll employment. At the end of 2010, nonfarm employment remained 7.8 million below its peak level in January 2008. However, the overall employment picture began to improve during the year, and this development was noteworthy after 2 years of substantial job losses. □

Notes

[1] The Current Employment Statistics (CES) program is a monthly survey of about 140,000 businesses and government agencies representing approximately 440,000 individual worksites. For more information on the program's concepts and methodology, see "Technical Notes to Establishment Data Published in *Employment and Earnings*" (U.S. Bureau of Labor Statistics, Mar. 4, 2011), on the Internet at **www.bls.gov/web/empsit.supp.toc.htm#technote** (visited Jan. 11, 2011). To access CES data, see "Current Employment Statistics – CES (National)" (U.S. Bureau of Labor Statistics, no date), on the Internet at **www.bls.gov/ces** (visited Jan. 11, 2011). The CES data used in this article are seasonally adjusted unless otherwise noted.

[2] For an overview of the impact of census workers on nonfarm employment in 2010, see Emily Richards, "The 2010 Census: the employment impact of counting the Nation," this issue, pp. 33–38.

[3] Recessions are identified by the National Bureau of Economic Research (NBER), according to which the most recent recession began in December 2007 and ended in June 2009. The previous two recessions were from March 2001 to November 2001 and from July 1990 to March 1991. For a complete list of business cycle dates, see "U.S. Business Cycle Expansions and Contractions" (Cambridge, MA, National Bureau of Economic Research, Sept. 20, 2010), on the Internet at **www.nber.org/cycles/cyclesmain.html** (visited Mar. 11, 2011).

[4] To access GDP data, see "National Economic Accounts" (Bureau of Economic Analysis, Feb. 25, 2011), on the Internet at **www.bea.gov/national/index.htm#gdp** (visited Mar. 11, 2011).

[5] To access corporate profit data, see "National Economic Accounts" (Bureau of Economic Analysis, no date), on the Internet at **www.bea.gov/national** (visited Mar. 11, 2011).

[6] The Conference Board is a global, independent business membership and research association. To access the Board's coincident and leading index data, see "Global Business Cycle Indicators" (New York, The Conference Board, updated at least daily), on the Internet at **www.conference-board.org/data/bcicountry.cfm?cid=1** (visited Mar. 11, 2011).

[7] Aggregate weekly hours are the product of employment and average weekly hours. The index is calculated by dividing this aggregate by aggregate weekly hours for 2007.

[8] Aggregate weekly payrolls are the product of employment, aggregate weekly hours, and average hourly earnings. The index is calculated by dividing aggregate weekly payrolls by annual-average aggregate payrolls for 2007.

[9] To access data on new residential construction (housing starts and building permits), see "New Residential Construction Building Permits, Housing Starts, and Housing Completions" (U.S. Census Bureau, no date), on the Internet at **www.census.gov/const/www/newresconstindex.html** (visited Mar. 11, 2011).

[10] To access data on new-home sales, see "New Residential Sales" (U.S. Census Bureau, no date), on the Internet at **www.census.gov/const/www/newressalesindex.html** (visited Mar. 11, 2011).

[11] To access data on the Housing Market Index, see "NAHB/Wells Fargo Housing Market Index (HMI)" (Washington, DC, National Association of Home Builders, 2011), on the Internet at **www.nahb.org/reference_list.aspx?sectionID=134** (visited Mar. 11, 2011). The index is based on a survey that has been mailed to a panel of NAHB builder members every month since January 1985. The survey asks builders to rate housing market conditions on the basis of their experiences. About 400 responses are obtained each month. With their experience and close contact with local market conditions, builders provide timely information about current housing market conditions, as well as information on how home sales are likely to behave in the future. The Housing Market Index is a weighted average of responses to survey questions asking builders to rate three aspects of their local market conditions: current sales of single-family detached new homes, expected sales of single-family detached new homes over the next 6 months, and traffic of prospective buyers in new homes. The NAHB survey asks builders to rate sales and sales expectations as "good," "fair," or "poor." Builders also rate traffic of prospective buyers as "high to very high," "average," or "low to very low." If all respondents answer "good" or "high," then the index is 100. If all answer "poor" or "low," then the index is 0. If the number of respondents who answer "good" or "high" and the number of respondents who answer "poor or "low" are equal, the index is 50. Any number greater than 50 indicates that more builders view sales

conditions as good than poor, and any number less than 50 indicates that more builders view sales conditions as poor than good.

[12] For information on the FDIC failed bank count for 2010, see "Bank Failures in Brief"(Washington, DC, Federal Deposit Insurance Corporation, Jan. 4, 2011), on the Internet at **www.fdic.gov/bank/historical/bank/2010/index.html** (visited Mar. 11, 2011). For the full list of failed banks, see "Failed Bank List" (Washington, DC, Federal Deposit Insurance Corporation, Mar. 7, 2011), on the Internet at **www.fdic.gov/bank/individual/failed/banklist.html** (visited Mar. 11, 2011).

[13] See "Manufacturers' Shipments, Inventories, and Orders" (U.S. Census Bureau, Feb. 24, 2011), on the Internet at **www.census.gov/manufacturing/m3** (visited Mar. 11, 2011).

[14] See "Industrial Production and Capacity Utilization," Federal Reserve Statistical Release G.17 (U.S. Federal Reserve, Feb. 16, 2011), on the Internet at **www.federalreserve.gov/releases/G17/Current/default.htm.** (visited Mar. 11, 2011).Industrial production data appear in an untitled table on the Internet at **www.federalreserve.gov/releases/G17/ipdisk/ip_sa.txt** (visited Mar. 24, 2011).

[15] *Ibid.* and author's calculations from an untitled table on the Internet at **www.federalreserve.gov/releases/G17/ipdisk/auto_sa.txt** (visited Mar. 24, 2011).

[16] To access retail sales data, see "Monthly & Annual Retail Trade" (U.S. Census Bureau, Jan. 28, 2011), on the Internet at **www.census.gov/retail** (visited Mar. 11, 2011).

[17] To access new-vehicle sales data, see "Motor Intelligence® Information" (Woodcliff Lake, NJ, Autodata Corp., no date), on the Internet at **www.motorintelligence.com/m_frameset.html** (visited Mar. 11, 2011).

[18] To access gas price data, see "Retail Gasoline Historical Prices" (U.S. Department of Energy, no date), on the Internet at **www.eia.doe.gov/oil_gas/petroleum/data_publications/wrgp/mogas_history.html** (visited Mar. 11, 2011). The 34-cent change in gas prices is the difference in price from the December 2009 reference week to the December 2010 reference week.

[19] To access data on consumer confidence, see "Consumer Data" (New York, The Conference Board, no date), on the Internet at **www.conference-board.org/data/consumerdata.cfm** (visited Mar. 11, 2011).

[20] For an overview of health care employment trends during the 2007–09 recession, see Catherine A. Wood, "Employment in health care: a crutch for the ailing economy," *Monthly Labor Review*, forthcoming, April 2011.

[21] See "How State Tax Policy Responds to Economic Recessions" (Washington, DC, National Conference of State Legislatures, Jan. 5, 2011), on the Internet at **www.ncsl.org/documents/fiscal/TaxPolicyandRecessions.pdf** (visited Mar. 11, 2011), especially p. 7.