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### Recession Grips the Bay State

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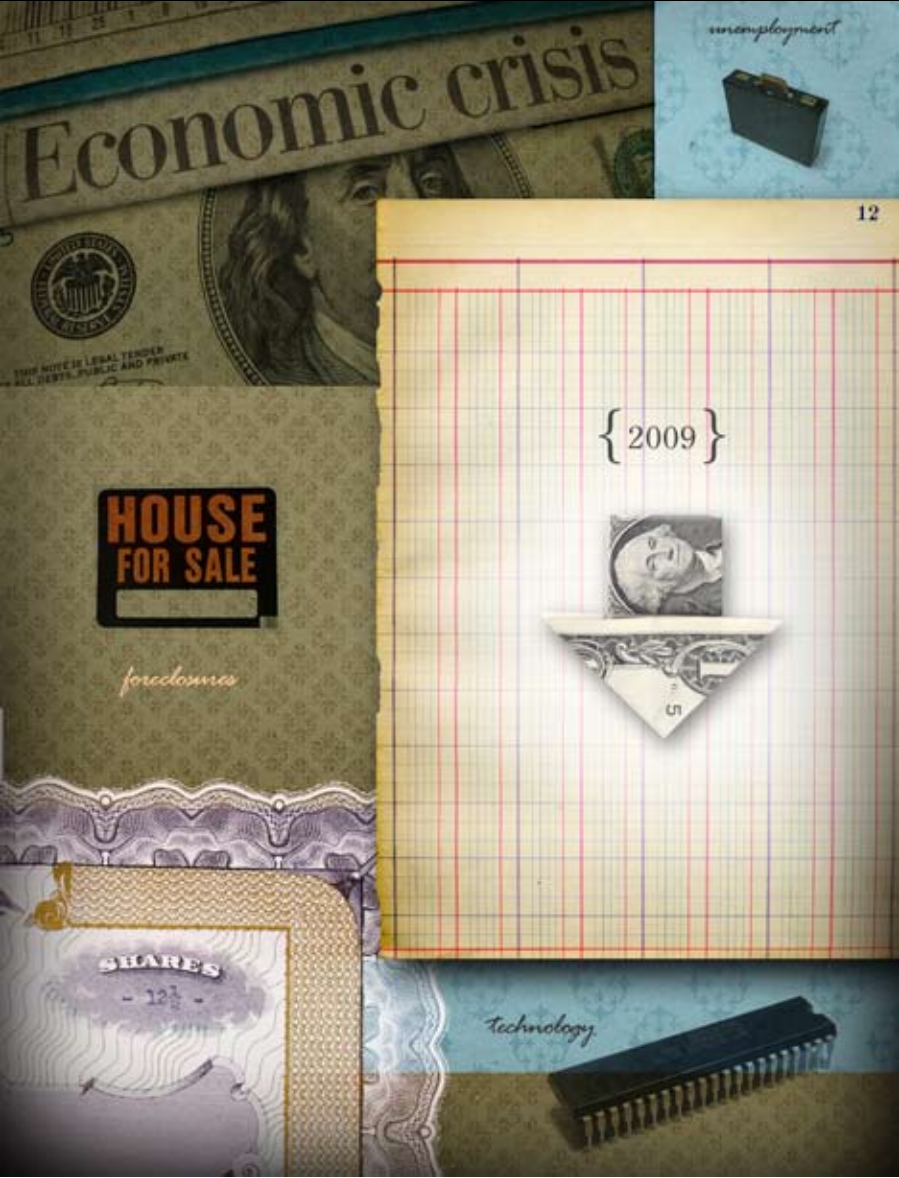
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THE STATE OF THE STATE ECONOMY

# ECONOMIC CURRENTS



## Recession Grips the Bay State

IT'S OFFICIAL: MASSACHUSETTS IS FOLLOWING THE U.S. ECONOMY INTO A SUBSTANTIAL DOWNTURN, WITH ONLY A FEW HOPEFUL SIGNS TO COUNTER THE GLOOM.

ALAN CLAYTON-MATTHEWS

**E**conomic activity in Massachusetts is on the decline. According to the current economic index, real gross state domestic product grew at only a 0.6 percent annual rate in the third quarter, and the leading index is predicting that the state's economy will decline at a 1.5 percent annual rate over the six months November 2008 through April 2009. Massachusetts is in a recession.

Through August, the state appeared to be buoyed by the technology, science, and health services sectors, but it now appears that declines in the rest of the state's economy have seriously weakened the positive impact of these sectors. Indeed, demand for the state's technology and science-based products and services appears to be waning in the face of a contracting national economy and rapidly slowing world economy.

The recession in the U.S. began in December 2007 according to the National Bureau of Economic Research, the official date-setter for national business cycles. Given the state's favorable industry mix — a smaller share of housing production, virtually no auto-related manufacturing, and a high concentration in technology and science-based goods and services — the recession in Massachusetts came later than in the nation as a whole. The *MassBenchmarks* current economic index estimates that real Massachusetts domestic product grew at a 0.2 percent annual rate in October, so the recession may have come to the state as late as November. However, current estimates of product growth were very low in both August and September — 0.3 percent and 0.1 percent respectively, so after revisions in the data, the peak may be moved back to August, July, or even earlier. As of now, the Massachusetts payroll employment peak was in June.

The following survey of key indicators of the Massachusetts economy paints a troublesome picture.

### **A flood of bad economic news**

Payroll employment fell a combined 10,100 jobs in September and October, erasing almost all the growth of the past year. In October, employment was only 0.1 percent greater than in October 2007. Employment declines have been broad-based. During the first 10 months of 2008, six of the 10 super sectors lost jobs on net, with the largest proportionate job losses in construction (4 percent), followed — in order — by manufacturing (1.3 percent), finance, trade/transportation/utilities, information, and leisure/hospitality (0.8 percent). One super sector, other services — which includes repair services, personal services, and nonprofits — saw no net change in employment during this period. Three super sectors: government, professional business services, and education and health services, experienced job growth of 0.5 percent, 1.0 percent,

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and 1.8 percent respectively. Total payroll employment declined 0.1 percent during this period.

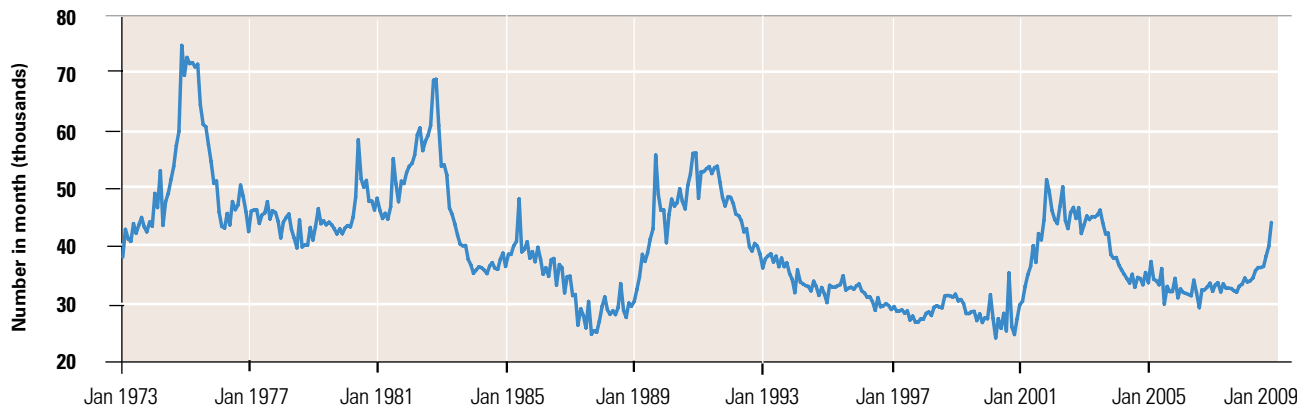
These payroll numbers — as weak as they are — may be overstating job growth. That is because they are based on a survey of employers that tends to perform badly at turning points, overestimating job growth at peaks, and underestimating job growth at troughs. When these job estimates get re-benchmarked in February, they may show that the number of jobs actually began to decline earlier and more rapidly than the current estimates indicate. At the prior employment peak in 2001, the payroll survey initially recorded a peak in June 2001, but when these data were re-benchmarked in February of 2002, the peak was moved back to January of 2001. What had originally appeared to have been a small increase of 6,800 jobs between January and June was revised to a job decline of 25,900. By February 2009, we may find that job declines in 2008 were steeper than the current estimates suggest.

The other employment survey, of resident households — used to estimate the state's unemployment rate, paints a bleaker picture than the payroll survey. According to that survey, state resident employment fell by 20,500 in the first ten months of this year (since December 2007) — a decline of 0.6 percent, while unemployment rose by 41,200, boosting the unemployment rate from 4.3 percent in December 2007 to 5.5 percent in October.

Other measures of unemployment also reflect a rapidly deteriorating labor market. Monthly initial unemployment claims rose from 36,000 to 43,700 (on a seasonally adjusted basis) between July and October. Historically, 40,000 has served as a reliable indicator of the critical dividing line between expansion and recession. Initial unemployment claims last rose above 40,000 in July 2001, and before that, in June 1989. In both cases, recessions had begun a few months earlier.

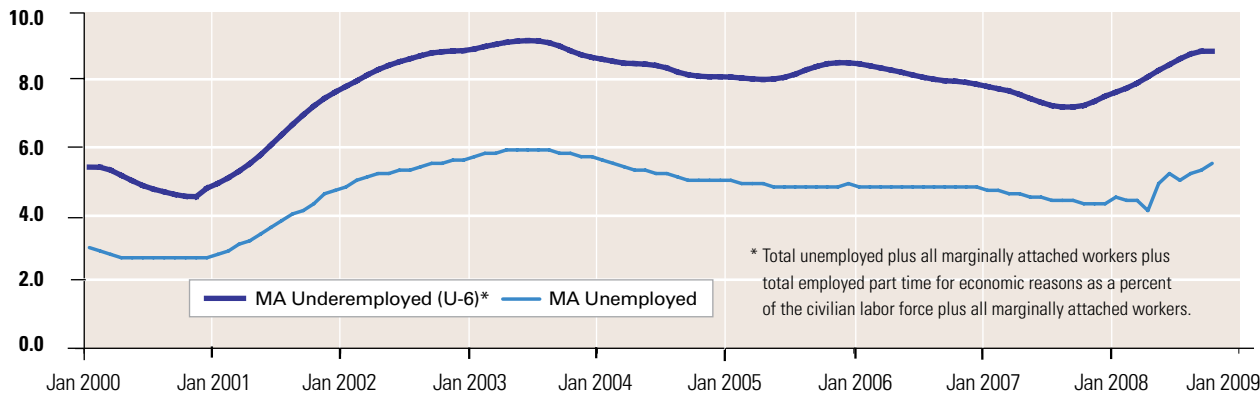
The Bureau of Labor Statistics' most inclusive measure of unemployment, called "U-6," has also risen rapidly during the last year. This measure adds to the official,

Figure 1. Initial Unemployment Claims, Massachusetts



Source: Massachusetts Executive Office of Labor and Workforce Development (EOLWD)

Figure 2. Massachusetts Unemployment and Underemployment Rate



Source: U.S. Bureau of Labor Statistics.

Note: The unemployment rate is the official unemployment rate as released by the BLS. The underemployment rate is from the monthly Current Population Survey (CPS), seasonally adjusted and smoothed by UMass.

more restrictive measure of unemployment by counting two additional categories of workers as unemployed: 1) those who want a job and who have looked for work in the recent past, but who have not looked in the last four weeks, and 2) those who currently are working part-time because they cannot find full-time employment. This measure for Massachusetts rose from 7.2 percent in September of 2007 to 8.8 percent in October. It last peaked at 9.1 percent late in the last recession.<sup>1</sup>

State tax revenues in the first quarter of this fiscal year fell short of expectations by over \$200 million, and, controlling for changes in tax laws and rates, were down by 0.2 percent from the first quarter of the prior fiscal year. In response, the Department of Revenue adjusted the official benchmark estimate for FY09 tax revenues down by \$1.1 billion, or 5.1 percent. Revenue from various sources began to decline sharply in September, reflecting a slowdown or outright decline in current economic activity.

Three tax components contribute to the *MassBenchmarks* current and leading economic indexes aforementioned. Withholding taxes derive from wages paid to payroll workers. These revenues are used to form an estimate of seasonally adjusted wage and salary income of Massachusetts workers. According to this estimate, total wage and salary income fell at a 1.5 percent annual rate (in nominal terms) in the three months ending in October from the prior three-month period.

State regular sales taxes — which exclude meals, automobile sales, gasoline, cigarette, and alcohol excise taxes — are a good proxy for consumer discretionary spending and business spending on office and building supplies. These revenues are used to form an estimate of such seasonally adjusted spending. This sales tax base measure fell at a 3.3 percent annual rate (in nominal terms) in the same most recent three-month period.

Motor vehicle sales taxes are a direct measure of automobile sales in Massachusetts. These revenues fell at

a 21.3 percent annual rate during the same most recent three-month period.

Both consumer and business confidence have fallen sharply this year. The last two readings of MassInsight’s quarterly Consumer Confidence Index were 50 in July and 51 in October, the two lowest recorded levels in the history of the index, which dates back to January 1992. The Associated Industries of Massachusetts Business Confidence Index in October was 41.4, the lowest value in its history, dating back to December 1996. A level of 50 for the business confidence index is the dividing line between expectations of an expanding versus contracting economy.

Household wealth, as measured by financial savings and home equity value, has fallen substantially in the last year. The Massachusetts Association of Realtors’ (MAR) median single-family home price in October was 10.6 percent below the previous year, and 17.3 percent below its peak in December of 2005 (on a seasonally adjusted basis). Stock prices (as of December 1) were down roughly 50 percent from their peak in October 2007.

The housing market continues to struggle. According to the Warren Group, foreclosures in the first nine months of this year were up 72 percent in Massachusetts from the same period in the previous year. Housing permits were below 500 for each of the first nine months of this year (on a seasonally adjusted basis). This is the longest period of time that permits have been depressed at this level for the history of these data, which go back to 1969. There is, however, one encouraging sign of activity. Home sales are up in Massachusetts. To the extent that sales are not up because of distressed foreclosure auctions, this means that households are finding sources for mortgage lending. Moreover, an increased level of “voluntary” transaction activity means that prices may be approaching the bottom. According to the MAR, in October, single-family home sales were up 6.6 percent from the previous year, and on a seasonally adjusted basis, in the last three-month period ending in October, they were up at an annualized rate of 14.1 percent from the previous three-month period. These increases are from low levels,

Table 1. Measures of U.S. and Worldwide Technology Demand

	Growth at Annual Rates			
	Most recent three months vs. prior three-month period	From same period prior year	Reference period (all in 2008)	Source
Investment in Information Processing Equipment and Software (U.S., SA)	-1	5	q3	U.S. BEA, NIPA
Industrial Production: Information Processing Equipment (U.S., SA)	-4	6	Oct	U.S. Federal Reserve
Value of Shipments: Computers and Electronic Products (U.S., SA)	-8	-7	Sep	U.S. Census Bureau
New Orders: Computers and Electronic Products (U.S., SA)	-9	-8	Sep	U.S. Census Bureau
Inventories-to-Sales Ratio: Computers and Electronic Products (U.S., SA)	14	17	Sep	U.S. Census Bureau
Semiconductor Equipment Shippings: North America (SA)	-55	-39	Oct	Semiconductor Equipment and Materials International
Semiconductor Equipment Bookings: North America (SA)	-53	-28	Oct	Semiconductor Equipment and Materials International
Semiconductor Billings: Worldwide Market (SAA)	9	2	Sep	Semiconductor Industry Association
Semiconductor Billings: Americas (SAA)	-29	-16	Sep	Semiconductor Industry Association
Bloomberg stock index for Massachusetts*	-35	-43	28-Nov	Bloomberg
Merchandise Exports: Massachusetts (SAA)	20	13	Sep	WISERTrade
Merchandise Exports: U.S. (SAA)	13	9	Sep	WISERTrade
AIM Business Confidence Index, Massachusetts	-20	-25	Oct	Associated Industries of Massachusetts
NAPM Manufacturing Index (U.S.)	-39	-23	Oct	National Association of Purchase Managers

Notes: SA means seasonally adjusted by the source; SAA means seasonally adjusted by the author.

\*Stock prices are end-of-month closing prices.

however, and are still 20 percent below the average for the 1999-2004 period, a time of relative “normality” in the housing market.

One bright spot for the state’s economy has been its technology, science, and knowledge-based sectors, which have been supported by national and international demand from business and government customers and clients. There are some indications that these sectors have continued to grow, at least through September or October. As of September, Massachusetts merchandise exports, which consist largely of technology-based products, have been doing well. In the third quarter, they grew at an annual rate of 20 percent over the previous quarter (on a seasonally adjusted basis), and were up 13 percent over the third quarter of the previous year. On another positive note, employment in professional, scientific, and technical services was up 3.1 percent in the first 10 months of 2008 (from December 2007).

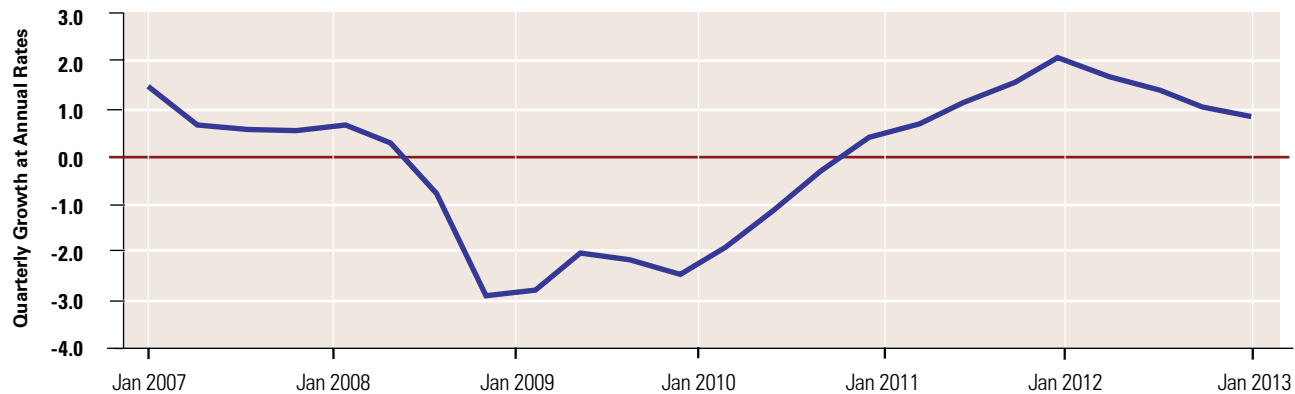
However, dark clouds are forming on the technology front. Several national and worldwide measures of demand for information technology (IT) products, which tend to lead employment in related sectors, exhibited negative

growth in the most recent three-month period (see accompanying table.) The market for semiconductor equipment is particularly weak, but wider measures of computer and IT products have also been declining recently. Among the indicators tracked in the table, only worldwide sales of semiconductors were growing through October; however, sales of semiconductors in the Americas were declining sharply. Also telling is the rise in inventories of computers and electronic products and the simultaneous decline in orders. This means that more layoffs in IT manufacturing and related sectors are on the way. The Bloomberg Stock Index for Massachusetts, which reflects the state’s high concentration in technology-related businesses, has fallen nearly as steeply as the decline that followed the dot.com bust in 2000. This strongly indicates that the state’s technology sector will not be spared during this recession.

**How bad will it be?**

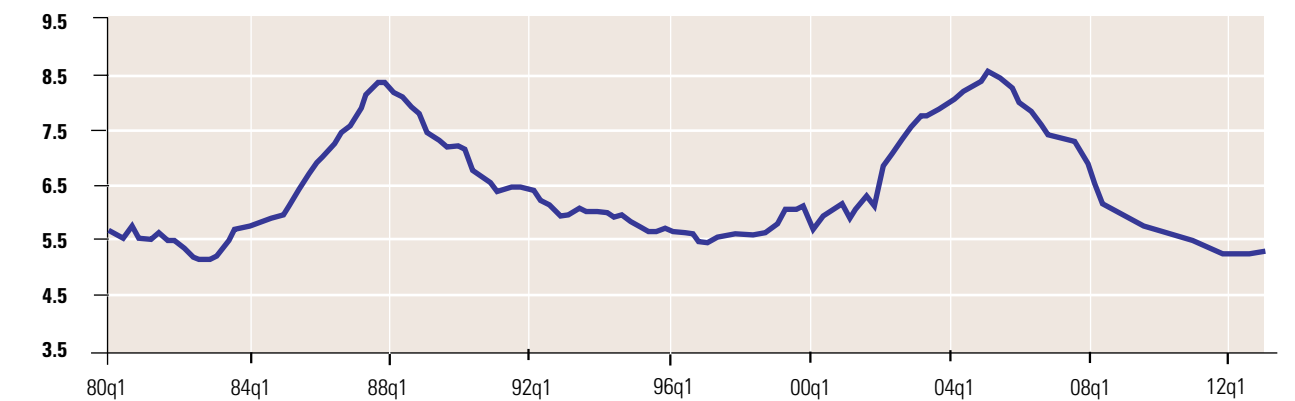
Just because the recession began here later than in the nation overall does not mean that it will be milder or shorter. Now that it appears that the recession has spread

**Figure 3. Employment Growth, Massachusetts**



Source: New England Economic Partnership (NEEP); Moody’s Economy.com

**Figure 4. Ratio of Median House Price to Per Capita Personal Income, Massachusetts**



Source: NEEP; Moody’s Economy.com

world-wide, affecting business investment as well as consumer spending, Massachusetts is likely to be hit as hard as the rest of the nation. Indeed, to the extent that the state is more concentrated in supplying business investment and innovation, the downturn could be longer if businesses wait to see evidence of a sustained pickup in consumer demand before making investments to expand capacity or accelerate product development.

On November 20, the New England Economic Partnership released its five-year forecast for the New England economy. The forecast for Massachusetts is for the peak-to-trough decline in real gross state domestic product to be a modest 0.6 percent between the third quarter of 2008 and the second quarter of 2009. On an annual basis (fourth quarter to fourth quarter), real gross state domestic product is expected to slow from a 1.3 percent growth in 2008, to a 0.3 percent growth in 2009.


Massachusetts payroll employment is projected to decline by 4.1 percent between the peak in the second quarter of 2008 to the trough in the third quarter of 2010, or by approximately 135,000 jobs. This is expected to be a substantial recession, but not as bad as the previous two. In the dot-com recession of 2001, the state lost 205,000 or 6.1 percent of its jobs, and in the recession of the late 1980s/early 1990s Massachusetts lost 356,000 or 11.3 percent of its jobs.

The fall in house prices is expected to continue through the first half of 2010, with a cumulative price decline, on a seasonally adjusted quarterly basis, of 21 percent from the peak in the third quarter of 2005 to the trough in the second quarter of 2010. Housing prices are then projected to remain flat through the end of 2011, after which they will begin to rise, appreciating about 5 percent in 2012.

By mid 2010, when prices are projected to hit bottom, the price-to-income ratio in Massachusetts — measured as the ratio of median single-family homes to per capita personal income — will be about 5.5, the same ratio that prevailed in the mid 1990s and the early 1980s. The peak of this ratio, reached in the beginning of 2005, was 8.5, about the same ratio attained at the peak of the market at the end of 1987. This fall to historically low levels should repair much of the cost-of-living disadvantage that Massachusetts has had in the last several years.

It is difficult to see how the economy could perform better over the next year or two than the scenario embodied in the NEEP forecast. It is easier to imagine scenarios that are worse, if only because of the time required for the economy to turn around given its downward momentum. It appears that asset prices for both stocks and real estate are overshooting on the downside, with consequent

effects on the real economy through falling wealth and falling expectations that affect both consumer and investment demand. This vicious downward spiral is going to continue for some time before it begins to correct itself.

Current economic events elicit a Keynesian description, with a Keynesian solution. The Keynesian multiplier is working on the downside, with falling demand in the U.S. and the developed world begetting further declines in spending, pulling the world economy into a nightmare scenario of an underemployment equilibrium. The Keynesian solution is for fiscal stimulus on a large scale, which could include a mix of federal government spending and tax cuts. The idea is that the stimulus would cancel the effects of the downside multiplier on spending, and boost expectations so that consumer and investment demand were restored, thus doing away with the need for further fiscal stimulus. This process takes time. 

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*ALAN CLAYTON-MATTHEWS, an associate professor and the director of quantitative methods in the Public Policy Program at the University of Massachusetts Boston, is co-editor of this journal.*

#### NOTE

1. The Bureau of Labor Statistics does not publish the U-6 measure at the state level. The author obtained the state's seasonally unadjusted rates from the monthly Current Population Surveys, and then seasonally adjusted and smoothed them to calculate the figures reported in the text.