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Economic Currents: The State of the State Economy

Alan Clayton-Matthews
University of Massachusetts Boston

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Economic Currents

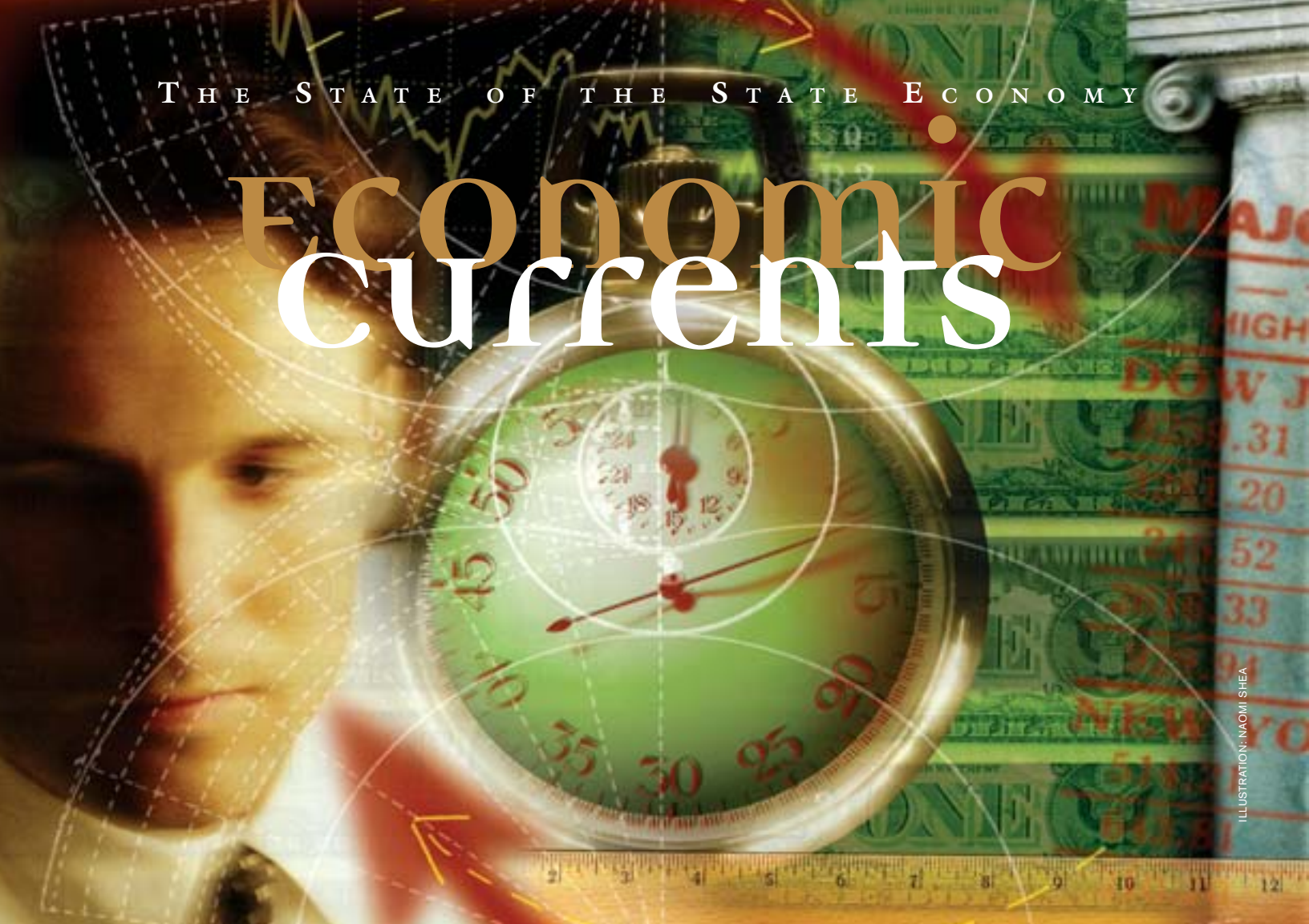


ILLUSTRATION: NAOMI SHEA

*It all seems clear in hindsight:
The national recession began last March
and the state recession in December 2000.
The difference in timing reflects the
importance of technology production and the
stock market to the Massachusetts economy.*

ALAN CLAYTON-MATTHEWS

The National Bureau of Economic Research Business Cycle Dating Committee, the widely accepted umpire for the dating of economic turning points, set the turning point of the economy at March 2001, the peak payroll employment level. Real GDP did not decline until later in the third quarter. In Massachusetts, payroll employment peaked in June, later than in the United States as a whole. Even though employment peaked later in the state than in the nation, the recession began earlier, according to several other state-level indicators.

The three other components of the Massachusetts Current Economic Index, a proxy for real Massachusetts

Gross State Product, peaked earlier. The unemployment rate reached its nadir of 2.3 percent in December 2000; the real withholding tax base peaked in September 2000, and the real sales tax base peaked in July 2000. The overall current index, a composite of these four indicators, peaked in December 2000. Furthermore, the Massachusetts Leading Economic Index first turned negative in November 2000 and remained negative for 10 of the next 12 months.

The state economy is still contracting, with sharp increases in layoffs, falling tax revenues, declining exports, and continuing declines in manufacturing production. So far, however, the recession has been mild. Though there are no clear signs that the bottom has been reached, there are several signs that the pace of contraction is slowing.

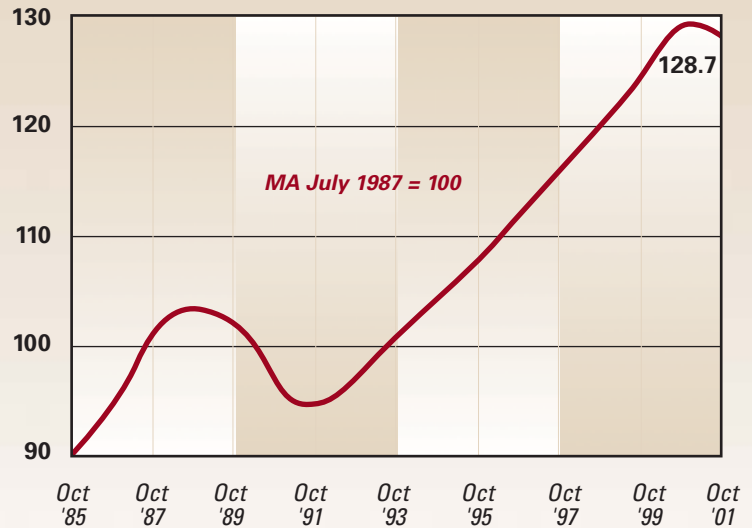
The Current and Leading Economic Indices for Massachusetts

The Massachusetts Current Economic Index for October was 128.7, down 1.1 percent from September (at annual rates), and down 0.7 percent from October of last year. The current index is normalized to 100 in July 1987, and is calibrated to grow at the same rate as the Massachusetts real gross state product over the 1978–1997 period.

The Massachusetts Leading Economic Index for October was -0.2 percent (negative 0.2 percent), and the three-month average for August through October was -0.6 percent (negative 0.6 percent). The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate.

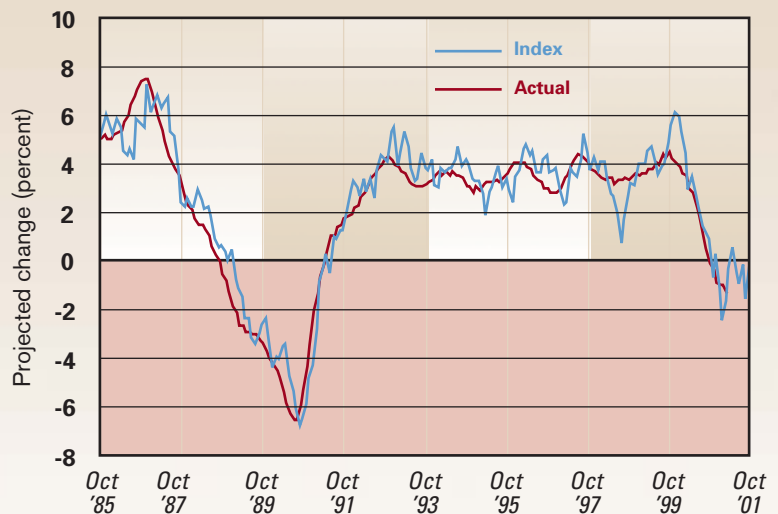
The negative shocks of the national and worldwide decline in investment spending for technology products, augmented by the economic disruptions related to the September 11 terrorist attacks, have gained momentum. Increased layoffs have deflated consumer confidence and non-automotive consumer spending. Though the economy is now officially in recession, however, some sectors are still holding up well, including residential real estate, hospitals, education, and management and consulting services. Aside from air transportation, related tourism sectors, and increased security costs in general, other impacts of the terrorist attacks on business activity in Massachusetts appear to have been temporary and short-lived. This still leaves the state in the midst of a mild recession—with no turnaround yet in sight—and the prospect that conditions are likely to deteriorate further over the winter and early spring.

Massachusetts Current Economic Index



Massachusetts Leading Economic Index

The leading index is the annualized, six-month projected change in the Massachusetts Current Economic Index.



Sources: The Conference Board; University of Massachusetts; Federal Reserve Bank of Boston

So Far, a Mild Recession Overall...

The NBER defines a recession as a general decline in business activity. In order for an episode to be classified as a recession, the decline must be diffuse (spread across many sectors), deep, and of significant duration. By these standards, the recession in Massachusetts has been mild so far. It has been concentrated primarily in manufacturing, related business services, wholesale trade, and transportation, but employment declines have spread to retail trade in the past several months. Construction and mutual funds, once rapid employment growth sectors, have essentially stopped hiring.

Outside of business services, employment in the large service sector continues to expand. Hospitals, private and public education, social services, and engineering and management services have all continued to increase employment near or above their average annual rates in the 1990s expansion. Commercial real estate is reeling with reduced rents and sharply higher vacancy rates, but residential real estate, aided by low mortgage rates, is still strong except at the very high end.

Because the recession has bypassed some major employment sectors, in the aggregate, it has not been deep. The unemployment rate is 4.2 percent, a level that until the last couple of years would have been considered full employment. According to the Current Economic Index, the Massachusetts economy has contracted at an annual rate of 1 percent since the peak in December 2000. The prospect, according to the Massachusetts Leading Economic Index, is for the rate of contraction to remain mild, and even decelerate. This mitigation of the rate of contraction is based on expansionary monetary policy, an improvement in stock market conditions, and some signs that consumers are willing to spend, as evidenced by strong automobile sales.

Duration, the third characteristic, is the big unknown. The Massachusetts Leading Economic Index is forecasting that the state's real gross state product will be lower in April 2002 than it was in October 2001. (The index's forecast horizon is sixth months.) This does not preclude a trough being reached in late winter or early spring, and it is consistent with the recession lasting throughout 2002.

Some Sectors Have Been Hit Hard

This has been primarily a broad-based manufacturing recession. According to the payroll employment survey, Massachusetts lost 17,200 manufacturing jobs (3.9 percent) between December 2000 and October 2001 and an additional 9,000 jobs (3.1 percent) in business services, primarily in temporary and contract employment related to the production of technology products. Initial unemployment claims have soared in recent months, as a wave of earlier layoff announcements were realized. In the most recent month available, October, seasonally adjusted state initial claims topped 53,000, twice the level that prevailed at the beginning of the year. This nearly matches the peak month of initial claims in the last recession: 56,000.

Lost jobs in manufacturing and supporting services are those that generally pay much better than average. Laid-off workers are now finding it difficult to get new jobs, raising

Initial Unemployment Claims, Massachusetts



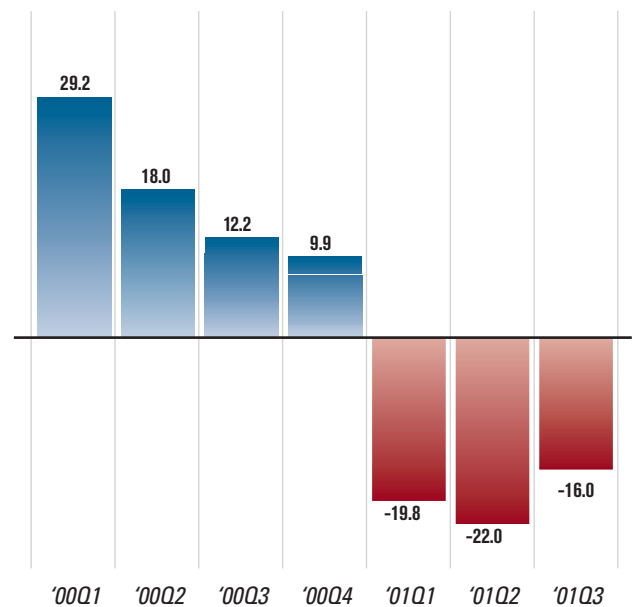
Source: MA Division of Employment and Training

the risk that the losses will have a multiplier effect in reducing employment in other sectors, as these households cut back on spending.

As bad as the manufacturing decline has been in Massachusetts, it is not as severe as in the United States as a whole, if state payroll figures are accurate. Sector by sector, almost without exception, job losses have been proportionately smaller here than across the nation. For example, in electronic and electrical equipment, the state's largest manufacturing sector, 4.8 percent of jobs were lost in the year ending in October versus 11.2 percent nationally. In industrial machinery and equipment, our second-largest sector, Massachusetts lost 2.4 percent of jobs in the year ending in October versus 8.7 percent nationally. In manufacturing as

U.S. Investment in Information-Processing Equipment and Software

Data show nominal growth from prior quarter at an annualized percentage rate.



Sources: U.S. Bureau of Economic Analysis; NIPA accounts

a whole, 3.7 percent of jobs were lost in Massachusetts versus 5.9 percent in the United States. We do not know why Massachusetts has fared proportionately better. Indeed, an analysis of recent wage and salary trends suggests that the payroll survey may be undercounting state job losses, at least in the third quarter of 2001.

Massachusetts merchandise exports, dominated by the state's technology products, have plummeted during this recession. From their peak in November of 2000, the current dollar value of exports has fallen 30 percent to about the level that prevailed in 1998. The decline in U.S. merchandise exports, in contrast, has been only about half as severe.

Technology Production May Be Near the Bottom

Employment and, for most products, production, has continued to decline. In the United States, investment spending (in nominal dollars) for information-processing equipment and software in the third quarter fell at an annual rate of 16 percent for the third consecutive quarter of double-digit declines.

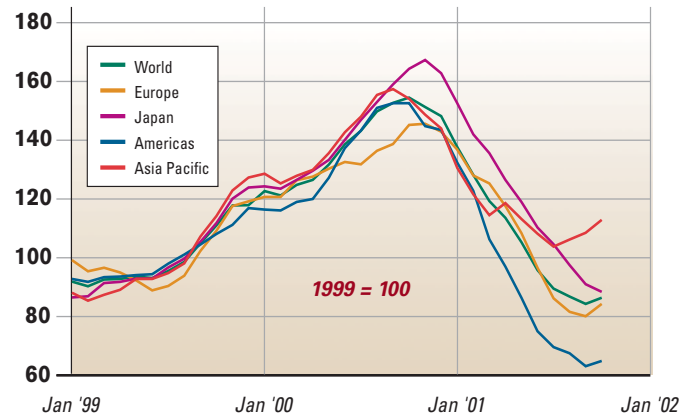
Product markets for many technology goods may be at or near the bottom, a welcome development for Massachusetts companies. Much of the news for October is even positive. According to the Census Bureau's survey of manufacturing, new orders for computer and electronic products from plants in the United States was up in October to the highest level since June.

Except for a dip in September, the level of new orders has been stable after plummeting almost continuously for a year. The value of shipments in this industry actually rose for the first time since December 2000. Though shipments still exceed new orders, their levels are very close, and the backlog of unfilled orders could be large enough to sustain the volume of shipments if orders continue to improve. Inventories in this industry have fallen steadily and rapidly for the last eight months but are still high as a proportion of sales.

The semiconductor chip industry may have begun a turnaround in October. According to the Semiconductor Industry Association's survey, the dollar value of worldwide sales of computer chips— semiconductor billings—rose in October.

Semiconductor Billings

Sales of Computer Chips
3-month moving average

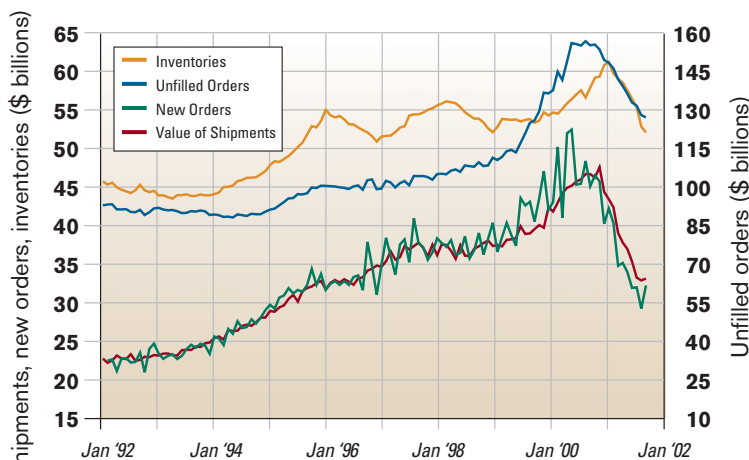


Source: Semiconductor Industry

This indicator is a three-month moving average, so the increase does not simply represent a rebound from September. All market areas were up except for Japan. The SIA reports an increase in demand for personal computers, cell phones, related communications products, and other consumer devices. They projected a turnaround and slow recovery for semiconductors beginning in the fourth quarter of 2001.

The recovery in the semiconductor equipment industry, another important sector for Massachusetts, will lag that in semiconductor chips. The latter industry has to expand first, before demand for chip-making machines returns. Excess capacity is a problem. Shipments fell 64 percent over the 12 months ending in October. The bottom may be near, though. The fall in orders for new equipment—bookings—appears to have hit bottom last April. If the semiconductor chip industry has actually begun its turnaround, demand for equipment should pick up, and the semiconductor equipment industry could be growing again in the first or second quarter of 2002.

Computer and Electronic Products United States



Source: The Conference Board

The Role of Bonuses and Stock Options in Recent Wage Trends

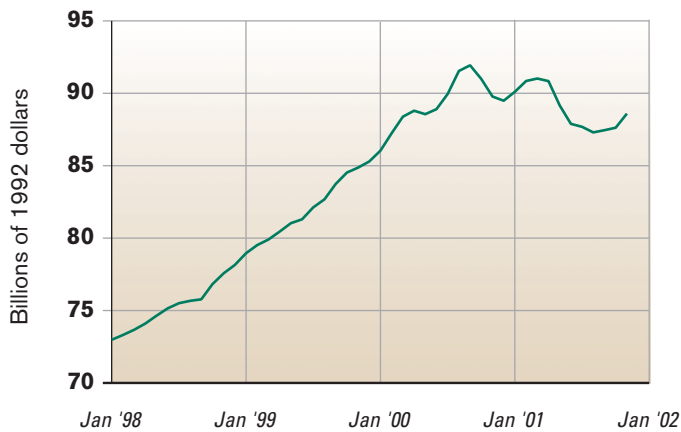
One distinguishing characteristic of the end of the Massachusetts expansion is the role played by bonuses and stock options in aggregate wage and salary income. These so-called lump-sum payments are counted as labor income in the reports that virtually all employers file with the Division of Employment and Training. They are also reflected in withholding taxes paid to the Department of Revenue. Understanding the magnitude and timing of these lump-sum payments is key to understanding why the tax-based indicators—and tax revenues—began to decline well before employment did. The real withholding tax base peaked in September 2000, and the real sales tax base peaked in July 2000. In contrast, payroll employment peaked in June 2001.

It is important to note that the figures presented here are estimates—lump-sum payments are not directly observed.¹ Furthermore, these estimates, based on state withholding taxes adjusted for changes in tax rates and base, probably understate their magnitude: they are derived from

observing the deviation of quarterly wages and salaries from an underlying trend of regular and usual wage and salary payments. That portion of lump-sum payments that, in the aggregate, are received each quarter get “lost” in the overall trend. Nevertheless, the pattern of boom-and-bust in 2000 and 2001 is revealed. The quarterly data reveal that lump-sum payments are concentrated in the fourth and first quarters of the year, so it makes sense to define an annual “bonus season” accordingly.

Some portion of these deviations is due to seasonal or irregular deviations in employment, so these are netted out. (Typically, employment is above trend in the fourth quar-

MA Real Withholding Tax Base



Source: MA Department of Revenue; author's calculations

ter, as trade employment gears up for the holiday shopping season, and is below trend in the first quarter, a slow season for construction.) Counting the remaining deviations as lump-sum payments shows that they began to accelerate in the 1999 season. In this season, comprising the fourth quarter of 1998 and first quarter of 1999, such payments totaled \$6.5 billion, significantly higher than the levels of \$5.3 billion in the 1998 season and \$5.8 billion in 1997. In the 2000 season, lump-sum payments reached \$9.8 billion. What is even more significant is that lump-sum payments continued into the second and third quarters of 2000, amounting to an additional \$3.1 billion. These probably represent additional realized stock options over and above the usual amount received each quarter.

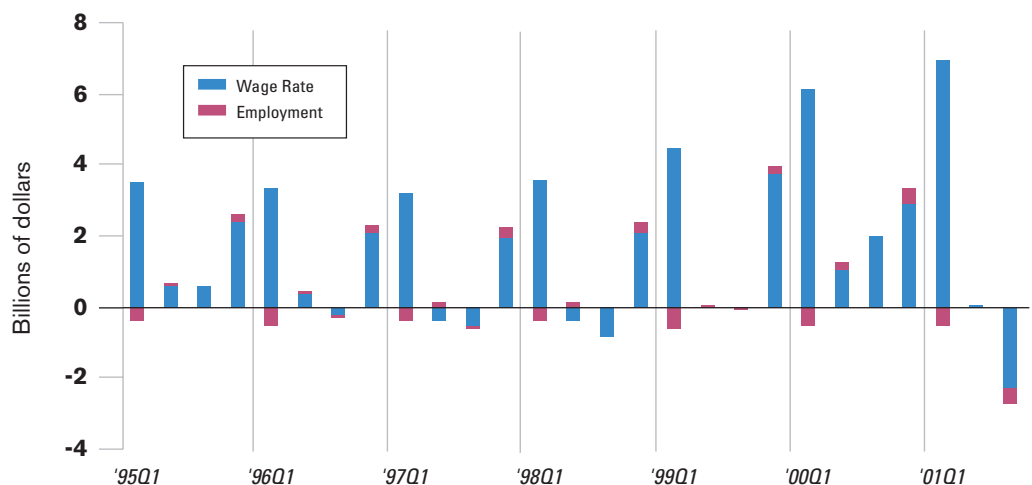
The NASDAQ stock index peaked in March 2000, and there was probably a rush to “cash in” on these options as the market declined over the remainder of the year. All told, lump-sum payments are estimated to have been \$12.9 billion in this four-quarter period. This is substantial, representing 8.6 percent of total wage and salary disbursements paid during

this time and an average of \$3,900 dollars for each of the state’s 3.3 million workers. This is many times the size of last summer’s federal income tax rebate of \$300 for single filers and \$600 for joint filers. (Only a fraction of workers, of course, shared in the \$12.9 billion.) These extraordinary receipts of income and withholding tax revenues accounted for the peak of the real withholding tax base in September of 2000.

The 2001 bonus season was also quite strong, with lump-sum payments totaling \$9.8 billion. However, wage and salary payments in the third quarter of 2001 were \$2.4 billion below trend. Accounting for this decline is puzzling. The decline in payroll employment below trend in this quarter accounts for only \$400 million, assuming that job-lost workers earned the average wage. Since employment losses were concentrated in manufacturing, which pays higher-than-average wages, \$500 million might be a better estimate for the portion due to employment declines. The remaining discrepancy also does not appear to be due to the September 11 terrorist attacks, as the strongest month of that quarter for withholding taxes was September. The remaining deviation might reflect two things. The first is a reduction in compensation for workers, or a freezing of compensation (the trend rate of compensation grew at an average annual rate of 6.4 percent from 1995 through the third quarter of 2001). The second is an undercount of job losses by the payroll survey. The payroll survey has a tendency to undercount job losses at the beginning of a downturn and to undercount job gains at the beginning of an upturn. The extent of error in the payroll survey will be known several months from now when the census of employer wage reports for this period becomes available.

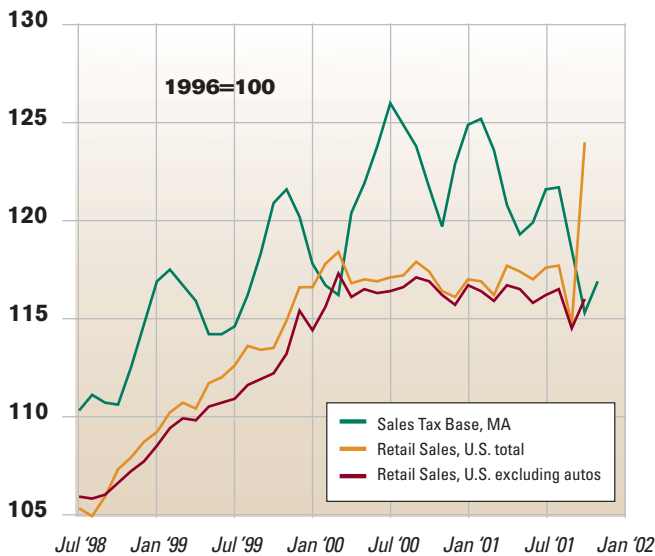
The end-of-2001 bonus season was almost certainly much leaner than in recent years, due to declines in the two main sources of bonuses and stock options: business profits and the stock market. For example, profits in the equity funds at Fidelity derive from management fees that are a fixed percentage of assets under management. Changes in the volume of assets under management are directly proportional to both stock prices and net inflows. On net, as-

Deviation of Total Wages and Salaries from Trend, by Source



Sources: MA Department of Revenue; Division of Employment and Training; author's calculations

Real Consumer Spending U.S. and Massachusetts



Sources: U.S. Census Bureau; MA Department of Revenue; author's calculations

sets have declined substantially. An analysis in the *Boston Globe* on September 30, 2001, estimated on information through August, suggested that revenues from management fees for stock and bond funds could decline by \$1 billion for the year at Fidelity alone, which would have directly decreased bonuses at year's end.

These patterns in aggregate wages and salaries inclusive of lump-sum payments are helpful in explaining recent trends in consumption as proxied by state sales tax revenues and the real sales tax base, as well as differences in the patterns of consumer spending between the state and nation. In the United States, real retail sales (exclusive of automobiles) stopped growing in March of 2000.

The peak in Massachusetts appears to have come later, in July 2000, just a few months after the peak of NASDAQ and the huge bonus season of 1999–2000. The importance of these lump-sum payments in Massachusetts also may explain why consumer spending in the state grew faster than nationally in the late 1990s. Since these peaks in consumer spending in 2000, real U.S. retail sales have remained essentially flat, while they declined in Massachusetts. This is consistent with declining lump-sum payments, wages and salaries, and the poor prospects for the 2002 bonus season. That the peak in Massachusetts consumer spending preceded that of wages and salaries also makes sense if the peak in the latter was due to a “cashing in” of stock options in anticipation of further declines in stock markets.

Will Growth Return in the Spring?

Because the signals of continuing weakness and nascent recovery are mixed, it is difficult to predict when the recession will end and the recovery will begin. The economy seems to be teetering on the brink of bottoming out or falling to new lows. Consumer spending will determine which way the balance tips. If the wave of layoffs in manufacturing and related sectors is near the end, then households' balance sheets may remain in good enough shape to

keep consumer spending from ratcheting down.

Another factor in consumer confidence and spending is the progress in the war on terrorism. So far, things appear to be going well. Despite this, the Conference Board's consumer confidence index for the United States was down in November; for New England, it was down sharply. If this downturn reflects the effect of job losses rather than news (which improved on the whole after the survey was taken), then the recession could lengthen.

Outside of the concern with employment and its effect on consumer spending, there is much to be optimistic about. Aggressive monetary policy by the Fed and an expected fiscal stimulus from the federal government are having positive impacts on financial markets, business outlooks, and residential real estate markets. Stock markets have rebounded from their lows since September 11 and have recovered to their August levels. A wave of refinancing made possible by low mortgage rates has improved households' financial positions. Falling oil and energy prices are also easing burdens on pocketbooks and ledgers. Finally, the markets for some key technology products appear to be close to turning around.

A recent forecast by the New England Economic Project projects that the recession in Massachusetts will end in the second quarter of 2002 and the number of jobs will begin increasing again in the third quarter. At the time the forecast was released, it was easy to imagine how conditions could turn out to be worse than those on which the forecast was based, and difficult to see how they could be better. As of this writing, the negative risks appear to have abated significantly, except for the continuing uncertainties about consumer spending. After the holiday shopping season and the bonus season are accounted for, these uncertainties should be largely resolved. ▮

Submitted December 6, 2001

1 A quarterly wage and salary series is derived from withholding tax revenues adjusted for rate and base changes, and exemptions. Quarterly payroll employment data are from the monthly payroll survey. Both wages and employment are not seasonally adjusted. The logarithm of each series is regressed on a time trend, a dummy for the fourth quarter, and a dummy for the first quarter. The time period of the analysis is 1995Q1 to 2001Q3. Trends of each are defined as the fitted regression line with the fourth- and first-quarter dummies set to zero. The total deviation of wages and salaries is the difference between the actual estimated wages and salaries and the regression trend. The portion of the total deviation due to the deviation of employment from trend is the employment deviation times the trend value of average wages per worker. The remainder of the deviation is an estimate of lump-sum payments. The trend rate of average wages per worker is the difference between the trend rates of wages and salaries and employment. The annual estimated trend rates of growth are 8.6 percent for wages and salaries, 2.1 percent for employment, and 6.4 percent for wages per worker.

ALAN CLAYTON-MATTHEWS is an assistant professor and the director of quantitative methods in the Public Policy Program at the University of Massachusetts Boston. He is also president of the New England Economic Project.