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Economic Currents: The State of the State Economy

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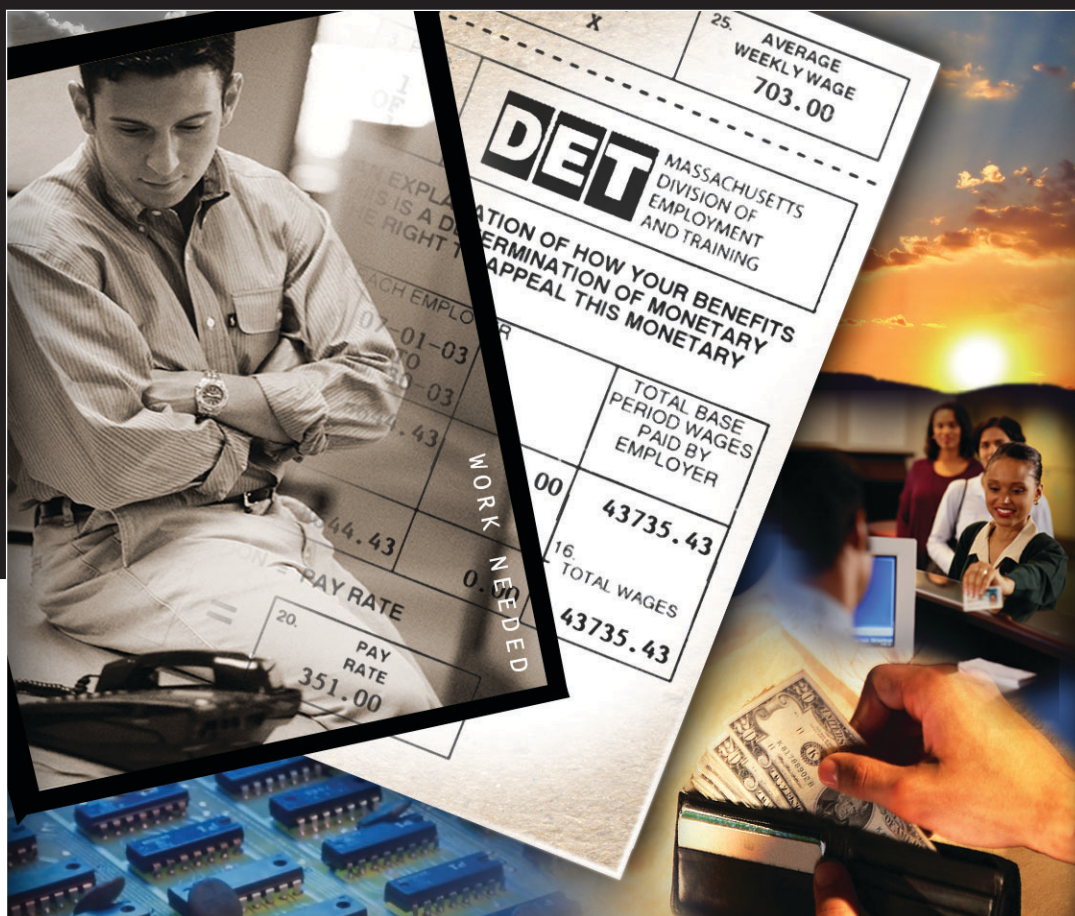
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CURRENTS



ALAN CLAYTON-MATTHEWS

Over the course of the summer, the Massachusetts economy appears to have begun to turn the corner. In the first quarter of this year, gross state product, as measured by the current index for Massachusetts, experienced its ninth consecutive quarter of decline. In the second quarter, it was flat, and in the third quarter, managed to eke out a small gain, growing at an annualized rate of 0.4 percent. The shift in direction is being led by a recovery in demand for, and production of, technology products that began at

the end of 2002, and has continued to gather momentum through the first three quarters of this year. The rebound is broadly based and includes spending by consumers and businesses, both here and abroad.

The return of business spending and growth in export demand has come in the nick of time for Massachusetts. Consumers have been supporting the economy, with the help of low interest rates, a strong housing market and mortgage refinancing, money saved from before the bubble burst, productivity gains that have kept inflation low and earnings

Economic Indexes for Massachusetts

The Massachusetts Current Economic Index for September was 126.2, down 0.4 percent from August (at annual rates), and down 0.1 percent from September of last year. The current index is normalized to 100 in July 1987 and is calibrated to grow at the same rate as Massachusetts real gross state product over the 1978–1997 period.

The Massachusetts Leading Economic Index for September was 3.3 percent, and the three-month average for July through September was 3.1 percent. The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate. Thus, it indicates that the economy is expected to grow at an annualized rate of 3.3 percent over the next six months (through March). Because of monthly fluctuations in the data on which the index is based, the three-month average of 3.1 percent may be a more reliable indicator of near-term growth.

The Massachusetts economy may finally be turning the corner. According to the Current Economic Index, real gross state product expanded at a 0.4 percent annual rate in the third quarter of this year, after no growth in the second quarter, and nine successive quarters of decline beginning in the first quarter of 2001. The state's economy may be expanding, but it has not grown fast enough yet to prevent continued job losses. Job growth may finally turn the corner soon, too, if output growth picks up to the 3-percent-plus pace suggested by the leading index.

This is likely to occur, given strong recent growth in U.S. GDP. Especially significant is the turnaround in high-tech equipment, which began at the end of last year, and is continuing. Export demand, especially from Asia, is strong for these products. These national production trends are very favorable for a turnaround of production and employment in Massachusetts.

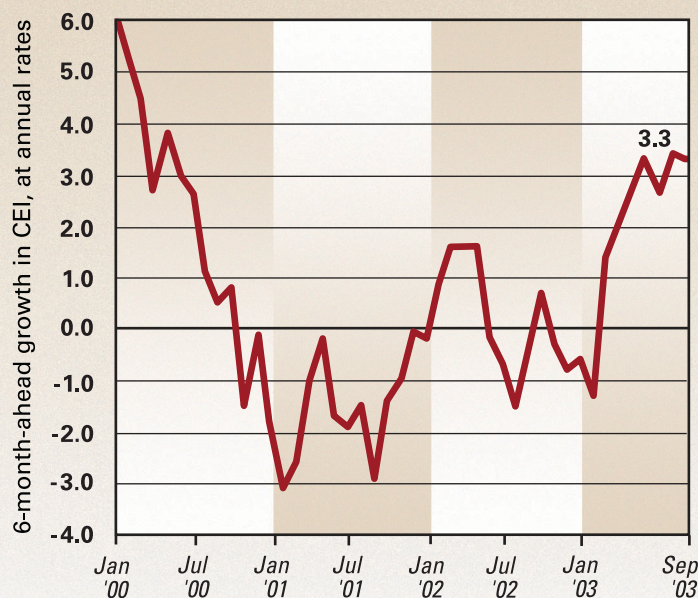
Immediate job growth is not guaranteed, however, even though the leading index has been positive now for seven consecutive months. The positive contributions to the index have been dominated by expectational and monetary policy indicators such as stock prices and the interest rate spread. The four current indicators, which consist of "real" indicators measuring labor market conditions, incomes, and spending, have yet to contribute positively to the index, and workers won't feel real relief until this happens. Employers are still reluctant to commit to expanded payrolls, but continued rising production and orders, and falling inventories, should soon shift the balance towards hiring.

SUBMITTED OCTOBER 20, 2003

Massachusetts Current Economic Index



Massachusetts Leading Economic Index



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

high, cheap imports, and tax cuts. Consumers are running low on ammunition, and the negative impacts of the weak job market may now be about to overwhelm the positive influences on consumer spending.

Weak Labor Markets

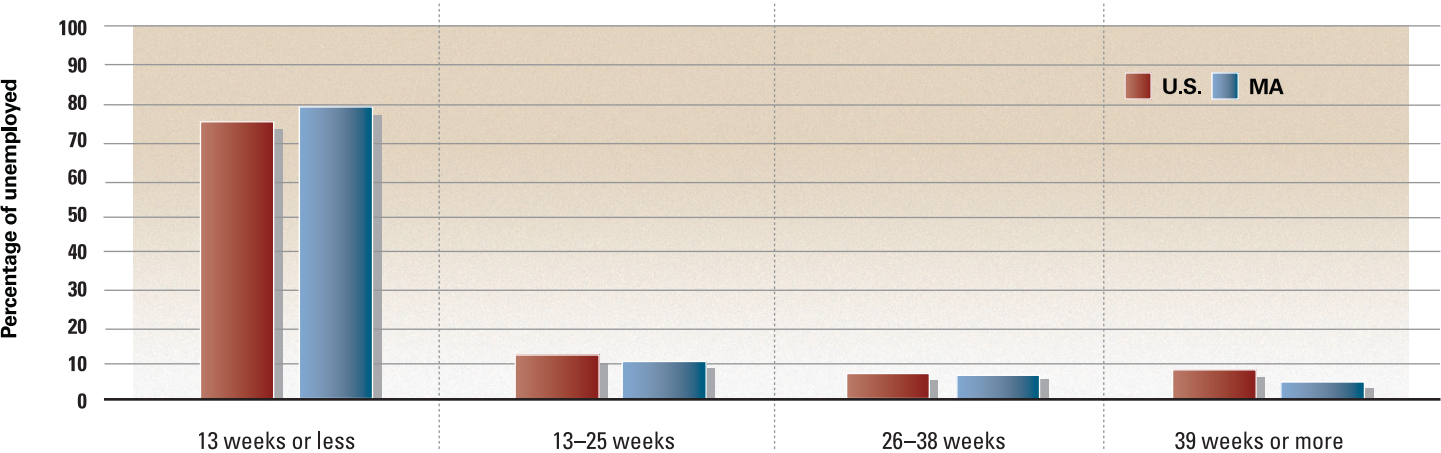
The job recession has continued through the first nine months of this year, making this the second worst recession in the state in the last half a century. In the thirty-two months since the payroll job peak in January 2001, employment has declined by 175,000 jobs, or by 5.2 percent of peak level. The 1989–1992 recession was worse, lasting for forty months, with an 11.4 percent employment decline.¹ In this recession (since January 2001), manufacturing and professional and business services have suffered the greatest job losses, of 19.2 percent and 13.8 percent, respectively. With the exception of private education, health, financial activities related to residential real estate, and scientific research and development, all sectors have experienced significant job losses during the current recession. In recent months, the job market has been mixed. Overall, job losses have continued: there are scattered signs that jobs in business-related

activities are beginning to become available, while at the same time, consumer-related sectors are shedding jobs.

Long-term unemployment has become more widespread as job terminations have continued to exceed new hires. In 2000, in the peak year of the boom, only 11.7 percent of unemployed Massachusetts residents had been out of a job and looking for work for twenty-six weeks or more.² This was lower than the corresponding proportion of long-term unemployed nationally, which was 14.1 percent in 2000. However, in the first nine months of 2003, 31.6 percent of Massachusetts unemployed residents were looking for twenty-six weeks or more, versus 25.4 percent in the United States as a whole. Moreover, among the Massachusetts unemployed, 18.7 percent were looking for nine months or more, and 15.2 percent were looking for a year or longer.

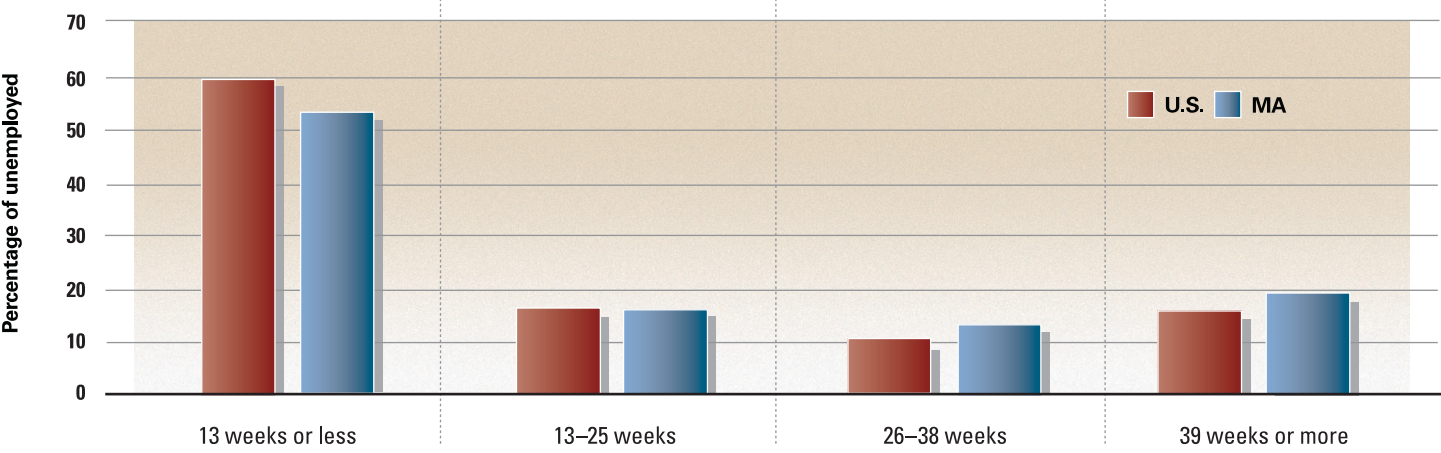
Unemployment duration typically varies by demographics. College-educated workers and older workers take longer to find jobs than less-educated or younger workers. In the first nine months of this year, for example, unemployment duration in Massachusetts averaged 27.4 weeks for those with a BA or higher degree, versus 15.5 weeks for those with a high-school diploma. Unemployment duration for workers

Unemployment Duration, 2000



Source: Monthly Current Population Surveys for 2000, January–September 2003, U.S. Bureau of Labor Statistics

Unemployment Duration, First 9 Months of 2003



Source: Monthly Current Population Surveys for 2000, January–September 2003, U.S. Bureau of Labor Statistics

55 years or older averaged 28.8 weeks, versus 17.5 weeks for workers younger than 25 years old. (Unemployment duration was slightly higher for non-whites and Hispanics than for white non-Hispanics, by almost one week; and higher for men than for women, by almost two weeks.) Since Massachusetts has a more highly educated workforce than the rest of the nation, one might expect that demographics at least partly account for its higher proportion of long-term unemployed. Nevertheless, even after taking account of demographic differences between Massachusetts and the U.S., unemployment duration in the state exceeds that of the nation by between two and three weeks.³

Despite the fact that the highly educated and older workers tend to be out of work longer than others when unemployed, this recession has been fairly typical in the sense that unemployment has been disproportionately borne by the less educated, minorities, and young workers. Using the average of the first nine CPS surveys for 2003, the average unemployment rate for Massachusetts residents in the first nine months of 2003 was 6.0 percent.⁴ For those with a B.A. or higher degree, the rate was lower, at 4.0 percent. For those with a high-school education, the unemployment rate was higher, at 7.0 percent; and for those with less than a high-school education, it was 11.8 percent. For non-whites and Hispanics, the unemployment rate was 10.0 percent versus 5.2 percent for white non-Hispanics. For workers 55 years of age or older, the unemployment rate was 5.3 percent, while for those younger than 25, it was 11.6 percent. Those between the ages of 25 and 54 had an unemployment rate of 5.0 percent. Women had a lower unemployment rate than men, 5.4 percent versus 6.4 percent.

It is true that the increase in the *share* of unemployment over the course of this recession has been greater for the highly educated, older, non-minority, and male workers, but these increases have been from very low levels. Unemployment for these very productive and high-earning workers is a

big problem that is restraining income and spending growth in the economy, but the major pain of the recession, as in prior recessions, has still been dealt to those who are less educated, minority, and young.

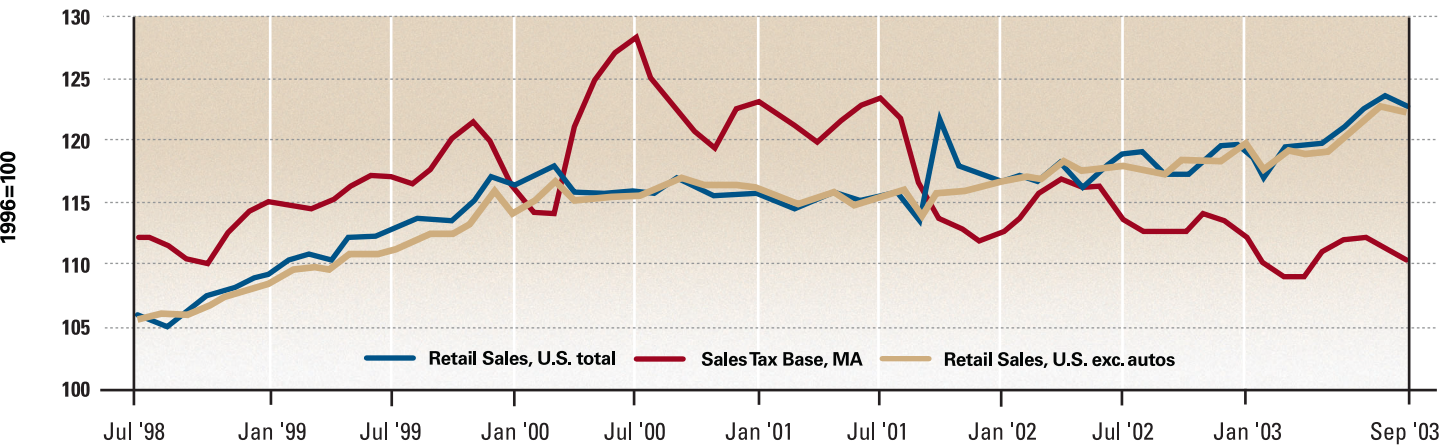
Spreading Weaknesses

The length of the recession and extent of unemployment is impacting income growth, consumer confidence, and, at least in Massachusetts, consumer spending. In the most recent data on quarterly incomes available from the Bureau of Economic Analysis, aggregate income in Massachusetts in the second quarter of this year grew at a meager 1.3 percent annual rate, and was only 0.5 percent above the level in the second quarter of the prior year. Aggregate wage and salary disbursements are estimated to have fallen at an annualized rate of 0.5 percent in the second quarter, and were 1.3 percent below the prior year. Data on state withholding taxes confirm these trends, suggesting that aggregate wage and salary income fell by 0.5 percent in the year ending in the third quarter. Increases in productivity and earnings of employed workers were not enough, in Massachusetts, to overcome income losses due to lost jobs over the past year.

Indeed, the tax and employment data suggest that in Massachusetts, earnings per worker grew at only 1.0 percent in the year ending in September, versus a 2.2 percent growth in a corresponding measure for the United States.⁵ Even for those who have a job, earnings growth is not keeping up with inflation.

The soft job market and falling real incomes and wages are reflected in consumer confidence. According to the Mass Insight/MassDevelopment index for Massachusetts, overall consumer confidence in October was 82. Although up from a low of 63 in January 2003, a period of great apprehension over the impending war with Iraq, confidence is still below the low of 91 recorded after the 9/11 disaster. The Conference Board's national and New England region consumer confidence indexes reflect similar sentiments.

Real Consumer Spending



Source: U.S. Bureau of the Census; Massschusetts Department of Revenue; author's calculations

Perhaps the most disturbing indicator of the weakness of current conditions in Massachusetts is consumer spending. Outside of spending on motor vehicles, which has been driven by some of the same forces supporting the housing market, consumer purchases have been tepid at best.

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Gathering Strengths

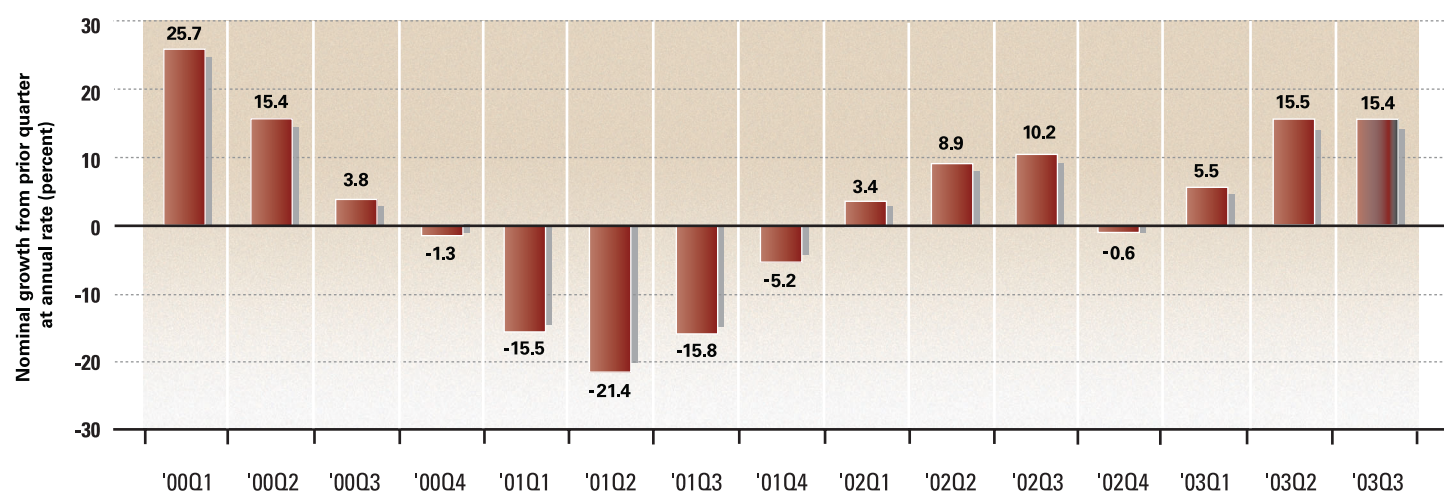
Fortunately, just as the household sector may be losing steam to support the economy, the business and foreign sectors have begun to turn on spending, especially on the products of the technology sector (which got clobbered when the bubble burst). According to quarterly reports of businesses, consumers too have been supporting the revival in computers and electronics.

Perhaps the best evidence of business spending is from the U.S. Bureau of Economic Analysis’ National and Income Product Accounts (NIPA). The BEA reported that real gross domestic product grew at an annualized rate of 7.2 percent

in the third quarter. Most importantly for Massachusetts, investment spending for information and processing equipment grew at an annual rate of 15.4 percent in the third quarter, following an equally impressive growth rate of 15.5 percent in the second quarter.⁶ Other national level indicators—these data are not available at the state level—show a similar surge in sales, production, and orders for technology products that began at the beginning of the year. The Federal Reserve Board’s index of industrial production of information and processing business equipment is up at an annualized rate of 9.5 percent in the first nine months of this year. The performance of the computer and electronics-manufacturing industry—the largest manufacturing sector in Massachusetts—is even more impressive. Shipments from December 2002 through August 2003 grew at annualized rate of 16.2 percent; new orders, by 18.1 percent; and unfilled orders, by 6.6 percent. Furthermore, inventories fell at an annualized rate of 11.7 percent over the same period. The inventory-to-sales ratio in this industry is as low as it was at the peak of the boom in early 2000. Worldwide semiconductor sales are up sharply as well, at an annualized rate of 18.1 percent.

Worldwide economic growth is spurring demand for the state’s products, including electronic products like digital integrated circuits and semiconductor equipment, medical devices, and pharmaceuticals. Since roughly one-fifth of the state’s manufacturing output is exported abroad, growth

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



Source: U.S. Bureau of Economic Analysis, NIPA Accounts

Semiconductor Billings, World Market

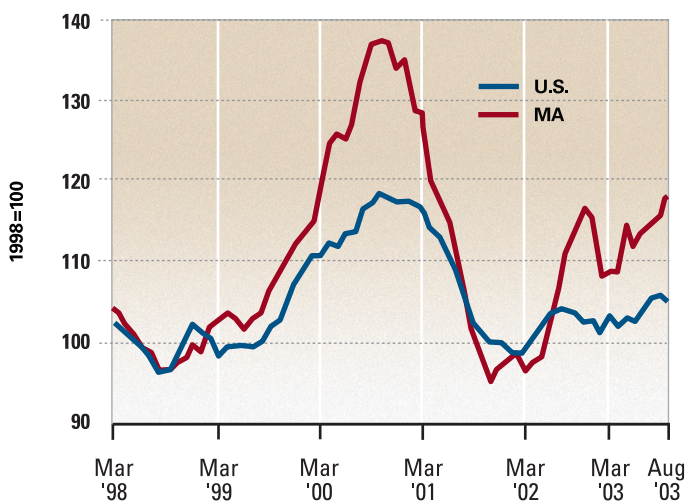


Source: Semiconductor Industry Association, with author's seasonal adjustments

in foreign markets can contribute a significant boost to the state's economic activity.⁷ In the first eight months of 2003, merchandise exports from Massachusetts grew by 12.8 percent over the corresponding period in 2002. Exports are growing most rapidly to the Asia Pacific region. In the first eight months of 2003, among the top-25 destination countries compiled by MISER, total exports to the Philippines, Malaysia, China, Singapore, Korea, and Hong Kong were 69 percent of exports to Europe, and were 76 percent greater than exports to Canada. As recently as 1998, exports to these Asian countries were 46 percent of those to Europe and 83 percent of those to Canada.

Business expectations are improving. Both the National Association of Purchasing Managers index and the Associated Industries of Massachusetts index are above 50, indicating expansion. Corporate profits are growing briskly, and are being boosted now not only by relentless cost-cutting measures, but also by growing sales and tax credits. Stock markets

Merchandise Exports Seasonally Adjusted 3-Month Moving Average



Source: U.S. Department of Commerce; Massachusetts Institute for Social and Economic Research (MISER); seasonally adjusted by author

are up, especially among technology sectors. Since the bottom of the bear market on October 9, 2002, the Dow is up 35 percent, NASDAQ is up 77 percent, and the Bloomberg stock index for Massachusetts is up 65 percent.

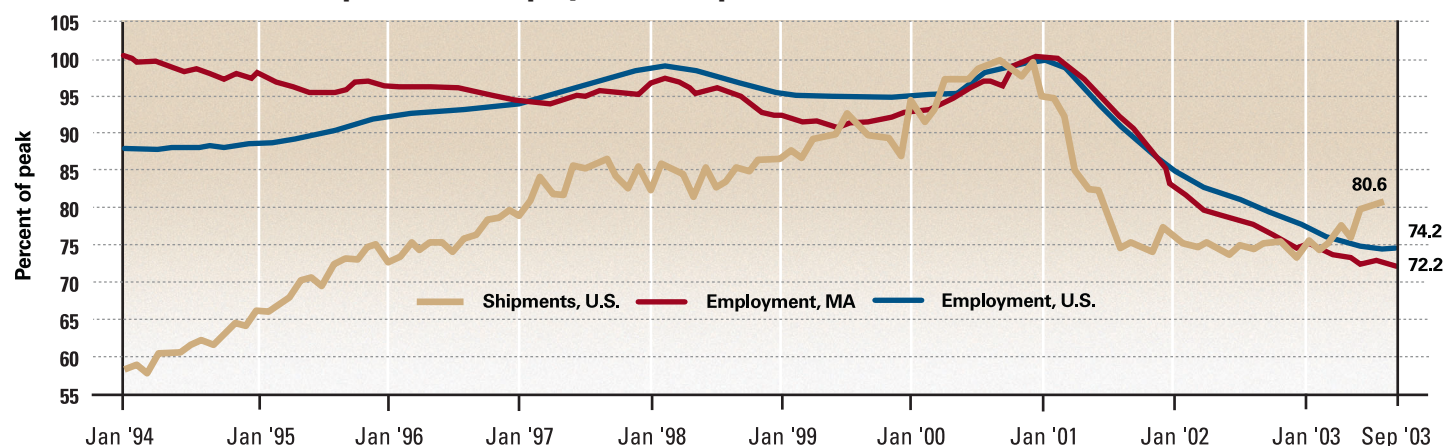
Going Forward—Short Term

Despite an apparent turnaround in output, it won't feel as if the recession is over until job growth resumes. The key for Massachusetts lies in its technology sector. Losses in that sector have a direct effect on the state's ability to supply its manufacturing sectors, and on related business-service employment. Indirectly, through the stock market, the sector also affects the securities sector of finance. Also, as an export sector, the earnings and profits derived from the state's sales have a substantial indirect effect on its economy. The largest economic impact comes through labor earnings, and so the main benefits of the reversal in the technology sector will come when there is an upswing in employment. Trends in

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shipments by and employment in the national computer and electronics industry suggest that this could happen soon. Employment in that sector has continued to decline through the first nine months of the year, even as shipments were growing strongly throughout the year. Given the low level of inventories and fast growth in orders, shipments and production should now be growing in tandem. Shipments in the industry in August were at 80.6 percent of the peak level, attained in September 2000, while employment was only at 74.2 percent of its peak level, attained in December 2000. This gap is consistent with productivity increases that have occurred since 2000, but very soon firms in the industry should need to hire new labor in order to keep up with growing orders. Because information on shipments, orders, and inventories is not available at the state level, it is difficult to know whether a similar situation has developed in Massachusetts. However, given that the markets in this industry are national and international, and that the industry has a competitive nature, local and national conditions are likely to be similar. Massachusetts employment in this industry

Shipments vs. Employment, Computers and Electronic Products



Source: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics

has declined proportionally to national trends. Peak employment occurred in the same month, and in September payroll employment was at 72.2 percent of its peak, indicating slightly greater employment losses here than in the nation.


The technology sector may be the key to the cyclical state of the Massachusetts economy, but developments in other markets will also determine the course of the state's recovery. Three sectors should continue to contribute to growth, just as they have mitigated the severity of the technology downturn: higher education, medical sciences, and health services. These markets are driven by demand that is somewhat independent of the business cycle, and demand growth in these sectors remains positive. An aging population will continue to require expansion in health services and medical sciences, while worldwide growth in income will provide additional demand for the state's exports of medical devices, pharmaceuticals, and educational services.

Offsetting these positive trends are a structural deficit in the state budget that is still severe, and impending weakness in residential real estate as long-term interest rates rise.

Going Forward—Are High-Skilled Jobs Going Abroad?

One important economic theme of the current decade that is emerging in this recession and early recovery is the loss of jobs to other countries. Unlike the deindustrialization of the 1980s, this wave of expatriation of jobs is not limited to manufacturing, but also includes services like back-office call centers and product support, and professional services like computer programming. This trend is very disturbing because job migration overseas was supposed to be confined to low-skilled jobs. A high-skilled labor market like the one in this region was thought to be immune, since low-skilled jobs in export industries had already disappeared. Now one of the very sectors that served as the backbone of growth in the 1990s, computer programming, is being decimated by foreign competition. How big a problem will this become, and what can be done about it at the state level?

It may be comforting to realize that this problem is not new to Massachusetts. From the beginning of its post-colonial era, the state has been losing jobs to other regions and other countries: first in agriculture, forestry, and mining, then in manufactures such as textiles, shoes, and apparel; more recently in electronics and mass-production segments of every other manufacturing sector; and now in service and professional sectors. Yet, the economy has adapted, relying on so-called Yankee ingenuity, which has always been based on a workforce with superior education and skills. This still remains the key to maintaining the state's economic vitality. With the rapid increase in the rate of college attendance that began with the baby-boom generation, Massachusetts emerged, by the end of the 1990s, as the state (not counting the District of Columbia, a special case) with the most educated population in the country.⁸ This has enabled the state's economy to adapt new technologies to new products and to attract both financial and human capital. State and local governments have little control over trade policy, but can support institutions of higher education and K-12 public education. The latter are critical not only for "growing" a native skilled workforce, but also for attracting young skilled households to the state and for enticing the state's college graduates to stay.

It is easy to identify jobs that have migrated to other countries, but difficult to identify job gains that result from this same migration. As jobs move abroad, foreign income rises and generates demand for a wide array of products that may be supplied and produced in the United States and Massachusetts, including consumer products like medical devices and pharmaceuticals, investment equipment, business services like consulting, and even higher education. Massachusetts is well positioned to supply these products and services, and could even be a net beneficiary of the increased international trade that should accompany foreign economic growth and development. 

¹ The current recession's count of job losses is based on the author's seasonal adjustments of official, not seasonally adjusted, payroll data. The state's 1989–1992 job loss was the largest since the Great Depression of the 1930s. The state's second largest job decline occurred in the sixteen-month period from June 1943 to October 1945, when 10.6 percent of jobs were lost. However, all but 10,000 of the 189,000 jobs lost in the postwar reconversion were recovered in the fourteen months following the trough.

² The figures presented here are from the Current Population Surveys. The CPS asks about unemployment in the survey week of each monthly survey, and the figures reported here are annual averages (nine-month averages for 2003) of the twelve survey weeks (nine survey weeks for 2003).

³ Based on a regression of individuals' unemployment duration on age, sex, race/ethnicity, educational attainment, and a dummy variable for Massachusetts.

⁴ The official, seasonally adjusted unemployment rate for the first nine months of 2003 was 5.5 percent. The difference is due to seasonal adjustment and statistical modeling for the official series.

⁵ For Massachusetts, earnings per worker is an estimate of wage and salary disbursements derived from state withholding taxes, divided by payroll employment. For the United States, wage and salary disbursements from the NIPA accounts are divided by payroll employment.

⁶ These growth rates are in current dollars rather than real dollars, a more appropriate measure for gauging their impact on the economy.

⁷ Massachusetts merchandise exports in the most recent twelve months were 19 percent of estimated manufacturing shipments over the same period. The latter were estimated by U.S. manufacturing shipments from the Census Bureau times the ratio of Massachusetts manufacturing gross state product to U.S. manufacturing gross state product in 2001, from the Bureau of Economic Analysis.

⁸ According to the 2000 Census, when considering the proportion of the population over 25 with a BA or higher degree, or with a graduate degree.

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