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Economic Currents: The State of the State Economy

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Economic currents

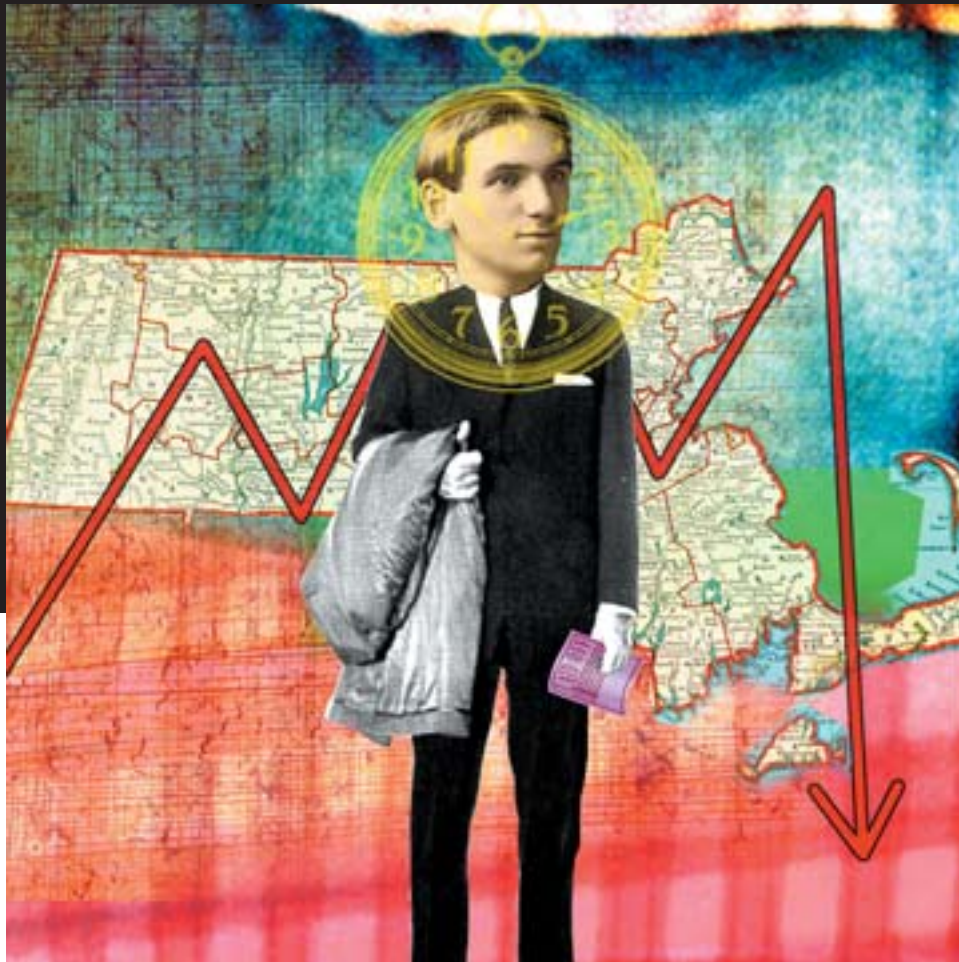


ILLUSTRATION: NAOMI SHEA

ALAN CLAYTON-MATTHEWS

Aggregate economic activity in Massachusetts during the first half of the year slowed to a halt, with declines in manufacturing offset by continued expansion in the rest of the economy. The Massachusetts economy appears to be weaker than that of the nation and may even have contracted during the second quarter.

The state is being hit hard by the fall in national and worldwide demand for computers and other information technology products, especially semiconductors and telecommunications equipment. Significant income losses have resulted from the disappearance of thousands of relatively high paying manufacturing jobs. Employees have also seen

lower bonuses and realized stock options associated with falling corporate profits and declines in stock markets relative to the prior year. Consumer spending has been restrained, and with the exception of a strong second quarter in automobile purchases, sales of taxable goods in recent quarters have not kept up with the rate of consumer price inflation.

Countervailing segments supporting the economy include construction, residential real estate, finance, and most services. The outlook for the second half of this year is for continued weakness, with very slow growth at best. A moderate decline in output and employment is more probable than not.

The Current and Leading Economic Indices for Massachusetts

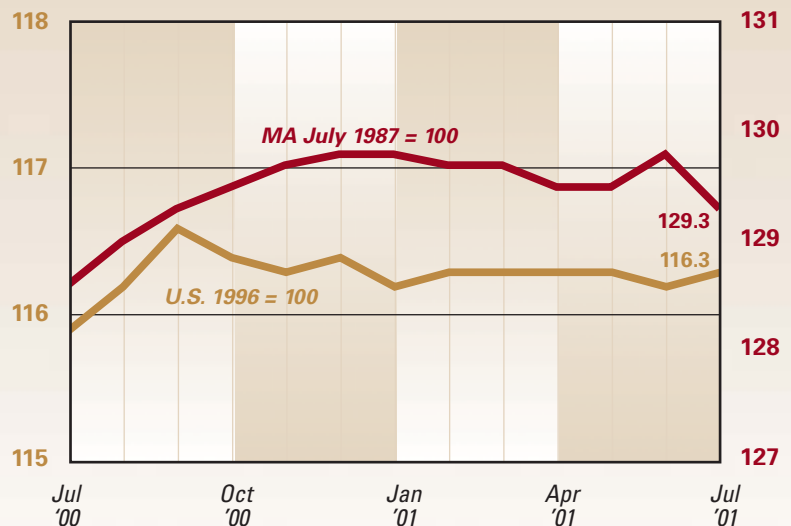
The Massachusetts Current Economic Index for July was 129.3, down 0.5 percent from June (at annual rates) and up 0.6 percent from July of last year. The current index is normalized to 100 in July 1987 and is calibrated to grow at the same rate as the Massachusetts real gross state product over the 1978–1997 period.

The Massachusetts Leading Economic Index for July was -0.7 percent, and the three-month average for May through July was 0.0 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 contract at an annual rate of 0.7 percent over the next six months. Because of monthly fluctuations on which the index is based, the three-month average of 0.0 percent, which indicates a stalled economy, may be a more reliable indicator of near-term growth.

Massachusetts is suffering from the national and worldwide decline in investment spending for technology products. Producers of semiconductors and semiconductor equipment, communications equipment, and other suppliers of business investment and related services have cut their workforces or announced layoffs. Unemployment is increasing, payroll employment declined in July, and tax-based measures of real (inflation-adjusted) statewide labor earnings have declined in recent months. The trend in recent sales tax revenues is flat to declining, suggesting that consumer spending in Massachusetts is weakening. Strength or stability in several sectors, including construction, residential real estate, finance, hospitals, education, and management and consulting services, have kept the economy from slipping into a full-blown recession.

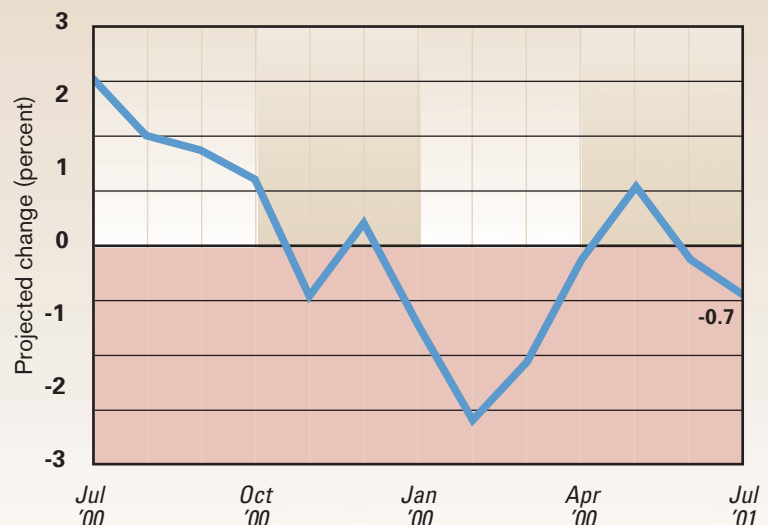
Current Economic Index United States and Massachusetts

The U.S. Current Economic Index is measured on the left vertical axis; the Massachusetts Current Economic Index is measured on the right.



Massachusetts Leading Economic Index

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



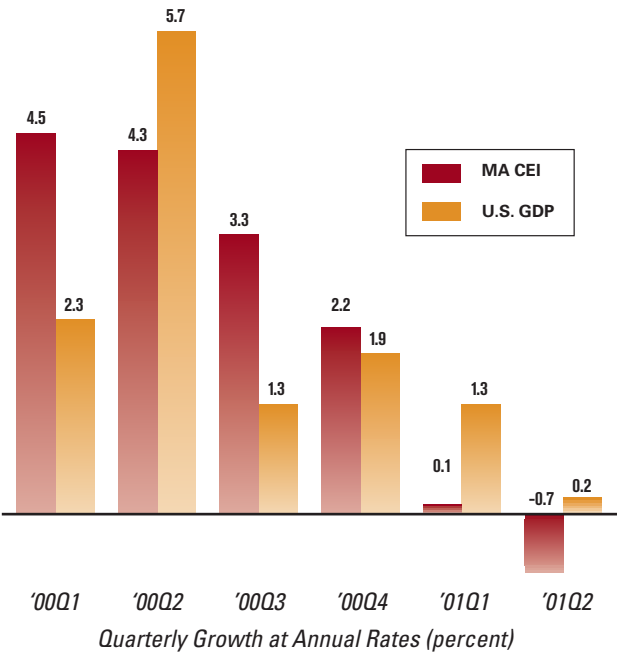
Sources: The Conference Board; University of Massachusetts; Federal Reserve Bank of Boston

2001: The End of the Expansion?

The Massachusetts Current Economic Index, a proxy for real state gross product, grew at a meager 0.1 percent annual rate in the first quarter and declined at a 0.7 percent annual rate in the second quarter. U.S. real gross domestic product (GDP), the analogous measure of economic output for the nation, grew at higher annual rates of 1.3 percent in the first quarter and 0.2 percent in the second quarter.

Massachusetts vs. U.S. Growth

Massachusetts grew more slowly than the nation in the second quarter of 2001.

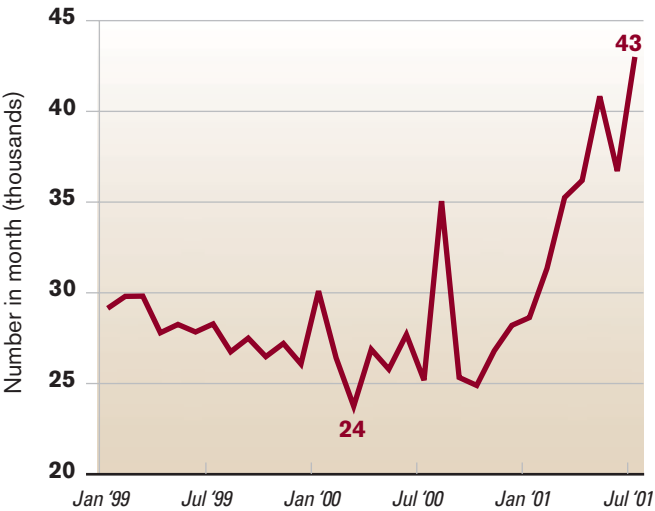


Sources: U.S. Bureau of Economic Analysis; author's calculations

All four indicators that comprise the current economic index—payroll employment, withholding taxes, sales taxes, and the unemployment rate—contributed to a below-trend rate of growth. In real terms, the tax bases estimated to underlie these revenues have declined over the 12 months ending in August. The unemployment rate in July, at 3.8 percent, was still low relative to its long-term history, but it had risen by 1.5 percentage points from its all-time low of 2.3 percent in December.

The Massachusetts Leading Economic Index, composed of the four coincident indicators of the current index plus six indicators that lead the current index, is projecting that the economy (real Massachusetts gross state product) will decline at a 0.7 percent annual rate from July through January. The weakness in the six leading indicators is concentrated in initial unemployment claims and stock prices. Initial unemployment claims rose sharply in the first seven

Initial Monthly Unemployment Claims, MA



Source: Division of Employment and Training, seasonally adjusted by the author

months of this year, and the Bloomberg stock index has exhibited a declining trend since early June, falling by 12.7 percent from June 8 to September 5.

Not all the news is bad. Consumer confidence for New England is holding steady at historically strong levels and actually bucked the national index by increasing in August from its July level. Construction employment is still increasing at about long-term trend rates of growth, supported by both residential construction and heavy construction projects, such as the Big Dig. It is also important to realize that forecasts of future economic growth are not certain. The standard error of the leading index is roughly one percentage point of growth, so it is very possible that growth could resume before the year ends.

A Manufacturing Recession

Manufacturing is in a recession in Massachusetts, the nation as a whole, and many other countries as well—especially for our trading partners in East Asia (with the exception of China). The source is a sharp decline in business investment in computers, communications equipment, and related information technology equipment and services. U.S. investment in information processing equipment and software has completely turned around from double-digit growth—an annual rate of 18.0 percent (in nominal terms) in the second quarter of 2000—to double-digit decline—at annualized rates of 19.8 percent in the first quarter of 2001 and 23.1 percent in the second quarter.

The cause of this reversal was a frenzy of what is now viewed as over-investment in such goods at the end of the 1990s and in early 2000, and the subsequent adjustment period that we are now in. This is also partly the cause and

the effect of the bubble in technology stocks, its bursting, and the recent doldrums. Falling corporate profits have exacerbated the fall in demand, as capital expenditures and workers are victims of cost containment.

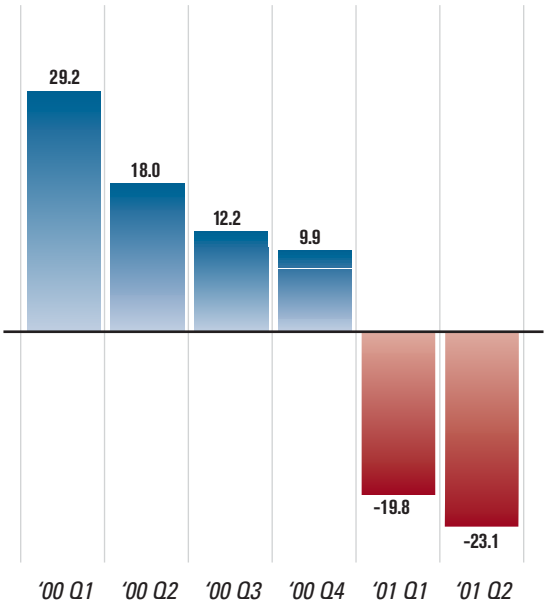
The manufacturing sector most closely aligned with these products in the new North American Industrial Classification System (NAICS) is computers and electronic products. According to the Census Bureau's survey of shipments, orders, and inventories for the United States, shipments in computers and electronic products in the first half of 2001 were 23.3 percent below those in the second half of 2000; new orders in the first half of 2001 were 32.3 percent below those in the second half of 2000; and inventories, though declining in the second quarter of this year, still grew by 5.7 percent in the first half of 2001 relative to the second half of 2000.

These national trends in computers and electronic products have impacted Massachusetts disproportionately, as the Commonwealth is 2.5 times as concentrated in the production of these products as is the nation as a whole. (According to the 1997 Census of Manufactures, this industry employed 105,506 in Massachusetts, or 3.4 percent of all payroll jobs, while nationally it employed 1,696,742, or 1.4 percent of all payroll jobs. This gives a relative concentration in Massachusetts of 2.5:1.)

Production and employment in almost all broad manufacturing sectors in Massachusetts and the nation are in decline, albeit to a lesser degree than in computers and electronic products. Exceptions include food, printing and publishing, and sectors supply-

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

ing the oil industry. In part, this is because firms in some industries (e.g., metal fabrication and plastics) supply computers and electronic products. It is also due to a general decline in all types of business investment, as well as a slowdown in consumer purchases of manufactured products.

Massachusetts lost 12,900 manufacturing jobs between December and July, which amounts to 2.9 percent of manufacturing payroll employment. This is the third major decline in manufacturing employment since the mid-1980s. To put this episode in perspective, the most recent prior decline in manufacturing, which began in February 1998 in response to the "Asian Crisis,"

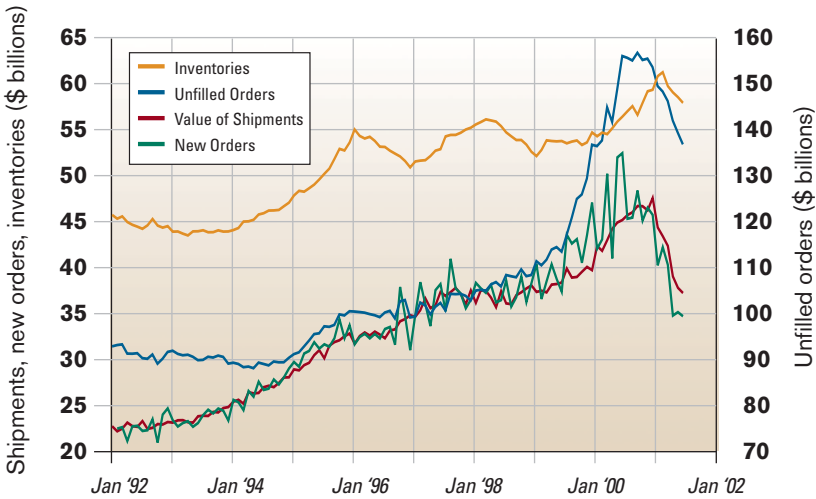
Wage Income and Consumption Spending Are Weak

The information technology sector in Massachusetts in the late 1990s was associated with high-paid manufacturing jobs; even higher-paid management, engineering, and professional jobs; and associated bonuses and stock options. Wage-

rate growth for Massachusetts workers (the wage rate measures used here include bonuses and the value of realized stock options), which trended slowly upward along with the nation through 1997, began to accelerate rapidly in 1998. By the second half of 1999, it was growing at over 10 percent per year.

For the most part, these aggregate gains appear to have been

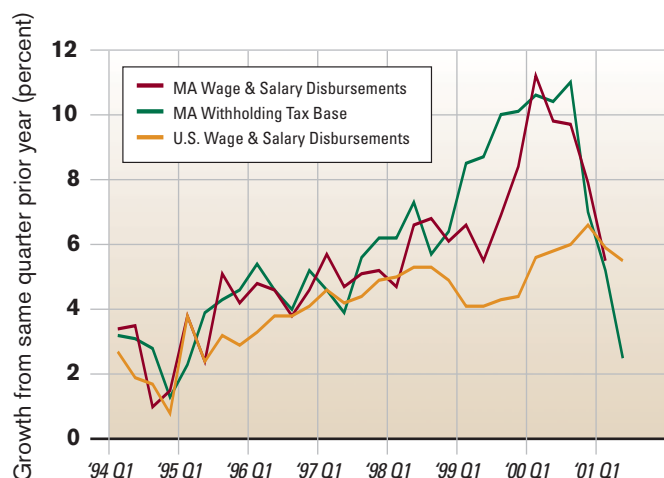
Computers and Electronic Products, United States



Source: The Conference Board

Growth in Nominal Wages Per Worker

The rapid decline in wage growth seen in Massachusetts in the first quarter of 2001 has continued in the second quarter; an indication that labor supply bottlenecks continue to disappear.



Sources: U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics; MA Department of Revenue; author's calculations

garnered by a relatively small minority of skilled and professional workers. Included are those in information technology and medical sciences and the top ranks of employees in sectors that traditionally include bonuses as a significant part of compensation: finance, law, management consulting, and medical services. After the Nasdaq bubble burst in March 2000, and with the subsequent failures of dot-com companies, sharp declines in output of technology products, and widespread declines in corporate profits, these highly concentrated gains appear to have diminished dramatically. As a result, aggregate wage-rate growth has sharply decelerated. In the second quarter of this year, average wages per worker are estimated to be only 2.4 percent greater than they were a year earlier. (These wage rates are estimated as total wages and salaries as drawn from state withholding taxes, divided by payroll employment.) Earnings per worker actually declined in the second quarter, which is consistent with job losses concentrated among manufacturing workers (who are better paid, on average, than non-manufacturing workers) and less compensation from realized stock options.

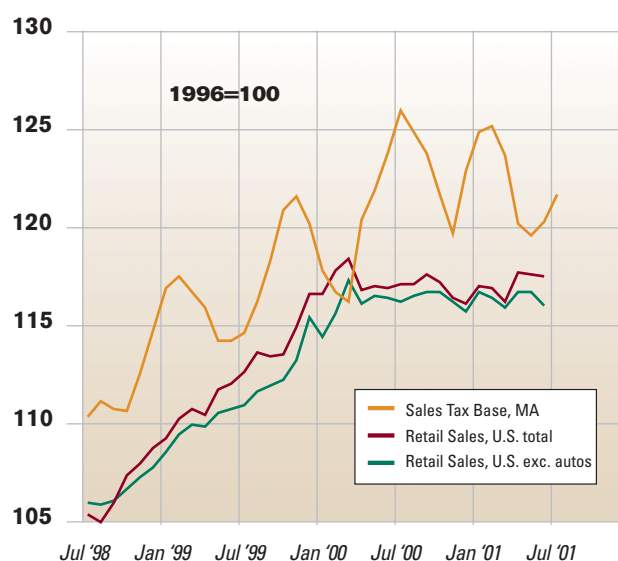
Consumer spending in Massachusetts, excluding the purchase of automobiles, appears to have barely kept up with inflation; in real terms, it may have declined slightly during the second half of 2000 and the first half of 2001. This is based on state regular sales taxes, which do not include all consumer purchases and are highly volatile from month to month. Given the volatility of sales tax receipts, it is possible that consumer spending growth in the state has paralleled the weak, but positive, trend in the nation as a whole.

The data suggest, however, that spending has been weaker in Massachusetts. For the three-month period ending in August (the most recent month available), the nominal sales tax base declined at an annual rate of 2.1 percent from the prior three months; the most recent six months of the nominal sales tax base (March through August) declined at an annual rate of 0.8 percent over the prior six months.¹

Automobile purchases in both the state and the nation were strong in the second quarter of this year, expanding at an annualized rate of 13.7 percent nationally and by 15.4 percent in Massachusetts, based on motor vehicle sales taxes. These may have come at the expense of sales in the second half of this year, however. In the most recent three-month period, ending in August, seasonally adjusted state motor vehicle sales taxes declined at an 8.2 percent rate over the prior three months.

Real Consumer Spending

After falling sharply in the first quarter, spending in Massachusetts picked up during the second quarter.



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

A More Somber Near-Term Outlook

The economy continues to have several strengths that are countervailing the weakness in manufacturing. These are in residential real estate, construction, finance, education, hospitals, and medical sciences, which includes medical device manufacturing, pharmaceuticals, and biotechnology. So far, these sectors have contributed enough employment gains and income to keep Massachusetts from falling into a full-blown recession. Until there are clear signs of a bottom or turnaround in business investment and the manufacturing sectors that supply it, however, it is difficult to remain opti-

mistic about the near-term outlook. This is especially true in the face of declining state tax revenues, which have been a reliable indicator of current economic conditions.

Aside from national and state consumer spending, which account for the bulk of aggregate spending, the key sector to watch is manufacturing, especially computers and electronic products. New orders in this sector fell rapidly in the first half the year but appear to have stabilized in the last couple of months. This good news is tempered by the fact that the current level of new orders is still below current levels of output, which indicates that output will probably contract further in the coming months.

Overall, the current and leading indices appear to balance these strengths and weaknesses reasonably well. This means that we can expect the Massachusetts economy to continue to stutter along through the beginning of next year, with no real growth, but perhaps a mild contraction. ▮

Submitted September 7, 2001

1 Sales taxes are converted into a sales tax base by adjusting for tax-law changes in the tax base, dividing by the tax rate, and smoothing. The resulting indicator is weighted toward durable goods, since food and most clothing are tax-exempt. The indicator also includes taxes paid by businesses, which may account for up to one-fourth of sales tax revenue.

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