Summer 2001

Economic Currents: The State of the State Economy

Alan Clayton-Matthews
University of Massachusetts Boston

Economic currents

ILLUSTRATION: NAOMI SHEA

ALAN CLAYTON-MATTHEWS

Pain and anxiety are accompanying the news of an economy that has not grown since December. The Massachusetts Current Economic Index, a proxy for real gross state product growth, was actually lower in April than it was at the end of last year, and it is only 1.5 percent greater than in April 2000.

Manufacturing has been hit particularly hard. During the first four months of the year, employment in this sector declined at an annual rate of nearly 5 percent. Over the summer months and into the fall, the state's economy can expect more of the same, with no growth in output and probably more employment declines.

The Massachusetts Leading Economic Index for April was negative 0.2 percent, forecasting a 0.2 percent decline in real gross state product from April to September. Seven of the ten indicators that comprise the index contributed to below-trend rates of growth. The three positive components are reflective of the Fed's interest rate reductions, the rise in stock prices since the beginning of April, and the strength of construction employment. The negative components reflect stagnant aggregate employment, declining withholding and sales tax revenues, rising unemployment, and weak consumer confidence.

Although the risk of recession is greater than it has been for a decade, a full-fledged recession does not appear to be imminent. Events are consistent with a cycle in business investment that could represent a relatively short adjustment to an over-investment in communications, computers, and other technology equipment. Growth could resume late this year or early next. Still, there is a significant probability that the adjustment could result in employment declines deep enough to touch off a more pronounced recession, through a multiplier effect of reduced consumer spending.

The Current and Leading Economic Indices for Massachusetts

The Massachusetts Current Economic Index for April was 129.5, down 1.3 percent from March (at annual rates), and up 1.5 percent from April 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.

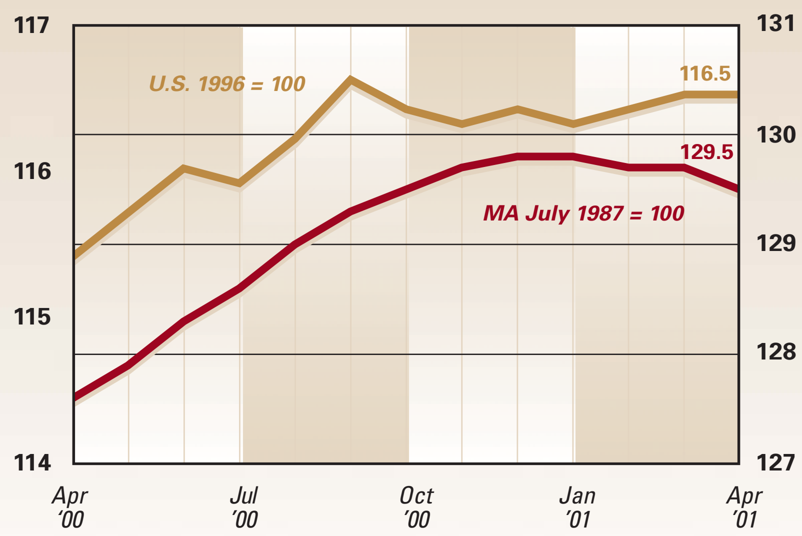
The Massachusetts Leading Economic Index for April was –0.2 percent (negative 0.2 percent), and the three-month average for February through April was –1.3 percent (negative 1.3 percent). The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate. Thus, it indicates that the economy is expected to contract at an annual rate of 0.2 percent over the next six months. Because of monthly fluctuations on which the index is based, the three-month average of –1.3 percent, which indicates a mild contraction, may be a more reliable indicator of near-term growth.

The Massachusetts economy has slowed to a stop. The worldwide decline in investment spending for technology products is impacting the state. Many major producers of semiconductors, semiconductor equipment, and communications equipment, as well as suppliers of business investment and related services, have announced layoffs and cutbacks in planned expansions. Tax-based measures of real (inflation-adjusted) statewide labor earnings and consumer spending have actually declined in recent months. Countervailing these negatives are an apparent stabilizing of stock market prices and consumer confidence, robust real estate markets, continued growth in construction employment, and the Fed's expansionary policies.

Submitted June 4, 2001

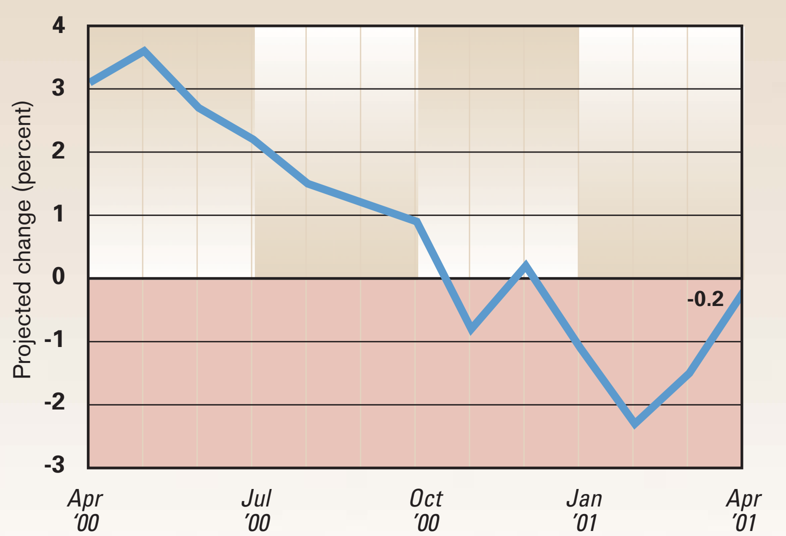
Current Economic Index United States and Massachusetts

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

The Slowdown Hits Massachusetts Later–but Harder–than It Does the Nation

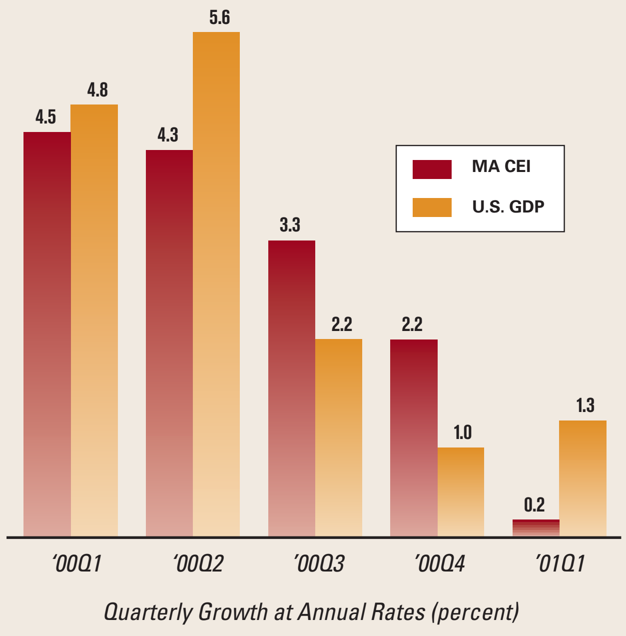
The slowdown began later here than in the Midwest and Southeast regions of the country. While the nation's other regions began to see sharp downturns in the last two quarters of 2000, the deceleration in Massachusetts was more gradual until the first quarter of this year.

The difference in timing reflects differences in industry mix. Demand for automobiles by consumers and transportation equipment by businesses declined in the third and fourth quarters of last year, forcing manufacturers in the Midwest and Southeast to lay off thousands of workers. The proximate cause of the slowdown in Massachusetts was the sudden fall in business demand for telecommunications and information-processing equipment, services, and related products that began in the last quarter of 2000. This resulted in declines in both output and employment in high-tech manufacturing and related sectors in the first quarter of this year, and the effects continued to accumulate in the second quarter.

Real U.S. GDP growth slowed from an annualized rate of 5.6 percent in the second quarter of 2000 to 1.0 percent in the fourth quarter. At the same time, real growth in Massachusetts, as measured by the Massachusetts Current Economic Index, slowed at a more gradual pace, from 4.3 percent in the second quarter to 2.2 percent in the fourth quarter of last year. But while U.S. growth in the first quarter of 2001 stabilized at 1.3 percent, it dropped to 0.2 percent in Massachusetts.

Massachusetts vs. U.S. Growth

Massachusetts grew more quickly than the nation in the last two quarters of 2000 and much more slowly in the first quarter of 2001.

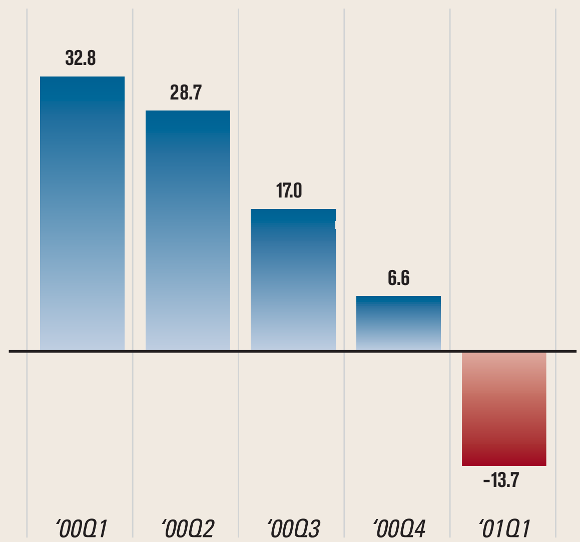


Sources: U.S. Bureau of Economic Analysis; author's calculations

There was a dramatic fall in capital expenditures by U.S. businesses for technology-related products. As recently as the third quarter of 2000, nominal investment in information-processing equipment and software grew at a 17.0 percent annualized rate over the prior quarter. In the fourth quarter, growth fell to 6.6 percent, and then became negative by the first quarter of 2001, when it fell by 13.7 percent on an annualized basis.

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

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



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

Nationwide, shipments and new orders for computers, communications equipment, and electronic components fell in each month of the first quarter, with the greatest decline for communications equipment and semiconductors and related equipment. Shipments of communications equipment in March were down 23.3 percent from the prior year, while new orders were down 37.5 percent over the same period.

The collapse of the semiconductor market is even more pronounced. Shipments of semiconductor equipment from North American producers fell from $2.6 billion last October to $1.7 billion by April. New orders fell even faster, from $3.0 billion in October to $700 million in April. The book-to-bill ratio fell to a 10-year low of .42, indicating further declines in output over the summer. Worldwide semiconductor sales have been declining rapidly since November. During the first three months of the year, sales declined at an annualized rate of over 50 percent per month.

Job Losses Are Mounting

Manufacturing losses have been widespread in Massachusetts, especially among durable goods producers. Through April, high-tech manufacturing employment in Massachusetts had declined more slowly than nationally. This may be because several large employers, including Cisco, EMC, Intel, and Sun Microsystems, have been implementing large expansions in Massachusetts. However, these companies have recently announced layoffs and/or cutbacks in expansion plans, so further reductions in employment can be expected.

Employment losses spread to business services in March and April. Most likely, these losses reflect continued cutbacks by Internet-related dot-com firms, other software firms, and temporary employment contractors. Until recently, laid-off workers with computer-related skills were quickly snatched up by other employers who had unfilled vacancies. Anecdotal evidence suggests that the number of job vacancies is quickly diminishing, as they are filled by recently unemployed workers, put on hold by employers, or simply disappearing as dot-com companies fail.

These trends are evident in rising unemployment rates and initial unemployment claims. From a record low in December of 2.3 percent, the state unemployment rate rose by nearly a full percentage point to 3.2 percent in April. Initial unemployment claims have also risen sharply, from a low of 25,000 last October to over 36,000[1] in April, the most recent month available. Relative to the historical record, the unemployment rate is still low. It is the rapidity of the change, consistent with the sharp rise in initial unemployment claims, that is of concern.

Wages and Salaries Are Declining

Aggregate wage and salary payments to those working in Massachusetts, estimated from withholding taxes, declined between March and May. This reflects a combination of nearly stagnant employment, job losses concentrated in better-than-average-paying jobs, and declines in lump-sum payments such as bonuses, commissions, and realized stock options. On a per-worker basis, year-over-year wages rose by 2.8 percent in May, well below the 10 percent rate that prevailed for most of last year. These annual rates of wage gain are now comparable to national rates, and for recent months are below U.S. wage rate growth. This rapid retrenchment in wages is another indication of how quickly labor supply bottlenecks are disappearing. It is also consistent with the particularly sharp rate of slowdown in Massachusetts relative to the nation in the first quarter of this year.

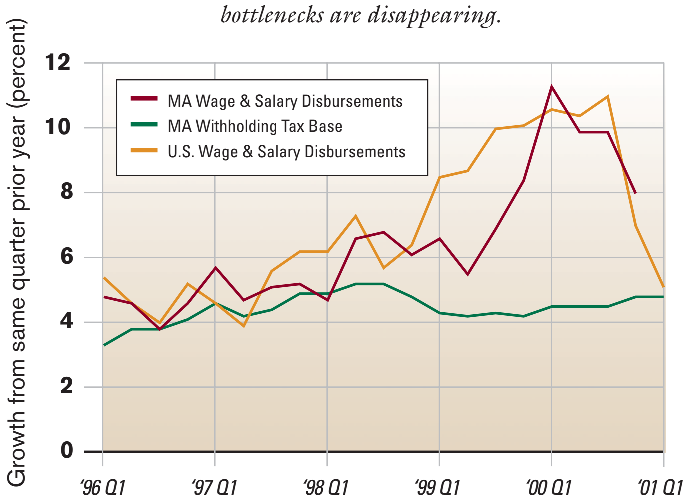
Consumption Is Key to Avoiding a Recession

Since personal consumer expenditures form the major portion of economic output, economists pay close attention to trends in consumer spending. If this slowdown escalates into a recession, it will most likely be because consumers have lost confidence in the prospects of maintaining employment and income, and have cut back on consumer spending. This concern over consumer spending is nationwide.

State-level data based on sales tax revenues are noisy, so it is difficult to determine short-run trends. Given that, the data suggest that consumer spending in Massachusetts is slowing as much as it is nationally, and may even be declining. As of May, the sales tax base had fallen sharply for three consecutive months. This in itself is not unusual, given past patterns in tax receipts. But the magnitude of the declines stands out. On a year-over-year basis, the nominal sales tax base in May was down 3.1 percent from the prior

Growth in Nominal Wages Per Worker

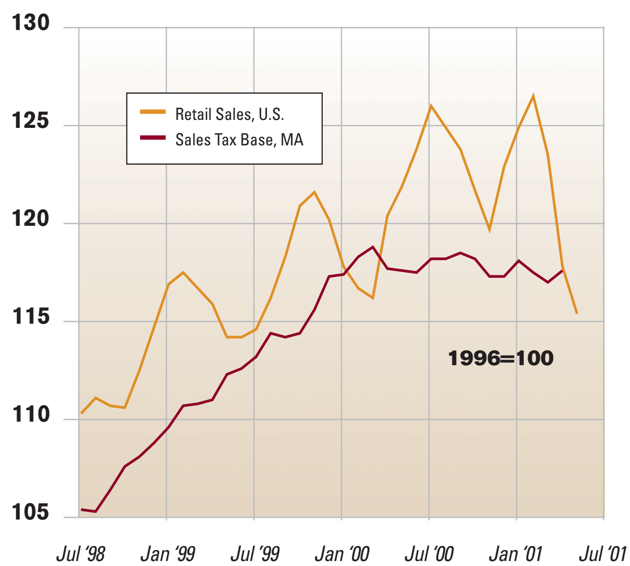
A rapid drop in wages is an indication of how labor supply bottlenecks are disappearing.



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

Real Consumer Spending

Consumer spending in Massachusetts has been declining rapidly, while it seems to be holding steady nationally.



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

year. U.S. retail sales, in contrast, were up 3.1 percent from the prior year (in April, the most recent month available).

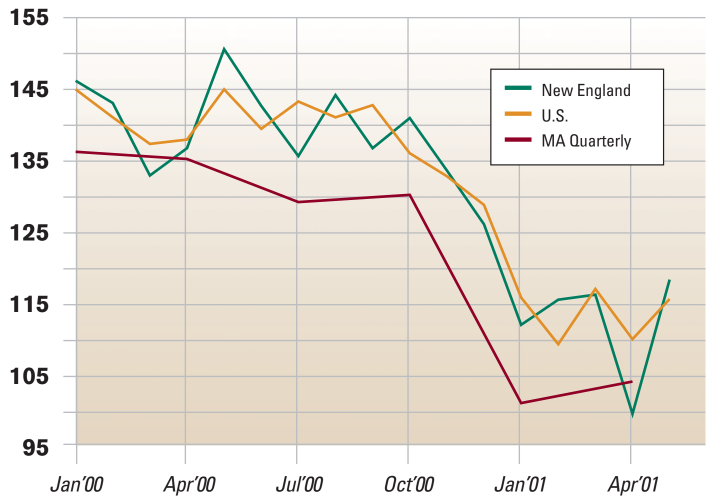
Massachusetts sales taxes exclude most food and clothing, and so are weighted toward consumer durable purchases, which tend to be more cyclically volatile than overall consumer spending. Also, a significant portion of receipts, perhaps one-quarter, derives from purchases made by businesses that are not directly tied to production (e.g., purchases of computers for non-production workers). This means that some portion of the decline in sales tax receipts may reflect the retrenchment in business capital expenditures. Nevertheless, Massachusetts sales tax receipts have historically tracked state retail spending quite well (until 1997, the U.S. Census Bureau published figures for Massachusetts), and so recent trends are a cause for concern.

Consumer confidence is down—but not gone. Two different regional measures, one from the Conference Board for New England and the other from Mass Insight/NEEP for Massachusetts, are indicating qualitatively similar trends. Confidence dropped sharply in the fourth quarter of 2000 and from January through May has fluctuated around this lower level. Households are comfortable with current economic conditions, but they are concerned about the future. The levels of the future expectations components in both indices are in the range experienced in the last recession. If unemployment rates rise, consumer confidence about current conditions could deteriorate rapidly.

Massachusetts and New England consumer confidence have trended very closely to national consumer confidence (also from the Conference Board) over the last several years. This reflects partly the widespread participation of households in the stock market and attention to daily financial and business news; it also reflects how closely connected the state, regional, and national economies are. Mergers, acquisitions, and investment in new offices and production facilities over the past decade of expansion have integrated states' economies with one another to a greater extent than ever before.

Consumer Confidence

Confidence dropped sharply in the fourth quarter of 2000 and has not recovered.



Sources: The Conference Board; Mass Insight/New England Economic Project

Housing Markets Still Strong

The housing market is still firm, with signs of some moderation in what has been a hot market for several years. Single-family housing permits in the first quarter were running at a little more than 1,000 per month on a seasonally adjusted basis, a rate about 13 percent below the same quarter a year ago. This is a continuation of a slowly softening trend of new home construction in the past couple of years, and has contributed to maintaining appreciation rates of housing.

As of the fourth quarter of 2000, the Fannie Mae/Freddie Mac housing price indices that control for quality were registering year-over-year appreciation rates of 15.4 percent in Massachusetts, well above the overall U.S. figure of 8.4 percent. The increase in home values contributes to increased household wealth, offsetting the loss due to falling stock prices. Sales volume of existing Massachusetts homes is down slightly from a year ago, but is still near historically high levels. Markets in the western part of the state appear to be weaker. In Springfield, house prices appreciated at only 4.6 percent in the year ending the fourth quarter.

Other Positives Could Prevent a Severe Recession

In addition to housing markets, there are other short-run indications and longer-run strengths that suggest that the slowdown might not deteriorate into a recession. If it does, the recession may be shallow and brief.

First, stock markets appear to have stabilized and to have capitalized the poor short-term outlook for business profits and output growth. As of June 1, the Bloomberg stock index had gained 26 percent since the low of April 4. The damage to the economy via the "wealth effect" on consumer spending may therefore be nearing an end. For businesses, having reached bottom in equity markets will mean easing credit conditions, allowing the Fed's several interest rate deductions to become effective.

Second, the stabilization in stock markets is partly due to the quick downsizing of businesses. This means that although we can expect unemployment to rise over the com-

ing months as firms' announced layoffs become effective, this round of pain may soon be over. The extent of layoffs may be great enough, however, to cause consumers to retrench further in their spending. In this regard, the significant inventory reductions in the first quarter are a good sign (though inventories in electronics and computers are still high), as production growth will resume sooner.

Third, on a local level (and on a national level), construction spending and employment growth remain strong. Aside from the Big Dig, there are several large commercial and office construction projects under way. The timing of this construction boom is fortunate. When it does abate, the business investment cycle may be back on the upswing, and Boston will be prepared for the increase in activity in terms of an increased capacity of office space and an improved transportation system.

Massachusetts has several long-term strengths that should ensure that the current slowdown does not turn into a repeat of the last recession. First, the downturn in computer and communications-related manufacturing is unlike that of the late 1980s in an important respect. Then, firms like Digital Equipment Corporation and Wang were rapidly losing market share, as personal computers replaced minicomputers. Today, the state's producers are not losing market share. The downturn in technology products is national and worldwide in scope, and Massachusetts producers will revive as business and household expenditures on these products resume.

Second, several other large sectors of the state's economy should provide a stable base of employment that will prevent a steep decline in employment and economic activity. These sectors are not immune from downturns, but they are not connected to the decline in business capital expenditures, which is responsible for the current economic problems. Moreover, their long-run prospects are for stable or growing output and employment trends. These sectors include medical services and related medical science production and research, higher education, and finance, particularly money management and mutual funds. Medical services are still feeling the effects of the Medicare cutbacks instituted in 1997 and the recent restructuring dislocations in managed care, but the long-term trend is driven by an aging baby boom that will spend increasing amounts on medical care.

Worldwide trends in aging and per capita income growth also bode well for health science industries, including medical devices, pharmaceuticals, and biotechnology. These industries export most of what they produce to other states and countries. Higher education is another important export industry for Massachusetts. This sector has provided stable growth throughout the expansion, and demographic trends—the rising college-age population—should support continued growth. Also, the continuing trend toward "upskilling" is boosting community colleges. The finance industry has weathered the fall in the stock market without major job losses. In the mutual funds industry, funds under management receive a continual inflow of retirement-based savings. Prospects for the future are good.

Submitted June 8, 2001

1 This number differs from the value for Monthly Initial Unemployment Claims on page 10 due to different methods of calculation.

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.