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Economic Currents: The State of the State Economy

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Economic currents

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The recession watch is on. The outlook for Massachusetts in 2001 is uncertain, and the downside risks appear to be gaining momentum. What was a favorable industry mix in 2000 may turn out to be unfavorable in 2001, if emerging signs of a worldwide decline in demand for technology products are realized. The chances of a downturn have not been higher in a decade.

Projected growth in GSP for the first half of 2001 is meager, at best, according to the Massachusetts Leading Economic Index for February. It is possible that employment will decline somewhat and unemployment rates will rise over the next several months. On the other hand, if employers perceive the slowdown as a short-term growth pause, they may be reluctant to lay off workers whom they had a difficult time recruiting in the first place. If this is the case, we may be spared declines in aggregate employment.

Economic conditions in Massachusetts at the end of last year consisted of a weak consumer sector compensated for by generally good overall business conditions. There was a pipeline of residential, commercial, and public construction projects in the state. Since Massachusetts is not concentrated in the production of consumer durable products, it did not feel the consequences of weak consumer demand—particularly in motor vehicles—that brought the national economy to a near standstill in the fourth quarter of 2000.

The Current and Leading Economic Indices for Massachusetts

The Massachusetts Current Economic Index for February was 130.6, up 3.9 percent from January (at annual rates), and up 3.1 percent from February 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. This preliminary release will be revised in the first week of April.

The Massachusetts Leading Economic Index for February was -0.4 percent (negative 0.4 percent), and the three-month average for December through February 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 0.4 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 no growth, may be a more reliable indicator of near-term growth.

The Massachusetts economy is hovering on the brink of recession. Weaknesses in stock markets and consumer confidence, along with the poor outlook for communications and information technology products, are pushing the economy toward recession. So far, however, labor earnings and consumer spending are holding up. Several sectors of the economy, most notably construction, nondepository finance (which includes mutual funds), business services, and engineering and consulting services, are still expanding.

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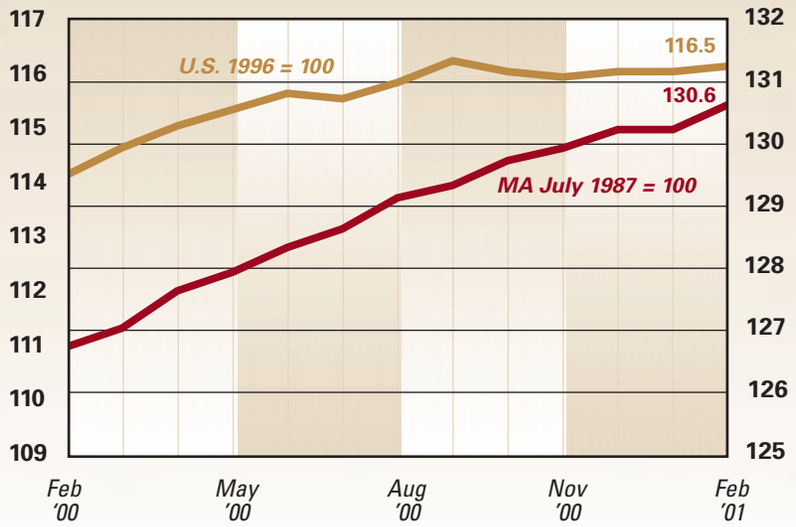
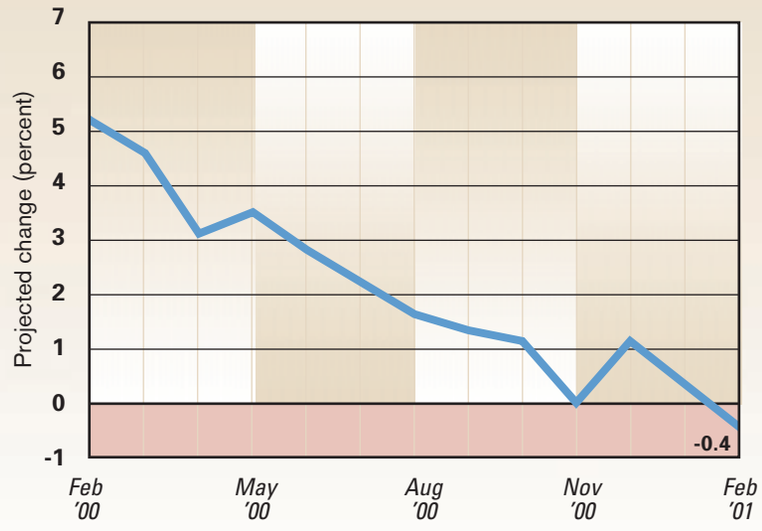
Current Economic Index
United States and Massachusetts

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

Instead—through the end of last year—there was a favorable mix of goods and service industries supplying domestic and worldwide demand for investment and consumer technology products, such as computer-related equipment and software, telecommunications components, instruments, and consulting and financial services. Consequently, the state's economy in the last quarter of 2000 outperformed the national average. While real U.S. gross domestic product in the fourth quarter grew by only 1.1 percent, the Massachusetts current economic index, a proxy for real gross state product, grew by 3.0 percent.

The first quarter, so far, has been marked by increasingly gloomy business conditions at the same time that consumers' earnings and spending improved from their poor fourth-quarter performance. The state's economy is in flux.

Recent economic performance in Massachusetts may look good relative to the nation, but compared to its own recent past, the state's economy has suffered some painful blows.

The Massachusetts Economy Takes a Hit

Recent economic performance in Massachusetts may look good relative to the nation, but compared to its own recent past, the state's economy has suffered some painful blows. In the fall and winter, technology stocks got pummeled. NASDAQ fell 54.6 percent from September 1 to March 12, and the Bloomberg stock index for Massachusetts fell by 39.8 percent. This was the mirror image of a year ago, when technology stocks were soaring.

As reported in the last issue of *Benchmarks*, a stock market bubble was responsible for the exceptionally lucrative bonuses and realized stock option season from late 1999 through early 2000.[1] Similarly, the recent stock market bust appears to be responsible for a poor bonus and stock option season in the past few months. Although confirmation of this won't be available until later this year, when employers' quarterly wage reports become available, declines in withholding tax revenues for the last months of 2000 are consistent with a bonus and stock option bust. The real withholding tax base fell by an annualized rate of 4.6 percent in the fourth quarter, after growing at an annualized rate between 7.2 percent and 11.4 percent in each of the preceding eight quarters. Nominal wages and salaries per worker are estimated to have fallen at an annualized rate of 4.3 percent in the fourth quarter, though because of strong growth earlier in the year, they were still 6.9 percent above the fourth quarter of 1999.[2]

In line with national trends, spending on consumer durable goods in Massachusetts appears to have slowed sharply. In the fourth quarter of 2000, U.S. real personal consumption expenditures for durable goods declined at an annualized rate of 2.8 percent, while the Massachusetts real sales tax base[3] declined at an annualized rate of 11.5 percent.

Also like the nation, automobile sales in Massachusetts have declined. As measured by seasonally adjusted state motor vehicle sales taxes, nominal purchases in the fourth quarter declined at an 11.9 percent annualized rate. (January and February motor vehicle taxes rebounded somewhat, and were close to year-ago levels.)

Three factors are contributing to the decline in consumer spending. One is the so-called wealth effect, a decline in spending associated with a fall in stock market prices. The second is a decline in earnings income at the upper end of the pay scale, due to a poor bonus and stock option season. The third is a stock adjustment effect (stock as in "the pantry is well stocked," not the stock market). Simply put, households had been engaged in a spending spree, acquiring cars, furniture, and other durable goods; they don't seem to need any more of these—at least for the time being.

Massachusetts Fared Better than Other States in the Second Half of 2000

Aside from the sharp slowdown in earnings and consumer expenditures, the Massachusetts economy appears to have performed better recently than has the nation as a whole—at least through the second half of 2000. Several positive influences were at work.

Construction projects. Bolstering this sector of the economy is a pipeline of big public construction projects, such as the "Big Dig," and smaller ones, such as K-12 school expansions. Additionally, years of low vacancy rates in downtown and suburban offices have resulted in several new and ongoing commercial construction projects. And residential real estate construction demand is still alive. Permits are down slightly, to a rate of 1,300 per month, but this still represents a substantial demand for construction workers. Construction employment in the fourth quarter grew at an annual rate of 10.9 percent and was 9.7 percent above the fourth quarter of the prior year.

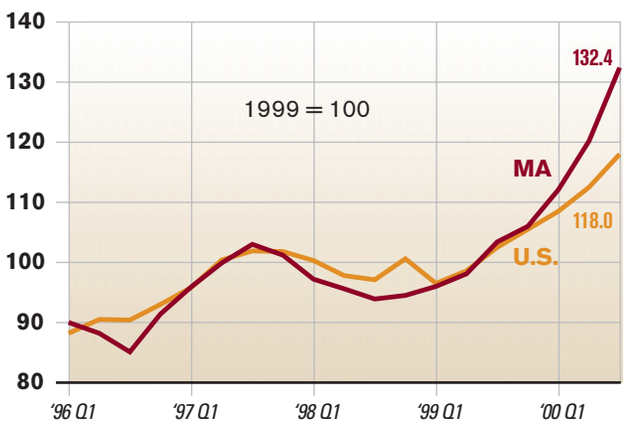
Services exports. Massachusetts also exports services that are cyclically less sensitive than manufactured products. Business services—including software—and engineering and management services have continued to grow in Massachusetts, as indicated by fourth quarter annualized em-

ployment growth rates of 8.7 percent and 5.5 percent, respectively. Employment in the state's large finance sector expanded at an annualized rate of 1.2 percent in the fourth quarter. Employment in nondepository institutions, which include money management and mutual fund companies, grew at the low annualized rate of 2.8 percent in the fourth quarter, well below the 7.8 percent annual average rate of the 1990s expansion. At first glance this deceleration is bad news. However, the fact that employment in nondepository finance has not declined in the face of an extended stock market slump actually demonstrates the robustness of this sector.

Manufacturing employment. Manufacturing employment in Massachusetts actually expanded in the fourth quarter at an annual rate of 1.0 percent, in contrast to an annualized *decline* of 2.3 percent for U.S. manufacturing employment. The difference is primarily one of the state's favorable industry mix. Two of the state's technology-producing export manufacturing industries, machinery and electronics, expanded employment throughout 2000 at an annual rate of over 5 percent. Employment in the third major technology export industry, instruments, was level in 2000.

Merchandise Export Index

Since '99 Q3 Massachusetts merchandise exports have grown at a rate roughly double the U.S. rate.

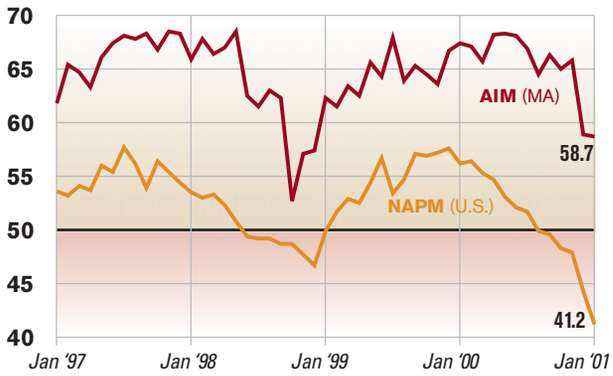


Sources: Massachusetts Institute for Social and Economic Research; U.S. Department of Commerce

Manufacturing exports. Manufacturing export growth through the third quarter of 2000 was particularly strong, although exports declined in the fourth quarter.[4] During the first three quarters, Massachusetts merchandise exports to foreign countries grew at a seasonally adjusted annual rate of nearly 30 percent, before declining at an annualized rate of 10.7 percent in the fourth quarter. Even in the face of a poor last quarter, however, fourth quarter exports from

AIM vs. NAPM Indices of Business Conditions

The Massachusetts index remains in the growth region, while the national index has been in the contraction range (below 50) since August '00.



Sources: Associated Industries of Massachusetts and the National Association of Purchasing Managers

Massachusetts were 18.1 percent above the prior year. This was nearly double the 9.4 percent growth in national merchandise exports over the same year-over-year period.

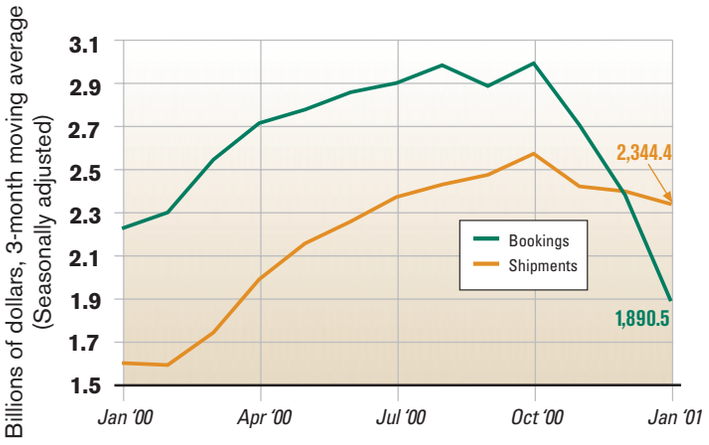
The difference between business conditions in Massachusetts and those in the nation as a whole is perhaps best illustrated by the Associated Industries of Massachusetts (AIM) and the National Association of Purchasing Managers (NAPM) indices. Based on the same set of questions, both indices indicate expansion if the index is above 50, and contraction if it is below 50. Though the AIM index is down sharply from last fall, it registered 58.7 in January 2001, still well in the growth region. In contrast, the NAPM index fell throughout 2000, from a value of 56.2 in January 2000 to 41.2 in January 2001. (In February the AIM index fell to 52.8, indicating that business confidence in Massachusetts is deteriorating.)

Given these favorable differences for Massachusetts, it is not surprising that overall employment growth here surpassed that of the nation in the fourth quarter, at an annual rate of 2.4 percent in the state versus 0.7 percent nationally. Unemployment in Massachusetts also remained at very low levels. In fact, the December unemployment rate for Massachusetts, 2.3 percent, was the lowest on record for the state. This rose slightly, to 2.7 percent, in February.

So far, employees who have lost jobs due to failing dot-com companies or other layoffs have been quickly rehired by other firms seeking their skills. It could be argued that, until recently, the effective unemployment rate for workers in technology-related companies was actually below zero. A recent study by the New England Council estimated a vacancy rate of 8.5 percent for jobs in technology-related companies, so it is not surprising that layoffs from some companies were quickly absorbed by hires from other companies. Employers may also be hoarding workers, on the

Worldwide Semiconductor Equipment Bookings and Shipments

Trends in this sector may be indicative of computer-related and communications equipment in general.



Source: Semiconductor Equipment and Materials International

assumption that the slowdown will be temporary. If the economy actually does rebound in the second half of this year, Massachusetts may be spared declines in aggregate employment.

Signs of Decline Abound

The standard warning on an investment prospectus applies as well to the Massachusetts economy at this time: The most recent economic data are mixed but contain sufficient negative signs to worry. Most worrisome for the Massachusetts economy is the deceleration in domestic investment spending on equipment and software, excluding transportation equipment, in the fourth quarter.[5]

Nominal spending for these investment goods by U.S. businesses, which grew 15.6 percent from the fourth quarter of 1999 to the fourth quarter of 2000, grew by only 3.0 percent at annual rates in the last quarter of the year.[6] So far, the state has weathered declines in this component of domestic investment spending quite well. However, the conditions that have allowed this may not be long-lived. Backlogs of unfilled orders have been substantial. In electronics, for example, unfilled orders from U.S. producers in the fourth quarter amounted to three months' worth of production. This has acted as a cushion compensating for slower growth in new orders, but the backlog is being worked down and may decline rapidly if order cancellations pick up.

In semiconductors, worldwide demand is down. The industry outlook is for this trend to continue through at least the first half of 2001 and longer if underlying investment and consumer demand do not recover. Worldwide sales of semiconductors declined in November and December, following declines in sales of computers and inventory buildups of memory chips and microprocessors by computer assemblers. Worldwide semiconductor equipment sales are also on a declining trend that began in November. Furthermore, bookings for semiconductor equipment collapsed at the end of the year, falling by 37 percent between October and January. The book-to-bill ratio for semiconductor equipment was .81 in January, indicating that production will continue to decline over the next several months.

Manufacturing of semiconductors and semiconductor equipment directly employed roughly 15,000 in Massachusetts in 1997.[7] Though this is only a fraction of employment in technology-related manufacturing, trends in this sector may be indicative of those for computer-related and communications equipment in general. Thus, what has been a favorable manufacturing industry mix for the long Massachusetts economic expansion may be unfavorable for the near-term future.

The magnitude of U.S. business investment spending for equipment and software, excluding transportation equipment, is roughly the same as consumer durable spending. This illustrates the potential impact a decline in such spending could have on Massachusetts. The decline in national consumer durable spending has pushed several states in the Midwest and the South into recession.

Energy costs are another negative impact. Though oil prices have moderated somewhat—the price of West Texas Intermediate oil declined to $29.58 in January from a peak of $34.40 in November—they are still high. Moreover, natural gas prices have exploded. The wellhead price in December nearly tripled from a year earlier, increasing 188.6 percent. The result is that Massachusetts consumers paid 18.6 percent more for fuels and utilities this past winter than the previous one. Virtually all of this increase is flowing to suppliers outside the state and country and is therefore acting like a tax increase.

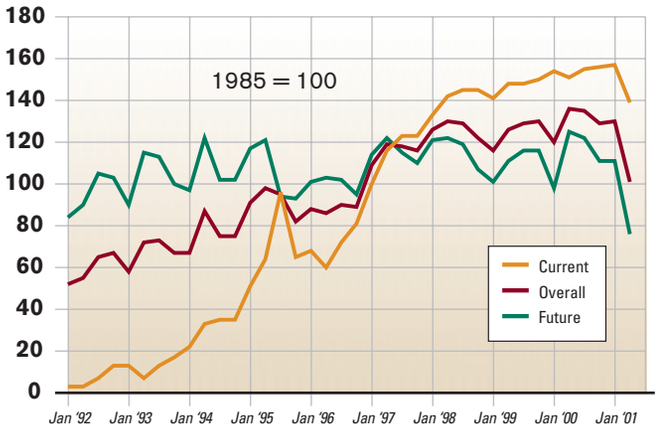
Natural Gas Wellhead Price, U.S. Average

Between December '99 and December '00 the wellhead price nearly tripled.

Source: U.S. Department of Energy

Massachusetts Consumer Confidence

Consumers are worried about future conditions.



Sources: Mass Insight and New England Economic Project

Finally, consumers are worried about future conditions. The Mass Insight/New England Economic Project Consumer Confidence Index for January fell to 101 from its reading of 130 in October. The index is constructed like the Conference Board indices for the United States and New England, and the reading for January is consistent with the Conference Board's. Like the Conference Board measures, the index is a composite of five questions comprising two subindices, a current conditions component and a future expectations component. Massachusetts households still rate current conditions as good, but the future expectations component plummeted from 111 in October to 76 in January, a recessionary level.

Households may be wrong, as they were in the fall of 1998. Recent consumer confidence figures have had a tendency over the last year to mirror technology stock markets, suggesting that households are reacting, perhaps overreacting, to daily financial and economic news. On the other hand, there are reasons for alarm. For Massachusetts, the primary concerns are declining worldwide demand for the computer, communications, instruments, and other technology equipment we supply.

Submitted March 14, 2001; Updated April 3, 2001.

1. Bonuses are typically received during the fourth or first quarters. Stock options can be realized at any time, but because of the rapid run-up in technology stocks in late 1999 and early 2000, many were apparently realized during last year's bonus season.

2. Wage rates per worker are calculated as the nominal Massachusetts withholding tax base divided by Massachusetts payroll employment.

3. 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.

4. These export data are seasonally adjusted by the author.

5. We omit transportation equipment from investment spending on equipment because this industry is concentrated in other regions of the country. Massachusetts has 2.4 percent of all U.S. manufacturing jobs, but only 0.9 percent of U.S. transportation equipment jobs.

6. Nominal—rather than real—spending is used here because rapid and steady price declines in computers and peripheral equipment, on the order of 13 percent per year, obscure the changes in investment outlays by businesses, which are, of course, in nominal dollars. Real investment spending on equipment and software excluding transportation equipment grew at an annual rate of 3.8 percent in the fourth quarter of 2000.

7. According to the 1997 Economic Census of Manufacturing, employment in semiconductor machinery manufacturing was 5,357, and employment in semiconductors manufacturing was 9,517.

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