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### Economic Currents: The State of the State Economy

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# Economic Currents



ILLUSTRATION: NAOMI SHEA

ALAN CLAYTON-MATTHEWS

**T**he Massachusetts economy has not fully caught up with the news that labor shortages are constraining growth. Real gross state product (GSP), as proxied by the Massachusetts Current Economic Index, grew at an annualized rate of 4.3 percent in the first quarter of 2000, only moderately below the 5.4 percent pace of U.S. gross domestic product (GDP). Employment-related measures over the twelve-month period ending in April bear this out. The number of employed Massachusetts residents increased by 1.3 percent, and the number of jobs in the state grew by 2.1 percent, matching the expansion-average annual rate of job growth.<sup>1</sup> Employment gains continued to outpace both population and labor-force growth, driving the unemployment rate down to 2.8 percent in April.

Furthermore, the near-term outlook is for continued demand pressure, despite the sharp correction in stock markets in March and April. The Massachusetts Leading Economic Index for April, a forecast of real GSP over the next six months, stood at 3.1 percent. The index is composed of 10 indicators, including the Bloomberg Stock Index. Weakness in the stock index was more than offset by strength in employment, labor earnings, and motor vehicle purchases. Though the leading index is indicating a continuation of above-trend growth, the 3.1 percent projection does represent moderation from earlier in the year.

# The Current and Leading Economic Indices for Massachusetts

The Massachusetts Current Economic Index for April was 127.3, up 4.4 percent from March (at annual rates), and up 3.9 percent from April of last year. The current index is normalized to 100 in July 1987, and calibrated to grow at the same rate as the Massachusetts real gross state product over the 1978–1997 period.

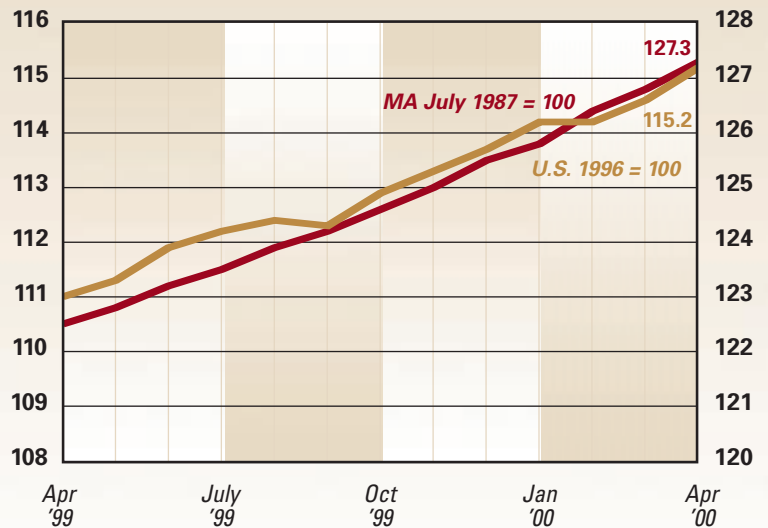
The Massachusetts Leading Economic Index for April was 3.1 percent, and the three-month average for February through April was 4.2 percent. The leading index is a forecast of the growth in the current index over the next six months, expressed at an annual rate. Thus, it indicates that the economy is expected to grow at an annual rate of 3.1 percent over the next six months. Because of monthly fluctuations in the data on which the index is based, the three-month average of 4.2 percent may be a more reliable indicator of near-term growth.

Continued growth in employment, soaring wages, and strong growth in motor vehicle purchases indicate that the Massachusetts economy is still hot. However, recent declines in stock markets, labor shortages, a leveling off in consumer confidence, and some weakness in sales tax collections suggest that growth may soon slow.

*Submitted June 2, 2000*

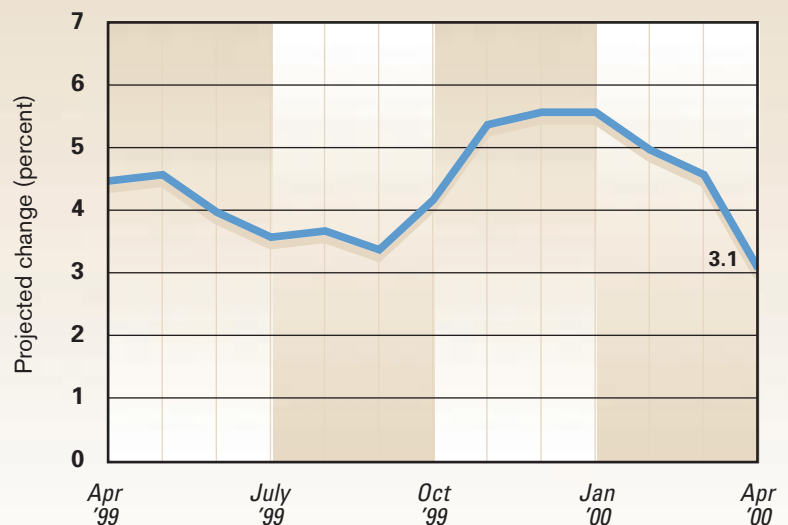
## Current Economic Index United States and Massachusetts

*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.*



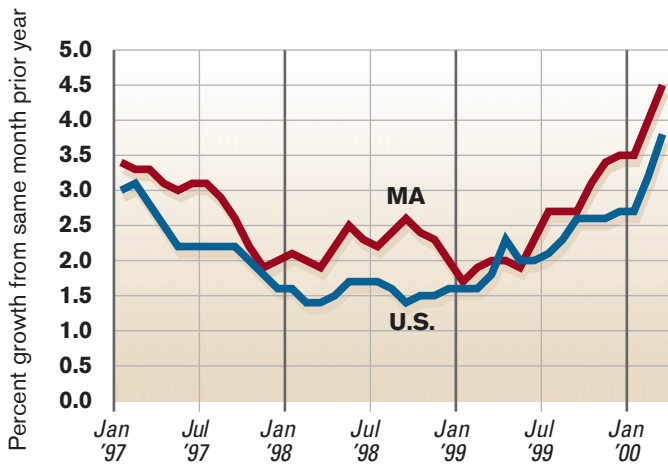
Sources: The Conference Board; University of Massachusetts; Federal Reserve Bank of Boston

## Inflation Is Breaking Out on Three Fronts

**Consumer Prices.** The continued real growth has not come without a price. That price is inflation. Given the length and strength of the state's expansion, this is no surprise. Inflation is evident in consumer prices, wage rates, and housing prices.

Consumer price inflation has been slowly accelerating in Massachusetts and the nation since the beginning of 1999. Part of the rise is a reversal of the deceleration largely attributed to the East Asian crisis in 1997–98, which resulted in lower import prices and interest rates. As the recovery in Asia proceeded during 1999, import prices and interest rates rose, working their way into higher consumer prices.

### Consumer Price Inflation



Source: U.S. Bureau of Labor Statistics

The increase in inflation since the beginning of 1999, however, has exceeded what would simply have been a return to pre-East Asian crisis conditions. In March, the year-over-year increase in consumer prices was 3.8 percent for the nation and 4.5 percent for the Boston metropolitan area. For the state, this is the highest rate of increase since 1991. A significant portion, somewhat more than one percentage point, is due directly to increases in oil prices. In March, energy costs were up 24 percent over the prior year in both Boston and the nation. Gasoline prices were up more than 50 percent.

OPEC and import prices, however, are not the sole forces behind accelerating inflation, especially in Massachusetts. Excluding food and energy, the Boston Consumer Price Index rose 3.5 percent in the year ending in March, indicating that inflation is gaining a broad-based foothold. Health care costs rose 5.2 percent during this time and will probably rise at a faster pace in the near future, as managed care providers adjust their rates upward to cover losses and operating costs. Housing costs were up by 5.4 percent and rents by 7.1 percent, the latter a reflection of the tight housing market. Perhaps the most telling indicator of core inflation is the increase in the broad services component of the Boston CPI, which rose 4.0 percent (versus 3.0 percent for the U.S.).

### Consumer Price Index, All Urban Consumers Percent Change March 1999 to March 2000

	Boston	U.S.
<b>All Items</b>	<b>4.5</b>	<b>3.8</b>
Energy	23.9	24.1
All Items Less Food and Energy	3.5	2.4
Apparel	0.1	0.3
Commodities	5.4	4.8
Durables	-0.6	-0.2
Education and Communication	0.1	1.2
Food and Beverages	2.2	2.1
Other Goods and Services	9.4	5.7
Housing	5.5	3.0
Shelter	5.3	3.1
Fuels and Utilities	9.4	4.6
Household Furnishings and Operations	3.1	0.9
Medical Care	5.2	4.0
Nondurables	7.5	6.5
Recreation	-1.6	1.1
Services	4.0	3.0
Transportation	8.3	9.3
Private Transportation	9.5	9.6
Food Away from Home	1.9	2.3
Rent of Primary Residence	7.1	3.2
Owner's Equivalent Rent, Primary Residence	5.4	2.7
Gas (Piped) and Electricity	0.1	2.3
Electricity	2.7	0.4
Utility Natural Gas Service	-3.4	7.2
Motor Fuel	53.7	52.5

U.S. is seasonally adjusted; Boston is not.

Sources: U.S. Bureau of Labor Statistics

The pace of inflation in the Boston metropolitan area is ahead of most of the rest of the nation, and in March exceeded the year-over-year growth in the 14 major metropolitan areas for which bimonthly CPI estimates are available. This is not unexpected. Massachusetts employment has grown at near the national rate during this long recovery (2.1 percent per year in Massachusetts versus 2.5 percent nationally). Since the state's population growth has been only half that of the nation, labor markets nine years into the expansion are necessarily tighter.

In April, the Massachusetts unemployment rate was only 2.8 percent, versus 3.9 percent nationally. The relationship between metropolitan area unemployment rates and consumer price inflation is in accord with a Phillips-type curve, meaning that regions with lower unemployment rates tend to have higher inflation rates.<sup>2</sup> This suggests that tight regional labor markets have a local effect on a region's core rate of inflation, which has important consequences for a region's business costs, competitiveness, and growth.

**Wage Rates.** The evidence on wage-rate growth is mixed, but a consistent pattern of acceleration is emerging. Outside of manufacturing, there are no direct, state-level measures of wage rates available, so we use measures of aggregate wages and salaries divided by payroll employment.

There are two reliable sources of data on wages and salaries paid to Massachusetts workers: wage and salary disbursements from the U.S. Bureau of Economic Analysis, and withholding taxes from the Massachusetts Department of Revenue.



## Unemployment and Inflation, Selected Metro Areas

*The pace of inflation in Boston is ahead of most of the rest of the nation and in March exceeded growth in 14 major metropolitan areas.*



The latter are converted to wages and salaries by dividing by the tax rate and adjusting for personal exemptions.

The two measures give somewhat different messages about wage inflation. According to the most recently available BEA measure, wage rates in the fourth quarter of 1999 were 7 percent higher than a year earlier. The tax measure indicates wage-rate growth of 10 percent over the same period and 11 percent in the year ending in the first quarter of 2000. It is likely that the number lies somewhere between 7 percent and 11 percent.

Another source of information on wage rate increases, based on a relatively small survey of business establishments throughout New England, is from the Federal Reserve's *Beige Book* for the Boston district. The May 3 edition reports average pay increases in the 3 percent to 5 percent annual range, but with larger increases for technology workers. The *Beige Book* also reports that signing bonuses, stock options, promotion rates, and performance-based compensation are becoming more common for professional and technical employees. The discrepancy between BEA and tax-based measures and the Fed survey may be partly explained by slower wage-rate growth outside of Massachusetts.<sup>3</sup> Furthermore, the BEA and tax-based measures include bonuses and stock options (when exercised), and include increases in weekly hours of work. Unfortunately, there are no reliable measures of hours, outside of manufacturing, at the state level.

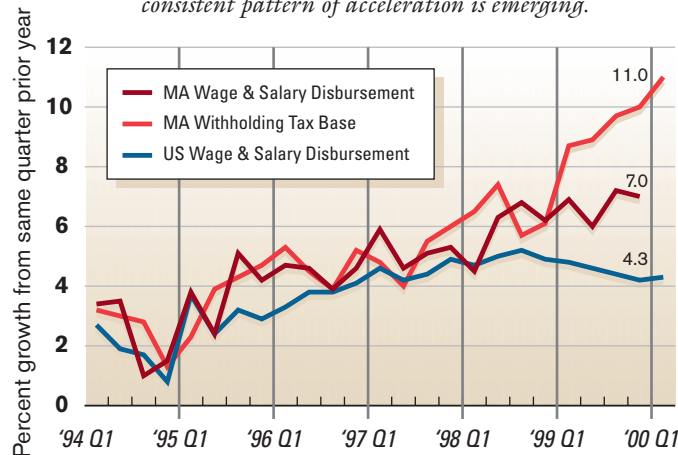
The growth in wage rates is potentially dangerous for two reasons. First, wages are rising faster in Massachusetts than nationally. (A comparable measure for the United States indicates wage-rate growth of 4.3 percent in the year ending in the first quarter of 2000.<sup>4</sup>) This means that the state's labor costs are rising faster, and for Massachusetts firms that are competing in national or international markets, profits are lower. Second, firms whose markets are primarily local can pass these costs on, resulting in higher inflation. Given the tightness in the labor market, higher inflation may result in higher wage demands that employers must accede to, initiating a wage-price spiral.

**Housing and Real Estate Prices.** Housing prices continue to accelerate. According to the Freddie Mac and Fannie Mae Repeat Sales Index, home prices in Massachusetts appreciated by 12.7 percent in the year ending the fourth quarter of 1999, versus 6.6 percent nationally. This gap has been widening for the last three years, translating directly into a widening cost-of-living gap between Massachusetts and the nation. The consequence is that net migration may fall, thereby exacerbating the shortage of workers, as both sides of the net migration equation are adversely affected. In-migration could drop, as the region's employers find it more difficult to recruit workers from other areas of the country, and out-migration could increase as Massachusetts households find other regions more attractive in terms of the cost of living.

Commercial real estate is also becoming more expensive, especially in Boston. Vacancy rates are at a 20-year low. Class A office space in the Back Bay and Cambridge, for example, has vacancy rates at only a fraction of a percent.<sup>5</sup> In March, class A (that is, prime) commercial rents in Boston were up between 12 and 15 percent, and class B commercial rents were up between 18 and 20 percent over the prior year.<sup>6</sup>

## Growth in Wages by Source of Data

*The evidence of wage-rate growth is mixed, but a consistent pattern of acceleration is emerging.*



## What Will Happen When the Bubble Bursts?

It is a widely accepted hypothesis that the run-up in technology stocks was a bubble, and that a sharp correction was due. No one knows for sure when, by how much, or even whether the full price adjustment has yet occurred. The inability to determine the value of IT firms is at the core of the problem, combined with the rapid pace of "dot.com" business formation, the frenzy over new stock issues for technology companies, the rapid growth in the venture capital market, and the relentless flow of money from households into equity markets.

Recent movements in the Bloomberg Stock Index for Massachusetts, which have paralleled the NASDAQ of late,

illustrate the gyrations in stock prices. Between October 18 of last year and this year's precipitous drop on March 6, the Bloomberg rose 94 percent. By April 14, the index had lost 38 percent of its top value. It had recovered somewhat by May 22, rising 11 percent from its April trough.

The basic valuation problems remain unresolved, so markets continue to be volatile. The most significant outcome of recent events has been to cast a specter of doubt over the viability of newly formed Internet-related firms, diminishing their supply of equity financing.

Since stock markets are still well above the levels that prevailed before the surge last fall (on May 22, the Bloomberg index was still 33 percent above its October 18 level), stock markets could experience another precipitous and sustained drop in the near future. If that happens, what will be the impact?

First, a drop would directly affect compensation in the high-paying financial sector. Employment in the security brokers and dealers industry represented 1.1 percent of total nonagricultural employment in the state in 1998 and accounted for 2.6 percent of total wages. Bonuses, a significant component of compensation in the industry, totaled roughly \$600 million for 1998. This was about 20 percent of compensation on average, and 0.5 percent of total nonagricultural wages.<sup>7</sup>

The financial sector has also been fast growing, with average annual employment growth of 10.5 percent from 1980 to 1998. Bonuses would suffer in a bear market, and employment growth would decline. After the 1987 stock market crash, employment growth in the sector was stagnant for a year before resuming its trend rate of growth. If the industry were to stop hiring and bonuses were trimmed by half, the effect would be a reduction of a fraction of a percent of GSP growth. This is small, but significant.

A second, but probably larger, impact would be through what economists call the "wealth effect" of household asset

values on consumer spending. Theory says that some portion of consumer spending derives from household wealth, in addition to consumer demand from income. Economists have estimated that the long bull market has added one percentage point to the nation's annual GDP growth via the wealth effect. There does appear to be a link between stock prices, consumer confidence, and consumer spending as measured by the Bloomberg Stock Index, consumer confidence in New England, and sales taxes.<sup>8</sup> There are already anecdotes about a softening in the demand for high-end homes in the wake of the sharp market dip in March and April.

A third impact is a reduction in investment flows to start-ups, especially for Internet-related firms. Many such firms are not yet profitable and rely on venture capital or new stock offerings for cash flow. In a sustained downturn of high-tech stocks, these firms may not be able to meet their payrolls and may be forced to drastically downsize, be acquired by cash-rich firms, or fail outright.

### The Silver Lining

So far, these impacts have been minimal, though the outlook for equity markets is still uncertain and risky. The silver lining in a near-term stock market downturn—if it is concentrated in those stocks that have reached unsustainable valuations, and if it is limited to bursting the bubble—is that it couldn't happen at a better time. Downtown office space for expansion of the finance industry is virtually unavailable, consumer demand is outstripping the capacity of the domestic economy to supply it, and employers across the state have unfilled vacancies for IT positions.

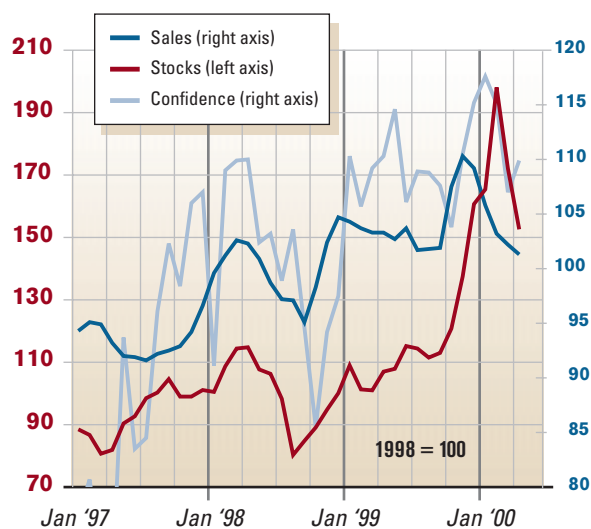
A moderate stock market downturn, if it restored a slower and steadier pace of equity price appreciation, would actually help solve these problems. Once again, as with the Asian crisis, the run of luck we have had in this expansion will turn bad news into good. The main price to pay when a bubble is burst—aside from reallocating wealth to those who jumped ship at the right moment—is that it reveals what was, in hindsight, a misallocation of resources. In this case, too many resources have been devoted to discovering new uses of the Internet and perhaps buying too many oversized houses and automobiles. Fortunately, the hardware, labor, and real estate released by failing start-ups can be easily reallocated to productive firms.

### Manufacturing Exports Are Back on Track

Employment in the manufacturing sector declined by 0.7 percent in the year ending in April. Small declines were spread over most industries, with the largest percentage declines in apparel, transportation equipment, and computers. Most employment declines are consistent with stable or growing output and productivity gains.

Semiconductor equipment manufacturers are doing well, as there is a large backlog of orders for re-tooling driven by new manufacturing technologies. The SEMI book-to-bill index for North American manufacturers in March was 1.42, indicating that future shipments are expected to

## Stocks, Spending, and Consumer Confidence



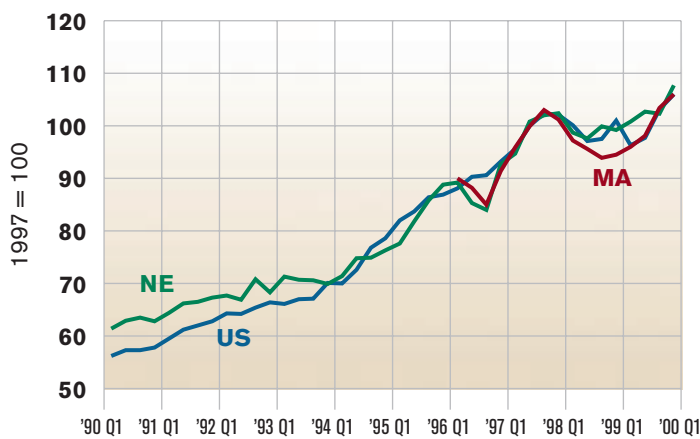
Sources: Bloomberg L.P.; Conference Board; MA Department of Revenue; Bureau of Labor Statistics; author's calculations. Note: Stock prices and the sales tax base are in real dollars, using the U.S. CPI-U as the deflator.

crease. Massachusetts manufacturers such as Helix Technologies are relying on maximum overtime in an attempt to keep the backlog from growing.

The decline in exports associated with the East Asian crisis is over, and we can begin to measure impact. Merchandise exports from Massachusetts grew at an average annual rate of 8.2 percent (roughly \$1 billion per year) from 1992 to 1997. In terms of the overall impact on the state's economy over this time, merchandise exports have been adding about one-third of a percentage point to the economy's annual rate of GSP growth. The decline in merchandise exports in 1998, largely attributable to the East Asian crisis, subtracted between one-half and two-thirds of a percentage point from GSP growth, and the recovery in Asia the following year added nearly one-half a percentage point.<sup>9</sup>

## Merchandise Export Index

*The decline in exports associated with the East Asian crisis is over.*



Quarterly data for Massachusetts are available beginning in 1996, and for the United States and New England in 1990.

## The Fed to the Rescue

After reducing interest rates in the fall of 1998 in response to the financial turmoil following the collapse of the Russian ruble, the Fed raised rates six times between June 1999 and May 2000. This increased the target federal funds rate by 175 basis points. So far, this has had little apparent impact on the U.S. or Massachusetts economies, aside from a very moderate reduction in housing permits. Partly, this is because the first 75 basis points merely offset the earlier reductions. Also, there is a lag between the time interest rates change and their effects are felt. This lag makes Fed policy a crude tool—like driving a car with a very loose steering wheel—but it is the best tool available to nudge the U.S. economy.

Inflationary pressures are threatening to do long-term damage to the Massachusetts economy. Increases in the cost of labor (in excess of productivity gains) and the cost of living are slowly pricing Massachusetts out of national business investment and labor markets. It is important to stop the growing gaps between state and national wage rates

and home prices, as these prices are “sticky” downward. It would take time to erase price differentials, because Massachusetts would have to wait until the rest of the country's wages and home prices caught up. During this time the state would lose investment and migration flows to other regions. As we know from the last cycle, this process could take several long and painful years to reverse itself.

Fed action to slow the economy is in the state's interest. The medicine is not tasty. Higher interest rates will raise business and credit costs and lower household wealth. If the Fed missteps and tightens too much, the ensuing recession will disproportionately hurt minorities and low-skilled workers, who had to wait several years for the expansion to lift them into jobs. Nevertheless, the risks are worth taking, because the alternative is a sure stagnation.

*Submitted May 22, 2000*

1. The current expansion in Massachusetts began in June 1991, the trough of the Massachusetts Current Economic Index.
2. The data in the graph consist of unemployment rates and year-over-year changes in the CPI in the 14 metropolitan areas for which bimonthly CPIs are available. The unemployment rates are for March and are not seasonally adjusted. Rates of inflation for Chicago, Los Angeles, New York, Boston, Cleveland, Dallas, and Washington, D.C., are calculated using data for March; inflation rates for other metropolitan areas use February data. The correlation between unemployment rates and inflation is -.62.
3. That wage rates in New England are growing more slowly outside of Massachusetts is a hypothesis that cannot be checked by the *Beige Book* for disclosure—and sample size—reasons. However, the BEA-based wage rate measure is available for all states and, based on this measure, Massachusetts has the fastest growth in New England in the year ending in the fourth quarter.
4. The U.S. measure is U.S. wage and salary disbursements divided by U.S. employment. This measure is not the same as the widely quoted employment cost index, but is comparable in definition to the state measures used.
5. Andrew Hoar, President of CB Richard Ellis/Whittier Partners, quoted vacancy rates for class A office space of .41 percent in the Back Bay and .35 percent for Cambridge (at the Greater Boston Real Estate Conference, April 25, 2000).
6. Ibid.
7. The data for security brokers and dealers are for 1998, and are from the Division of Employment and Training's Unemployment Insurance “202” reports. Bonuses for 1998 are estimated as the difference between wages for the 4<sup>th</sup> quarter of 1998 and the 1<sup>st</sup> quarter of 1999, less wages for the 2<sup>nd</sup> and 3<sup>rd</sup> quarters of 1998.
8. Consumer confidence for New England is from the Conference Board. The sales tax base is constructed from tangible property and services sales tax revenues from the Massachusetts Department of Revenue and converted into a tax base by adjusting for changes in the tax base and rates.
9. The methodology and calculations are available from the author upon request.

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