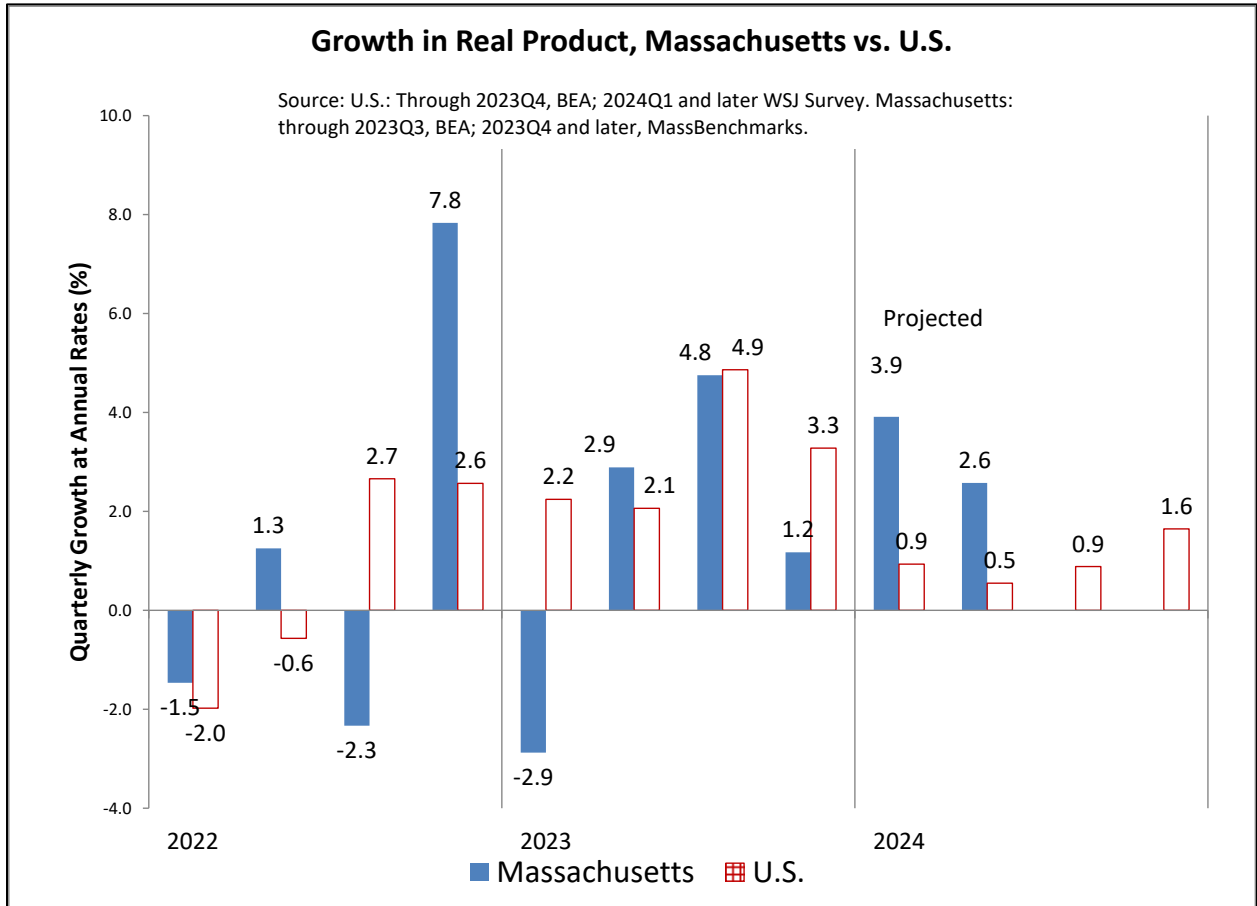


Massachusetts Current and Leading Economic Indices

The Massachusetts Current Economic Index for December was 244.7, up 21.2 percent from November (at annual rates), and up 4.3 percent from December 2022. The current index is normalized to 100 in July 1987 and is calibrated to grow at the same rate as Massachusetts real gross domestic product over the 1978–2022 period.



In the fourth quarter of 2023, Massachusetts real gross state product (GDP) increased at an annual rate of 1.2 percent, according to MassBenchmarks, while U.S. GDP increased at a 3.3 percent annual rate, according to the U.S. Bureau of Economic Analysis (BEA). According to the BEA, in the third quarter of 2023, Massachusetts GDP grew at an annual rate of 4.8 percent while U.S. GDP grew at an annual rate of 4.9 percent. In the first and second quarters of 2023 the BEA estimates that Massachusetts GDP declined by 2.9 percent and grew by 2.9 percent respectively, while U.S. GDP grew at 2.2 percent and 2.1 percent respectively.

The performance of the Massachusetts economy was substantially weaker than that of the U.S. in the fourth quarter. The weakness was broad based, with indicators of employment, wage and salary income, and goods spending weaker in the state than in the nation. Part of the difference in performance may be due to more impediments to labor force growth in Massachusetts than the U.S., but it may also be that Massachusetts has been more sensitive to higher interest rates,

particularly in technology and related services, which relies on venture capital funding and business spending for information services, and in housing, where inventory is tight.

Employment and Earnings Growth at Annual Rates, Massachusetts and the U.S.				
	Payroll Employment		Wage and Salary Income /1	
	MA	US	MA	US
2023Q4	0.8%	1.3%	-9.6%	4.6%
2023q3	1.7%	1.5%	6.0%	5.6%
22Q4 to '23Q4	1.9%	1.8%	5.0%	6.3%
Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; MassBenchmarks.				
1. Massachusetts wage and salary income for 2023Q4 is estimated by MassBenchmarks.				

In the fourth quarter, payroll employment grew at an annual rate of 0.8 percent in Massachusetts versus 1.3 percent in the U.S. This followed annualized third quarter payroll employment growth of 1.7 percent in Massachusetts versus 1.5 percent in the U.S. Relative to the fourth quarter of 2022, payroll employment in the fourth quarter of 2023 was up 1.9 percent in Massachusetts and 1.8 percent in the U.S. Weakness in Massachusetts employment growth is noteworthy in the business services sector, which usually grows faster than overall employment, but fell in the fourth quarter from the third quarter. Payroll employment in this

sector grew less than 0.5 percent from December 2022 to December 2023. From December 2021 to December 2022, this sector grew over 4 percent.

Wage and salary income in Massachusetts in the fourth quarter, as measured by seasonally adjusted personal income withholding taxes, declined at an annual rate of 9.6 percent from the third quarter, while in the U.S., wage and salary income grew at a 4.6 percent annual rate. The decline in Massachusetts was likely due to a much weaker than usual bonus season. Bonuses – largely from the financial sector – usually result in fourth quarter personal income withholding revenues 12.5 percent above trend relative to the third quarter, but in the fourth quarter of 2023, these withholding revenues only grew 9.2 percent from the third quarter. For the fourth quarter, withholding revenues fell short of the Massachusetts Department of Revenue’s benchmark target by 2.2 percent. This suggests that after factoring out the effect of the decline in bonuses, wage and salary income growth in Massachusetts was significantly weaker than for the U.S. in the fourth quarter, at perhaps an annualized rate of 2 to 3 percent.

There is growing evidence that the labor market is weakening in Massachusetts. The official headline U-3 unemployment rate in Massachusetts rose to 3.2 percent in December from 2.6 percent in September, while in the U.S. it fell to 3.7 percent in December from 3.8 percent in September. Given similar labor market conditions, the unemployment rate in Massachusetts tends to be about 0.7 percentage points lower than in the U.S. due to higher levels of educational attainment, so the difference in the Massachusetts unemployment rate relative to the U.S. in December does not appear to be remarkable. However, the unemployment rate (seasonally adjusted by MassBenchmarks) from the Current Population Survey (CPS) for Massachusetts rose from 2.9 percent to 6.0 percent from September to December, much higher than the headline U-3 rate. What accounts for this discrepancy?

Unemployment Rates, Massachusetts and the U.S.				
	U-3 Rate		U-6 Rate	
	MA	US	MA	US
Dec-23	3.2%	3.7%	8.0%	7.1%
Sep-23	2.6%	3.8%	5.4%	7.0%
Dec-22	3.7%	3.5%	8.5%	6.5%
Sources: U.S. Bureau of Labor Statistics/ MassBenchmarks.				

These official U-3 rates for states from the U.S. Bureau of Labor Statistics (BLS) are based on a model that smooths the unemployment rates from the Current Population Survey (CPS). The CPS is a small monthly sample of residents, so the monthly unemployment series from the CPS tends to be noisy. The objective of the BLS model is to take the noisy monthly series and separate the signal from the noise. Occasionally

the model misinterprets real changes in the unemployment rate as noise, and this may be happening now. Smoothing models tend to lag real changes in trends.

The broader U-6 measure of unemployment, which counts workers who work part-time but want full-time jobs (involuntary part-time workers), and persons who have recently given up looking for work but have looked for work in the past year (marginally attached workers), as unemployed, rose to 8.0 percent in Massachusetts in December from 5.4 percent in September. In the U.S. the U-6 rate was 7.1 percent in December and 7.0 percent in September. Both the Massachusetts and U.S. estimates are from the CPS and are seasonally adjusted (Massachusetts seasonally adjusted by MassBenchmarks). The rise in Massachusetts was not due to a rise in involuntary part-time work or in marginally attached workers, but from the rise in unemployment from the U-3 labor force concept.

The rising CPS-based unemployment rates for Massachusetts may reflect noise rather than signal, but they are consistent with weaker employment growth and slower wage and salary income growth.

Also, the number of unemployment insurance first payments in Massachusetts appears to be rising, averaging 15 percent more in the second half of 2023 than in the first half, on a seasonally adjusted basis.

Seasonally adjusted current dollar spending on goods subject to the state regular sales tax and motor vehicle sales taxes were up 12.7 percent on an annualized basis in the fourth quarter over the third quarter, following a 19.4 percent annualized decline in the third quarter. Spending in the fourth quarter was down 3.5 percent from the fourth quarter of 2022, reflecting a weakness in consumer and business spending on these goods. This weakness may partly reflect the low level of home purchases during 2023. Spending on home furnishing and home improvement materials often accompany purchases of new and existing houses. In contrast, national seasonally adjusted current dollar consumer spending on goods grew 1.9 percent on an annualized basis in the fourth quarter and 3.5 percent from the fourth quarter of 2022 to the fourth quarter of 2023. For national consumer spending on durable goods, the corresponding growth rates were 1.0 percent in the fourth quarter and 3.8 percent from the fourth quarter of 2022 to the fourth quarter of 2023.

CPI-U Inflation, Boston Metro and the U.S.				
	All Items		Core	
	BOS	US	BOS	US
2023Q4	3.5%	2.8%	2.5%	3.4%
2023Q3	2.2%	3.6%	1.8%	2.8%
22Q4 to '23Q4	2.3%	3.2%	3.2%	4.0%

Sources: U.S. Bureau of Labor Statistics, CPI-U; Core inflation excludes food and energy. For Boston, the CPI is available for odd months only -- January, March, etc. Even months are interpolated. Boston seasonally adjusted by MassBenchmarks.

Consumer prices generally have been rising more slowly in the Boston metropolitan area than in the U.S. (all metro areas). Although the “all items” Boston area inflation rate exceeded that of the U.S. in the fourth quarter, 3.5 percent for Boston versus 2.8 percent for the U.S., the year-over-year – fourth quarter 2022 to fourth quarter 2023 – inflation rate was lower for Boston, 2.3 percent versus 3.2 percent for the U.S. Core price inflation has continued to be lower in the Boston area. In the

fourth quarter, these rose 2.5 percent in Boston versus 3.4 percent for the U.S.; and 3.2 percent from the fourth quarter 2022 to the fourth quarter 2023 in Boston versus 4.0 percent from the U.S.

The “long and variable lags” due to the Fed’s interest rate policy appear to be biting on the Massachusetts economy, perhaps to a greater degree than nationally, at least for now. One sign of this is in state tax revenues, which have been coming in below expectations for several months. In a forecast of state tax revenues for the state’s annual consensus revenue estimation process, one economist’s model (Alan Clayton-Matthews) estimated that the direct impacts of higher real interest rates would lower fiscal year 2024 state tax revenues by about \$500 million in the last 8 months of the 2024 fiscal year, and by \$1.3 billion in fiscal year 2025.

The outlook of the Wall Street Journal survey of economists is for U.S. GDP growth to slow in the first half of this year to an annualized rate of 0.9 percent in the first quarter and 0.5 percent in the second quarter, followed by somewhat faster growth in the second half of this year, as the Fed is expected to begin to cut interest rates in the spring. It is likely that Massachusetts will continue to grow slowly in the first half of this year. The leading index is suggesting a sharp pickup in growth in the first quarter, driven by technical factors – including a strong stock market and a positive cyclical adjustment. We believe the leading index is sending an erroneous signal.

The current and historic quarterly estimates for state domestic product growth include adjustments for changes in productivity growth. These adjustments are estimates of the quarterly deviations from the 1978-2022 trend in the growth of the ratio of output to employment. In the fourth quarter of 2024, these adjustments subtracted 0.5 percent from growth. In the third quarter of 2023, these adjustments added 0.8 percentage points to growth. In the first quarter of 2024 and the second quarter of 2024, these adjustments are expected to subtract 0.5 percentage points from growth.

The current and historical quarterly estimates also include “cyclical” adjustments, as the relationship between the growth in the current indicators and that of gross domestic product

changes over the course of the business cycle. In the fourth quarter of 2024, these adjustments added 1.9 percentage points to growth. In the third quarter of 2023, these adjustments added 0.8 percentage points to growth. In the first quarter of 2024 these adjustments are expected to subtract 1.0 percentage points from growth, and in the second quarter of 2024 to add 0.7 percentage points to growth.

Several recent months of the current index are revised each release. These revisions are a result of the statistical method used to create the index, as well as revisions in the underlying indicators.

All the indicators in the current index refer to Massachusetts. The current index is composed of four indicators: nonagricultural employment, withholding taxes, sales taxes, and the unemployment rate. Withholding taxes and sales taxes are deflated by the U.S. consumer price index for all urban consumers, excluding food and energy.

For a description of the methodology used to construct this index, see: Alan Clayton-Matthews and James H. Stock, "An application of the Stock/Watson index methodology to the Massachusetts economy", *Journal of Economic and Social Measurement*, vol. 25 (1998/1999), pp. 183-233.

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