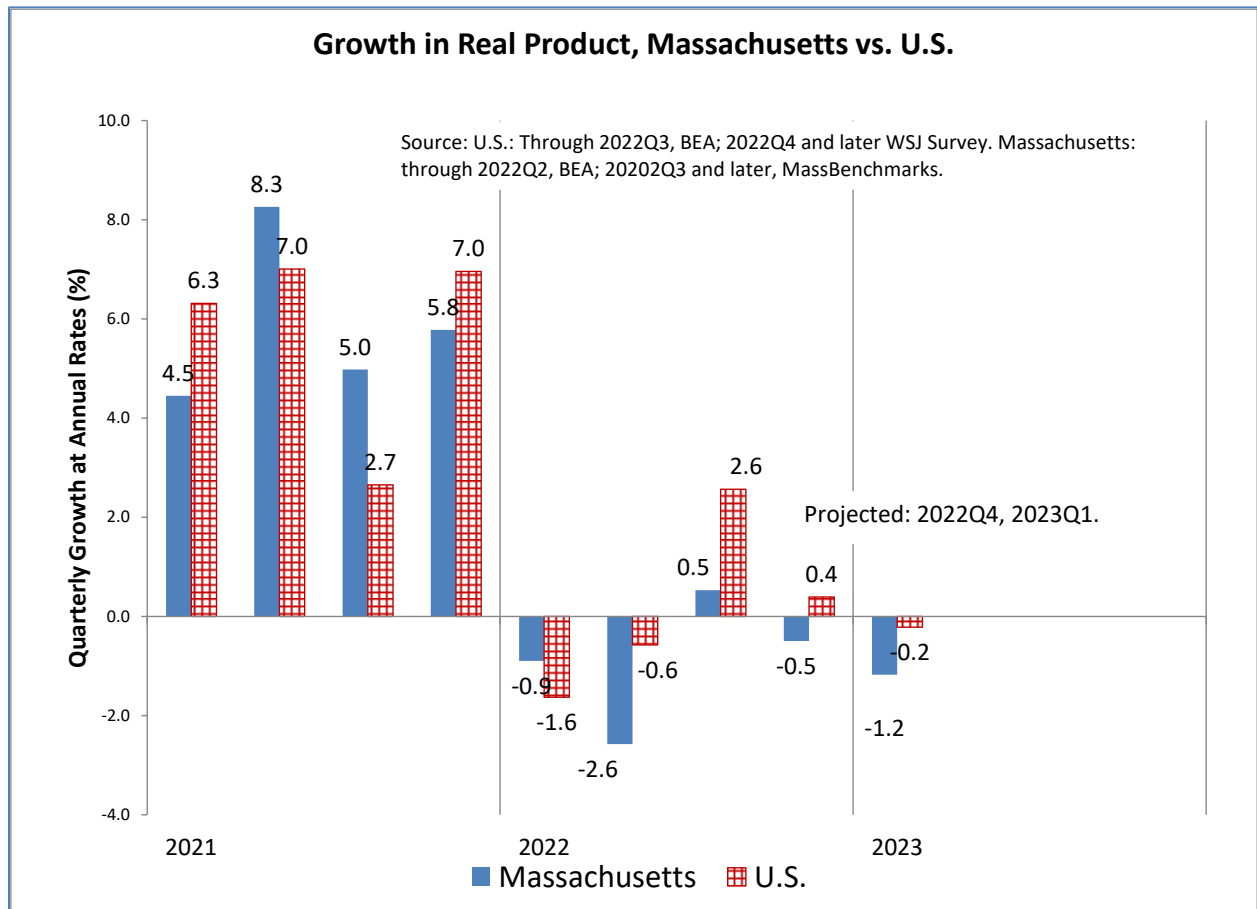


Massachusetts Current and Leading Economic Indices

The Massachusetts Current Economic Index for September was 234.4, up 3.2 percent from August (at annual rates), and up 8.0 percent from September 2021. The current index is normalized to 100 in October 1987 and is calibrated to grow at the same rate as Massachusetts real gross domestic product over the 1978–2021 period.



In the third quarter of 2022, Massachusetts real gross domestic product (GDP) increased at a 0.5 percent annualized rate, according to MassBenchmarks, while U.S. GDP increased at a 2.6 percent annualized rate according to the U.S. Bureau of Economic Analysis (BEA). In the second quarter of this year, the BEA estimates that Massachusetts GDP decreased at an annual rate of 2.6 percent while the U.S. declined at a 0.6 percent rate. In the first quarter of this year, the BEA’s annualized growth estimates showed declines of 0.9 percent for Massachusetts and 1.6 percent for the U.S. The Commonwealth’s growth has lagged that of the U.S. in three of the last four quarters.

Despite the apparent improvement in output growth in the third quarter, the Massachusetts economy appeared to slow along other dimensions, as job growth decelerated, the labor force shrunk (in absolute terms and as a share of the population), and weaknesses emerged in the sectors most affected by rising interest rates, most notably housing. Inflation does not appear to

be accelerating but remains well above the target levels set by the Fed. Consumer spending has remained robust, but as inflation continues to undermine household wage gains and erode the savings stockpiles accumulated during the pandemic, spending is likely to slow going forward. The Massachusetts economy may be more vulnerable than that of the U.S. for reasons discussed below.

Employment and Earnings Growth at Annual Rates, Massachusetts and the U.S.				
	Payroll Employment		Wage and Salary Income /1	
	MA	US	MA	US
2022Q3	2.2%	3.1%	3.3%	7.9%
2022Q2	3.7%	3.3%	3.9%	6.9%
21Q3 to '22Q3	3.8%	4.0%	6.7%	8.6%
Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; MassBenchmarks.				
1. Massachusetts and U.S. wage and salary income for 2022Q3 is estimated by MassBenchmarks.				

Payroll employment growth in both the state and the nation decelerated over the last year. Compared to the third quarter of last year, there were 3.8 percent more jobs in Massachusetts in the third quarter of 2022. However, job growth in the second quarter slowed to a 3.7 percent annual rate and slowed further in the third quarter (2.2 percent). The U.S. followed a similar pattern with 4.0 percent job growth year over year, 3.3 percent in the second quarter, and 3.1 percent in the third quarter. This deceleration may be related to the shrinking pool of available workers as the recovery from the COVID downturn has

progressed to its later stages.

Unemployment Rates, Massachusetts and the U.S.				
	U-3 Rate		U-6 Rate	
	MA	US	MA	US
Sep-22	3.4%	3.5%	5.9%	6.7%
Jun-22	3.7%	3.6%	5.6%	6.7%
Sep-21	5.1%	4.7%	8.7%	8.5%
Sources: U.S. Bureau of Labor Statistics/ MassBenchmarks.				

In September the unemployment rate in Massachusetts stood at 3.4 percent, down from 5.1 percent in September 2021. More recently, the declining unemployment rate has been in part the result of a declining workforce – in September 2022 the labor force was smaller than in September 2021 – underscoring the challenge presented by a scarcity of available workers going forward. The

U.S. unemployment rate stood at 3.5 percent in September, down from 4.7 percent in September 2021. In September, the number of payroll jobs nationally exceeded the pre-COVID peak of February 2020 by 0.3 percent. Massachusetts remains 1.3 percent below the February 2020 peak.

Inflation, consumer spending, and interest rates have affected sectors of the economy differently. Rising mortgage rates have dramatically slowed transactions in the housing market and consumer spending on household goods like furniture and appliances that are associated with home buying and new household formation.

At the same time, consumer spending on services such as travel, leisure and hospitality has increased robustly. Through August, real U.S. consumer spending was still increasing, with increases in services more than offsetting declines in real goods spending. In Massachusetts, nominal spending on goods subject to the state sales tax and motor vehicle tax fell in the third quarter at a 5.1 percent annual rate, but this followed very sharp growth in the second quarter. Relative to the third quarter of 2021, such spending in Massachusetts was up 7.8 percent in the third quarter of 2022, outstripping inflation.

Technology, banking, and finance have been hurt by rising interest rates and asset value declines. With a concentration in information technology and biotechnology, Massachusetts is especially vulnerable to the effect of higher interest rates on the supply of venture capital and private investment. Several tech companies have announced hiring slowdowns, pauses, or layoffs and the tech-heavy NASDAQ and Massachusetts Bloomberg stock indexes have both performed significantly worse than the S&P 500 and the Dow Jones indexes.

Massachusetts wage and salary income growth has lagged that of the U.S. and has fallen far short of inflation on a per-worker basis. The U.S. Bureau of Economic Analysis reported annualized nominal wage and salary income growth in Massachusetts in the second quarter of only 3.9 percent, relative to U.S. wage and salary growth of 6.9 percent. This trend appears to have continued in the third quarter. Based on state withholding taxes, MassBenchmarks estimates that Massachusetts wage and salary income grew at a 3.3 percent annualized rate in the third quarter, as compared to 7.9 percent for the for U.S. (BEA’s estimate of U.S. wage and salary growth in the third quarter will be released Friday, along with revisions to the second quarter estimates.) On an average per-payroll-worker basis, Massachusetts nominal wage and salary income grew at a meager 0.2 percent rate in the second quarter and 1.1 percent in the third quarter.

CPI-U Inflation, Boston Metro and the U.S.				
	All Items		Core	
	BOS	US	BOS	US
2022Q3	6.0%	5.7%	4.6%	6.4%
2022Q2	8.1%	10.5%	4.5%	6.6%
21Q3 to '22Q3	7.6%	8.3%	4.9%	6.3%
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.				

The Boston CPI-U price index in the third quarter increased 7.6 percent from the third quarter of 2021 for all items and 4.9 percent excluding food and energy. The corresponding all metro areas CPI-U inflation rate for the U.S. was 8.3 percent for all items and 6.3 percent excluding food and energy.

During the third quarter overall (for all items) prices in the Boston metropolitan area rose 6.0 percent on an annual basis from the second

quarter according to the Bureau of Labor Statistics’ CPI-U inflation measure. Excluding food and energy, so-called core prices increased at a 4.6 percent annual rate in the third quarter from the second quarter. Second quarter prices in the Boston area for all items rose by 8.1 percent (annualized) from the first quarter, while core prices rose by 4.5 percent (annualized). The deceleration in inflation from the second to third quarters for all items was driven primarily by decreases in gasoline and other energy prices.

For the U.S., overall prices rose 5.7 percent (annualized) in the third quarter from the second quarter and 10.5 percent in the second quarter from the first quarter, according to the BLS CPI-U for all cities. Corresponding core inflation was 6.4 percent in the third quarter from the second, and 6.6 percent in the second quarter from the first quarter.

This pattern of price changes suggests that inflation in the third quarter was not accelerating, although it was still well above the target inflation rate goal of the Fed. Cutbacks in oil production and probable shortages of natural gas and other energy this fall and winter could increase the rate of inflation once again.

The outlook for the rest of this year and for the first quarter of 2023 calls for slower growth, with a real possibility of outright declines in output. Economists who contributed to the Wall Street Journal's October survey of forecasters on average projected U.S. real annualized GDP growth of 0.4 percent in the fourth quarter and a decline of 0.2 percent in the first quarter of 2023, with the probability of a recession by October 2023 of 63 percent. The MassBenchmarks leading index is projecting annualized rates of decline in state GDP of 0.5 percent in the fourth quarter and 1.2 percent in the first quarter of next year, respectively.

While these projections are speculative and based on a limited set of leading economic indicators, given the state's older demographic profile (holding back labor force growth) and its exposure in the interest-sensitive technology sector, the risks to the state's economic outlook are weighted towards the downside.

The current and historical quarterly estimates for state domestic product growth include adjustments for changes in productivity growth. These adjustments are estimates of the quarterly deviations from the 1978-2021 trend in the growth of the ratio of output to employment. In the third quarter of 2022 these adjustments subtracted 3.1 percentage points from growth. In the second quarter of 2022 these adjustments subtracted 6.3 percentage points from growth. In the first quarter of 2022 these adjustments subtracted 8.6 percentage points from growth. In the fourth quarter of this year and the first quarter of 2023 these adjustments are expected to subtract 2.5 percent and 1.5 percent from growth respectively.

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 third quarter of 2022 these adjustments did not affect growth. In the second quarter of 2022 these adjustments subtracted 2.4 percent points from growth. In the first quarter of 2022 these adjustments subtracted 3.6 percentage points from growth. These adjustments are expected to add 2.0 percentage points to growth in the fourth quarter of this year and 2.0 percentage points to growth in the first quarter of 2023.

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. The employment and the unemployment rate are through September, and the withholding and sales taxes are through August.

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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