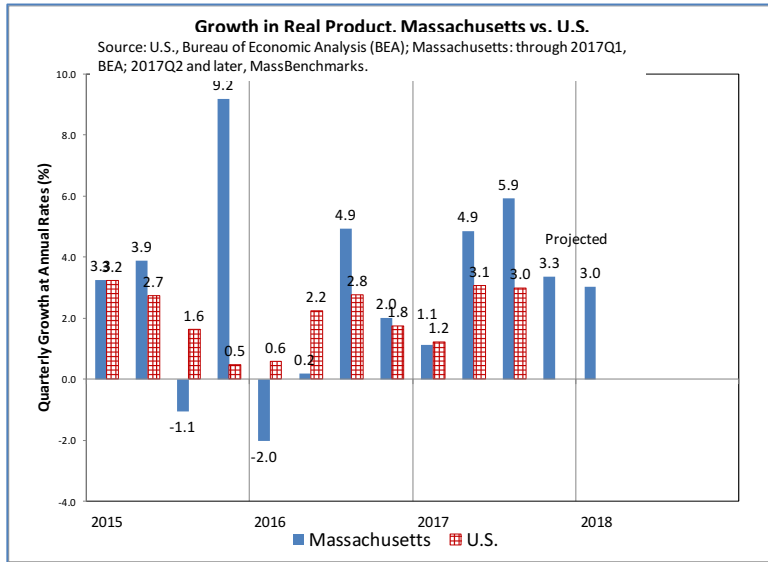


Massachusetts Current and Leading Economic Indices

The Massachusetts Current Economic Index for September was 2010.1, up 5.8 percent from August (at annual rates), and up 4.8 percent from September 2016. 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 1978–2016 period. Unless otherwise specified, all growth rates below are expressed at annual rates.



The Massachusetts Leading Economic Index for September was 3.0 percent, and the three-month average for July through September was 3.1 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 annualized rate of 3.1 percent over the next six months (through March 2018) if productivity were at recent average rates.

Massachusetts real gross domestic product grew 5.9 percent in the third quarter of 2017 according to *MassBenchmarks*. Nationally, U.S. real gross domestic product grew 3.0 percent, according to the U.S. Bureau of Economic Analysis (BEA). In the second quarter *MassBenchmarks* estimates that the state economy grew 4.9 percent, versus 3.1 percent for the U.S. (from the BEA). In the first quarter the BEA estimated that Massachusetts grew 1.1 percent versus 1.2 percent for the U.S.

Employment and Earnings Growth at Annual Rates, Massachusetts and the U.S.

	Payroll Employment		Wage and Salary Income /1	
	MA	US	MA	US
2017Q3	2.1	1.2	10.5	3.8
2017Q2	1.0	1.3	3.5	4.4
16Q3 to '17Q3	1.5	1.4	5.8	2.7

Sources: U.S. Bureau of Labor Statistics; U.S. Bureau of Economic Analysis; Mass. Department of Revenue/*MassBenchmarks*.

1. Massachusetts is derived from state withholding revenues for 2017Q3.

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Wage and salary income in the Massachusetts, as estimated from state withholding tax revenues, grew a strong 10.5 percent, while *MassBenchmarks* projects a 3.8 percent growth for wage and salary income for the nation. (The BEA will release its estimate on Monday.)

Over the year, the state and the nation’s job growth were on par, with employment growing 1.5 percent in Massachusetts over the third quarter of last year versus 1.4 percent growth for the U.S. Wage and salary income growth in the state was 5.8 percent from the third quarter of last year, significantly stronger than the estimated 2.7 percent over the year growth for the nation.

Unemployment Rates, Massachusetts and the U.S.				
	U-3 Rate		U-6 Rate	
	MA	US	MA	US
Sep-17	3.9	4.2	7.6	8.3
Jun-17	4.3	4.4	7.7	8.6
Sep-16	3.3	4.9	7.6	9.7

Sources: U.S. Bureau of Labor Statistics/ *MassBenchmarks*.

Labor markets appear to be nearly back to full employment levels. The unemployment rate in Massachusetts in September was 3.9 percent versus 4.2 percent for the U.S. The broader U-6 measure of unemployment was 7.6 percent in Massachusetts versus 8.3 percent for the U.S. Despite these low unemployment rates and anecdotes about a shortage of workers, employment growth

continues unabated without clear signs of wage rate pressures. Perhaps the rapid growth in wage and salary income in Massachusetts is signaling the beginning of an acceleration in wage rates, but it’s too early to tell. Tax revenues can fluctuate from quarter to quarter for a variety of reasons that do not reflect an underlying trend.

As measured by regular sales tax receipts and motor vehicle sales taxes, spending in the state has been surprisingly weak given strong income growth and the surging stock market. Spending on these taxable items declined in the third quarter by 3.3 percent, although that decline was the result of what could simply be a short-run decline or pause in automobile sales. Nevertheless, this spending grew only 1.7 percent from the third quarter of last year.

The state’s economy is expected to continue to grow at a moderately robust pace. The leading index is projecting real state product growth of 3.3 percent in the fourth quarter and 3.0 percent in the first quarter of next year.

The 10 indicators that comprise the leading index usually do not all move in tandem. Typically, some may indicate an expectation of faster than average growth, while at the same time others may indicate an expectation of slower than average growth. The following table accounts for the contributions of each towards faster or slower growth than the recent underlying trend of 1.4 percent. The index value is their sum.

In September, five indicators contributed to a forecast of above-trend growth: total nonagricultural employment, withholding taxes, the unemployment rate, consumer confidence, and the Bloomberg stock index for Massachusetts. Two indicators contributed to average-trend growth: sales taxes, and initial unemployment claims. Three indicators contributed to below-

trend growth: the interest rate spread between 10-year and 3-month U.S. Treasury securities, construction employment, and motor vehicle sales taxes.

Contributions of Indicators to the Leading Index		
	September	July-September
Trend	1.4	1.4
Total Nonagricultural Employment	1.0	1.3
Withholding Taxes	0.7	0.5
Sales Taxes	0.0	0.0
Unemployment rate	0.2	0.1
Consumer Confidence	0.1	0.2
Interest rate spread (10-year less 3-month)	-0.1	-0.1
Bloomberg MA stock index	0.2	0.2
Initial Unemployment Claims	0.0	0.0
Construction Employment	-0.1	-0.1
Motor Vehicle Sales Taxes	-0.2	-0.3
Total	3.0	3.1

Note: Numbers may not add exactly due to rounding.

In the three-month period July through September, the same pattern of indicators was observed.

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 1978-2016 trend in the growth of the ratio of output to employment. In the third quarter of 2017, these

adjustments subtracted less than 0.1 percentage points from growth. In the second quarter of 2017, these adjustments subtracted 0.1 percentage points from growth. In the first quarter of 2017, these adjustments subtracted 2.1 percentage points from growth. For the forecast of state domestic product growth in the fourth quarter of this year and the first quarter of next year, productivity growth is assumed to be at the average of the last five years.

Several recent months of the indices 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 of the indicators except interest rates refer to Massachusetts. The current index is composed of four indicators: nonagricultural employment, withholding taxes, sales taxes, and the unemployment rate. The leading index includes these four current indicators plus the other six (leading) indicators in the contributions table. All the indicators are as of September, except for interest rates and the Bloomberg stock index for Massachusetts, which are through October 23. The MassInsight Consumer Confidence Index is released every third month. Intervening months are interpolated, and changes in the Conference Board's Consumer Confidence Index for the U.S. are used to extrapolate to the current month of the index, as needed. Series measured in current dollars or values, i.e., withholding taxes, sales taxes, the Bloomberg stock index, and motor vehicle 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 these indices, 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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