NEW ENGLAND ECONOMIC OUTLOOK

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Federal Reserve Bank of Boston
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Disclaimer: The views expressed here are those of the speaker and do not necessarily represent the views of the Federal Reserve Bank of Boston or the Federal Reserve System.
Economic Activity Above Pre-Recession Levels in All New England States

Source: Federal Reserve Bank of Philadelphia, NBER, Haver Analytics
Payroll Employment Below Pre-Recession Peak in 3 New England States

Source: Bureau of Labor Statistics, NBER, Haver Analytics
Employment Growth Rate Above Trend in All New England States Except Maine

<table>
<thead>
<tr>
<th>Annual Long-term Trend</th>
<th>Last 12 months</th>
<th>Since Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percent</td>
<td>Percent</td>
</tr>
<tr>
<td>United States</td>
<td>1.4</td>
<td>1.7</td>
</tr>
<tr>
<td>New England</td>
<td>0.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Connecticut</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Maine</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>0.8</td>
<td>2.2</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>1.5</td>
<td>2.1</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>0.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Vermont</td>
<td>1.3</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Note: “Last 12 months” refers to year-over-year growth through September 2016. “Annual Long-term trend” refers to average year-over-year growth for the period 1984-2015. “Since Peak” refers to employment change from each state’s pre-recession peak employment level.

Source: Bureau of Labor Statistics, Haver Analytics
Most Metro Areas Seeing Decent Job Growth

Percent Change, September 2015 - September 2016

Source: Bureau of Labor Statistics, Haver Analytics
Construction Sector Experiencing Strong Rebound in Employment Growth

Percent Change, September 2015 - September 2016

- Construction: 3.2%
- Leisure & Hospitality: 2.4%
- Professional & Business Services: 2.8%
- Education & Health: 2.2%
- Finance: 1.4%
- Transportation, Warehousing, and Utilities: 1.3%
- Wholesale Trade: 1.0%
- Other Services: 0.8%
- Retail Trade: 0.8%
- Government: 0.5%
- Information: 0.3%
- Manufacturing: -0.5%

Source: Bureau of Labor Statistics, Haver Analytics
But Construction Employment Growth Varies Across States

Percent Change, September 2015 - September 2016

-6.4
-1.2
1.1
1.1
1.2
0.9
0.7
-0.5

Construction
Leisure and Hospitality
Prof. Services
Education and Health

CT
ME
MA
NH
RI
VT
Single-Family Permits Still Well Below Pre-Recession Highs

Source: U.S. Census Bureau; data for New England are seasonally adjusted by the Boston Fed.
Multifamily Permits Activity Only Slightly Better than Single-Family

Source: U.S. Census Bureau; data for New England are seasonally adjusted by the Boston Fed.
Unemployment Rate for New England Below its Pre-Recession Minimum

Source: Bureau of Labor Statistics, NBER, Haver Analytics
Unemployment Rates Down Since 2015 in Most Metro Areas

Source: Bureau of Labor Statistics, Haver Analytics, Federal Reserve Bank of Boston
Region’s Labor Force Participation Rate Up Since January; Down Since 2007 (by less than in U.S.)

Exhibit 1a: Labor Force Participation Rate
June 2005 - Sept 2016

Source: Bureau of Labor Statistics; Seasonally-Adjusted Data
Maine Had Largest Decline in Labor Force Participation Since 2007

<table>
<thead>
<tr>
<th>State</th>
<th>US peak (Jan. 2007) to Aug. 2016</th>
<th>2007 average to 2015 average</th>
<th>Each Area Peak-Trough*</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>-3.6</td>
<td>-3.4</td>
<td>-4.0</td>
</tr>
<tr>
<td>Connecticut</td>
<td>-2.4</td>
<td>-2.4</td>
<td>-3.7</td>
</tr>
<tr>
<td>Maine</td>
<td>-3.7</td>
<td>-4.0</td>
<td>-5.2</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>-2.0</td>
<td>-1.7</td>
<td>-2.6</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>-1.5</td>
<td>-2.4</td>
<td>-2.8</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>-3.8</td>
<td>-3.6</td>
<td>-4.2</td>
</tr>
<tr>
<td>Vermont</td>
<td>-4.0</td>
<td>-3.6</td>
<td>-4.9</td>
</tr>
</tbody>
</table>

Source: Author’s calculations based on data from the Bureau of Labor Statistics, provided by Haver.

*Note: Peaks were constrained to be in 2006 or later; peak and trough dates are as follows: US: Jan 07-Sep 15, CT: Apr 08-Nov 13, ME: Dec 06-Feb 16, MA: Nov 06-Jan 16, NH: Jan 07-Jan 16, RI: Jan 07-Feb 16, VT: Oct 06-Dec 15.
New England States Lost More Prime Age Workers than U.S. Since 2005

Adult Population Share Ages 25 to 54
New England States and U.S., 2005-2014, Yearly Averages

Source: Census Bureau, American Community Survey. Adult population refers to individuals ages 16 and older.
...And Gained More Older Citizens

Adult Population Share Ages 65 and Over
New England States and U.S., 2005-2014, Yearly Averages

Source: Census Bureau, American Community Survey. Adult population refers to individuals ages 16 and older.
Labor Force Participation Among Region’s Seniors Rising at Faster Rate than in U.S.

Prime-Age Participation Declining, But Less Steeply Among College-Educated

Labor Force Participation Rate, Ages 25 to 54

More Prime-Age Citizens Collecting Disability Insurance

Shares Collecting Disability Insurance, Ages 35 to 54

Source: Author's calculations based on data from the Social Security Administration and the American Community Survey.
Without International Migration, Massachusetts Population Would be Declining

![Graph showing population trends with and without international migration.](source: Census Bureau/Haver Analytics)
Headline CPI Inflation Above 2 Percent in Boston

Source: Bureau of Labor Statistics, NBER, Haver Analytics
Fuel & Utilities Prices Surging in Boston Area (not Gasoline)

Source: Bureau of Labor Statistics, Haver Analytics

Percent Change, September 2015 - September 2016

- US
- Boston

- All Items
  - US: 1.5%
  - Boston: 2.3%

- All Items, Less Food and Energy
  - US: 2.2%
  - Boston: 2.5%

- Fuel & Utilities
  - US: 1.1%
  - Boston: 4.9%

- Medical Care
  - US: 3.4%
  - Boston: 3.4%

- Shelter
  - US: 0.1%
  - Boston: 2.6%

- Education and Communication
  - US: -0.3%
  - Boston: 0.6%

- Food
  - US: 2.5%
  - Boston: 0.6%

- Transportation
  - US: -1.1%
  - Boston: -0.6%

- Recreation
  - US: -0.7%
  - Boston: 0.8%

Source: Bureau of Labor Statistics, Haver Analytics
Personal Income Growth Down Since Late 2014 in Region and U.S.

Source: Bureau of Economic Analysis, NBER, Haver Analytics
### Exhibit 4.3: Income and Wage/Salary Changes - to Q2 2016

<table>
<thead>
<tr>
<th></th>
<th>Personal Income</th>
<th>Wage and Salary Disbursements</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>15,900,879</td>
<td>1.0%</td>
</tr>
<tr>
<td>New England</td>
<td>911,532</td>
<td>1.1%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>252,249</td>
<td>1.1%</td>
</tr>
<tr>
<td>Maine</td>
<td>58,561</td>
<td>0.7%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>438,596</td>
<td>1.1%</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>76,860</td>
<td>1.1%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>53,949</td>
<td>0.9%</td>
</tr>
<tr>
<td>Vermont</td>
<td>31,317</td>
<td>0.8%</td>
</tr>
</tbody>
</table>

*Source: U.S. Bureau of Economic Analysis/Federal Reserve Bank of Boston.*

*Note: Data represent millions of dollars and are seasonally adjusted.*
House Price Increases Steady Since 2014; More Moderate in Region than U.S.

Source: FHFA, NBER, S&P/Case-Shiller, Haver Analytics
House Price Growth Below Average in CT, ME, VT

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent Change, Q2 2015 - Q2 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>5.4</td>
</tr>
<tr>
<td>Boston</td>
<td>6.1</td>
</tr>
<tr>
<td>New England</td>
<td>5.3</td>
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<td>Connecticut</td>
<td>3.2</td>
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<td>4.1</td>
</tr>
<tr>
<td>Vermont</td>
<td>-0.1</td>
</tr>
</tbody>
</table>

Source: FHFA, S&P/Case-Shiller, Haver Analytics
Econ. Growth Stronger in MA than in U.S., but Growth Pace Moderating in late 2016

Growth in Real Product, Massachusetts vs. U.S.

Source: U.S., Bureau of Economic Analysis; Massachusetts: MassBenchmarks
Consumer Confidence Back to Pre-Recession Levels in New England

Source: The Conference Board, NBER, Haver Analytics
Present Confidence Improved More than Confidence in Future

Source: The Conference Board, Haver Analytics
FOMC: GDP Growth May Increase in 2017-18, but Long-Run Growth Rate Below 2 Percent

FOMC: Unemployment Rate Drifts Down Further Through 2018; Settles at ~4.8 Percent in Long Run

FOMC: Inflation Higher in 2017, then Roughly Flat at ~2 Percent Through 2019 and Beyond

FOMC: Federal Funds Rate 75-100 Basis Points Per Year Through 2019, Lands at ~3 Percent in Long Run Run

Risks to the Outlook

- **Upside risks**
  - Domestic labor markets tightening
  - Renewed fiscal stimulus?
  - Tax cuts, deregulation?

- **Downside risks**
  - Political uncertainty
  - Protectionist trade policy?
  - Tighter immigration policy?

- FOMC saw risks as “balanced” in latest statement

- Risks for the region:
  - Aging workforce, other drags on labor force participation
  - Reliance on international immigration