National and Regional Economic Outlook

Virginia, Maryland and Delaware Association of Electric Cooperatives FAMIS Conference
September 26, 2017

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Group Vice President
Overview

The National Economy
• Measures of output
• Labor markets
• Residential investment
• Business investment

The Economies of Virginia, Maryland, and Delaware
• Business activity
• Labor markets
• Housing markets
National Economic Trends
U.S. Real Gross Domestic Product

% Change, SAAR

Source: Bureau of Economic Analysis via Haver Analytics

Q2: 2017
US: 3.0%
Real Gross Domestic product

<table>
<thead>
<tr>
<th></th>
<th>2016 Q2</th>
<th>2016 Q3</th>
<th>2016 Q4</th>
<th>2017 Q1</th>
<th>2017 Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CHANGE FROM PREVIOUS QUARTER AT COMPOUND ANNUAL RATE [PERCENT]:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Gross Domestic Product</td>
<td>2.2</td>
<td>2.8</td>
<td>1.8</td>
<td>1.2</td>
<td>3.0</td>
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<tr>
<td>Personal Consumption Expenditures</td>
<td>3.8</td>
<td>2.8</td>
<td>2.9</td>
<td>1.9</td>
<td>3.3</td>
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<tr>
<td>Nonresidential Fixed Investment</td>
<td>3.3</td>
<td>3.4</td>
<td>0.2</td>
<td>7.2</td>
<td>6.9</td>
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<tr>
<td>Structures</td>
<td>0.5</td>
<td>14.3</td>
<td>-2.2</td>
<td>14.8</td>
<td>6.2</td>
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<tr>
<td>Equipment</td>
<td>-0.6</td>
<td>-2.1</td>
<td>1.8</td>
<td>4.4</td>
<td>8.8</td>
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<tr>
<td>Intellectual Property Products</td>
<td>11.1</td>
<td>4.2</td>
<td>-0.4</td>
<td>5.7</td>
<td>4.9</td>
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<tr>
<td>Residential Fixed Investment</td>
<td>-4.7</td>
<td>-4.5</td>
<td>7.1</td>
<td>11.1</td>
<td>-6.5</td>
</tr>
<tr>
<td>Exports of Goods &amp; Services</td>
<td>2.8</td>
<td>6.4</td>
<td>-3.8</td>
<td>7.3</td>
<td>3.7</td>
</tr>
<tr>
<td>Imports of Goods &amp; Services</td>
<td>0.4</td>
<td>2.7</td>
<td>8.1</td>
<td>4.3</td>
<td>1.6</td>
</tr>
<tr>
<td>Government Consumption Expenditures &amp; Gross Investment</td>
<td>-0.9</td>
<td>0.5</td>
<td>0.2</td>
<td>-0.6</td>
<td>-0.3</td>
</tr>
<tr>
<td>Final Sales to Domestic Purchasers</td>
<td>2.6</td>
<td>2.2</td>
<td>2.3</td>
<td>2.4</td>
<td>2.7</td>
</tr>
</tbody>
</table>

| **LEVEL IN QUARTER AT SEASONALLY ADJUSTED ANNUAL RATE [Billions of Chained (2005) Dollars]:** |     |     |     |     |     |
| Change in Private Inventories | 12.2 | 17.6 | 63.1 | 1.2  | 1.8  |
| Net Exports of Goods & Services | -572.4 | -557.3 | -631.1 | -622.2 | -613 |

Source: Bureau of Economic Analysis via Haver Analytics
Retail Sales

YoY % Change
August: 3.2%
July: 3.5%
June: 3.0%

Source: Census Bureau via Haver Analytics
Total Employment Growth

Average Monthly Change, Thous.

Monthly Change
August: 156
July: 189
June: 210

Source: Bureau of Labor Statistics/Haver Analytics
Unemployment Rate

August 2017
US: 4.4%

Source: Bureau of Labor Statistics/Haver Analytics
Labor Force Participation Rate

Source: Bureau of Labor Statistics/Haver Analytics

August 2017
US: 62.9
Average Hourly Earnings

August: 2.5%

Source: Bureau of Labor Statistics/Haver Analytics
Investment in Non-Residential Structures

Source: Bureau of Economic Analysis via Haver Analytics

2Q: 2017
6.2%

% Change, SAAR

Source: Bureau of Economic Analysis via Haver Analytics
Investment in Equipment

Source: Bureau of Economic Analysis via Haver Analytics

% Change, SAAR

2Q: 2017
8.8%

Source: Bureau of Economic Analysis via Haver Analytics
Residential Fixed Investment

% Change, SAAR

Source: Bureau of Labor Statistics/Haver Analytics

2Q:2017
-6.5%
Single-family Existing vs New Home Sales

New Home Sales (Left axis)
Existing Home Sales (Right axis)

90s Average: New Sales
90s Average: Existing Sales

Source: Census Bureau via Haver Analytics
Private Single-Family Housing Starts & Permits

- **August 2017**
  - Permits: 0.800
  - Starts: 0.851

- **90's Average Permits:** 1.010
- **90's Average Starts:** 1.105

Source: Census Bureau via Haver Analytics
Home Price Index

July 2017
Total: 6.7%
Non-Distressed: 5.9%

Source: CoreLogic Information Solutions, Inc.
Multi-Family Housing Starts & Permits

August 2017
Permits: 0.500
Starts: 0.347

90's Average Permits: 0.313
90's Average Starts: 0.268

Source: Census Bureau via Haver Analytics
Regional Economic Trends
Richmond Manufacturing Survey and ISM Manufacturing Survey

Source: The Federal Reserve Bank of Richmond/Institute of Supply Management
Economic Activity in the Fifth District
Service Sector

Richmond Service Sector Survey and ISM Nonmanufacturing Survey

- Services Revenue Index (Left Axis)
- ISM Nonmanufacturing (Right Axis)

Source: The Federal Reserve Bank of Richmond/Institute of Supply Management
Payroll Employment

Source: Bureau of Labor Statistics/Haver Analytics

August 2017
US: 1.4%
VA: 1.5%
MD: 2.3%
DE: 0.6%
Virginia Industry Structure

2016

Natural Resources & Mining
- U.S.: 0.5%
- Virginia: 0.2%

Construction
- U.S.: 4.7%
- Virginia: 4.8%

Manufacturing
- U.S.: 8.6%
- Virginia: 5.9%

Trade, Transportation & Utilities
- U.S.: 18.9%
- Virginia: 16.9%

Information
- U.S.: 1.9%
- Virginia: 1.7%

Financial Activities
- U.S.: 5.7%
- Virginia: 5.1%

Professional & Business Services
- U.S.: 14.0%
- Virginia: 15.1%

Education & Health Services
- U.S.: 13.6%
- Virginia: 15.7%

Leisure & Hospitality
- U.S.: 10.8%
- Virginia: 10.2%

Other Services
- U.S.: 3.9%
- Virginia: 5.1%

Government
- U.S.: 15.4%
- Virginia: 18.2%

Employment Share (Percent)

Source: Bureau of Labor Statistics/Haver Analytics
Virginia Industry Growth

August 2017

- Total
- Natural Resources & Mining
- Construction
- Manufacturing
- Trade, Transportation & Utilities
- Information
- Financial Activities
- Professional & Business Services
- Education & Health Services
- Leisure & Hospitality
- Other Services
- Government

YoY % Chg (SA)

Source: Bureau of Labor Statistics/Haver Analytics
### Maryland Industry Structure

<table>
<thead>
<tr>
<th>Industry</th>
<th>U.S.</th>
<th>Maryland</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Resources &amp; Construction</td>
<td>5.1</td>
<td>6.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>3.8</td>
<td>8.6</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>1.9</td>
<td>18.9</td>
</tr>
<tr>
<td>Information</td>
<td>1.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>5.7</td>
<td>5.5</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>14.0</td>
<td>16.3</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>10.8</td>
<td>15.7</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>3.9</td>
<td>10.0</td>
</tr>
<tr>
<td>Other Services</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Government</td>
<td>15.4</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Employment Share (Percent) 0 2 4 6 8 10 12 14 16 18 20

Source: Bureau of Labor Statistics/Haver Analytics
Maryland Industry Growth

### August 2017

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<thead>
<tr>
<th>Industry</th>
<th>U.S.</th>
<th>Maryland</th>
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</thead>
<tbody>
<tr>
<td>Total</td>
<td>1.4</td>
<td>2.3</td>
</tr>
<tr>
<td>Natural Resources &amp; Construction</td>
<td>3.7</td>
<td>4.8</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1.1</td>
<td>0.4</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Information</td>
<td>-2.4</td>
<td>-2.7</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>1.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>1.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>2.1</td>
<td>3.4</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Other Services</td>
<td>1.3</td>
<td>1.5</td>
</tr>
<tr>
<td>Government</td>
<td>0.0</td>
<td>2.7</td>
</tr>
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</table>

Source: Bureau of Labor Statistics/Haver Analytics
Delaware Industry Structure

Source: Bureau of Labor Statistics/Haver Analytics
Health and Education Services Employment

Index: Dec. 2007 = 100

- U.S.
- Virginia
- Maryland
- Delaware

Source: Bureau of Labor Statistics/Haver Analytics
August 2017
US: 4.4%
VA: 3.8%
MD: 3.9%
DE: 4.9%

Source: Bureau of Labor Statistics/Haver Analytics
Unemployment in Fifth District Counties

Unemployment Rate
July 2017

Source: Bureau of Labor Statistics/Haver Analytics
Housing Starts

Source: Bank of Tokyo-Mitsubishi UFJ/Haver Analytics

SAAR, thousands

Virginia (Left Axis)
United States (Right Axis)

Virginia 1990s Average
United States 1990s Average

Source: Bank of Tokyo-Mitsubishi UFJ/Haver Analytics
Housing Starts

Source: Bank of Tokyo-Mitsubishi UFJ/Haver Analytics
Single-Family Building Permits

YoY % Chg
3-month average

U.S. and Virginia

July 2017
US: 11.4%
VA: 17.7%

Source: U.S. Census Bureau/Haver Analytics
Single-Family Building Permits

YoY % Chg, 3-mma

July 2017
MD: 14.5%
DE: 16.7%

Source: U.S. Census Bureau/Haver Analytics
Multi-Family Building Permits

YoY % Chg
3-month average

July 2017
US: -0.6%
VA: -4.7%

Source: U.S. Census Bureau/Haver Analytics
Multi-Family Building Permits

Source: U.S. Census Bureau/Haver Analytics
House Prices—CoreLogic HPI

Source: CoreLogic Information Solutions, Inc.

YoY % Chg (SA)

U.S.
Virginia
Maryland
Delaware

July 2017
US: 6.7%
VA: 2.7%
MD: 2.7%
DE: 1.5%
Summary

• As was expected, economic growth picked up in the second quarter, and labor markets remain strong by most indicators.
• The consumer is spending more, with growth in employment and some pick-up in wages as well as a continually declining unemployment rate.
• Strengthening labor markets have been evident across Maryland, Virginia, and Delaware as well, though not as strong as the nation.
• Activity in the housing sector remains steady in the U.S. and across all three states despite the second quarter slowdown in residential investment.
The views expressed here are those of the author, and do not necessarily represent those of the Federal Reserve Bank of Richmond or the Federal Reserve System.