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<td>Mar-28-2019 08:30</td>
<td>Q4-2018</td>
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<td>Real Gross Domestic Product</td>
<td>Mar-28-2019 08:30</td>
<td>Q4-2018</td>
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<td>Decomposition of Real Gross Domestic Product</td>
<td>Mar-28-2019 08:30</td>
<td>Q4-2018</td>
<td>6</td>
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**Households**

- Retail Sales                    | Apr-01-2019 08:30 | Feb-2019      | 7    |
- Consumer Spending and Income     | Mar-29-2019 08:31 | Jan-2019      | 8    |
- Sales of Automobiles and Light Trucks | Apr-02-2019 17:43 | Mar-2019      | 9    |
- Personal Saving Rate              | Mar-29-2019 08:31 | Jan-2019      | 10   |
- Existing Single-Family Home Sales | Mar-22-2019 10:00 | Feb-2019      | 12   |
- Private Multi-Family Housing Starts & Permits | Mar-26-2019 08:31 | Feb-2019      | 15   |

**Business Investment**

- Real Investment in Nonresidential Structures | Mar-28-2019 08:30 | Q4-2018       | 16   |
- Real Private Construction Put in Place     | Apr-01-2019 10:00 | Feb-2019      | 17   |
- Real Nonresidential Fixed Investment       | Mar-28-2019 08:30 | Q4-2018       | 18   |
- Real Investment in Equipment               | Mar-28-2019 08:30 | Q4-2018       | 19   |
- Real Investment in Intellectual Property   | Mar-28-2019 08:30 | Q4-2018       | 20   |

**Trade**


**Manufacturing**

- Indexes of Manufacturing Activity        | Apr-01-2019 10:02 | Mar-2019      | 25   |
- Indexes of Non-Manufacturing Activity    | Apr-03-2019 10:05 | Mar-2019      | 26   |
- *Table*: ISM Business Survey Indexes     | Apr-01-2019 10:02 | Mar-2019      | 27   |
- Manufacturers' New Orders                | Apr-02-2019 08:31 | Jan-2019      | 28   |
- Core Capital Goods                      | Apr-02-2019 08:31 | Jan-2019      | 29   |
- Business Inventory/Sales Ratios          | Apr-01-2019 10:00 | Jan-2019      | 30   |
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#### Labor Market

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<td>Nonfarm Payroll Employment</td>
<td>Apr-05-2019 08:30</td>
<td>Mar-2019</td>
<td>31, 32</td>
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<td>Unemployment Rate Measures</td>
<td>Apr-05-2019 08:30</td>
<td>Mar-2019</td>
<td>33,34</td>
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<td>Aggregate Weekly Hours Index</td>
<td>Apr-05-2019 08:30</td>
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<td>Average Hourly Earnings</td>
<td>Apr-05-2019 08:30</td>
<td>Mar-2019</td>
<td>39</td>
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<td>Employment Cost Index</td>
<td>Jan-31-2019 08:31</td>
<td>Q4-2018</td>
<td>40</td>
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<tr>
<td>Business Labor Productivity</td>
<td>Mar-07-2019 08:32</td>
<td>Q4-2018</td>
<td>41</td>
</tr>
<tr>
<td>Unit Labor Costs, Nonfarm Business</td>
<td>Mar-07-2019 08:32</td>
<td>Q4-2018</td>
<td>42</td>
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#### Inflation

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<td>Table: Gauges of Inflation</td>
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<td>Mar-2019</td>
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<td>Expenditure Price Indexes</td>
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<td>Jan-2019</td>
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<td>Consumer Price Indexes</td>
<td>Mar-12-2019 08:31</td>
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<td>Crude Oil Prices</td>
<td>Apr-08-2019</td>
<td>08-Apr-2019</td>
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<td>TIPS Inflation Compensation</td>
<td>Apr-02-2019 15:40</td>
<td>29-Mar-2019</td>
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<td>Monetary Policy Instruments</td>
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<td>Eurodollar Futures</td>
<td>Apr-08-2019</td>
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<td>SEP: Federal Funds Rate</td>
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<td>Monetary Base</td>
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<td>M2</td>
<td>Apr-04-2019 16:32</td>
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<td>Money Market Rates</td>
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<td>Capital Market Rates</td>
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<td>Treasury Yield Curve</td>
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<td>Risk Premium</td>
<td>Apr-07-2019 11:01</td>
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## Real Gross Domestic Product

### Change from Previous Quarter at Compound Annual Rate [Percent]:

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<th>2017 Q4</th>
<th>2017 Q1</th>
<th>2017 Q2</th>
<th>2017 Q3</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross Domestic Product</td>
<td>2.3</td>
<td>2.2</td>
<td>4.2</td>
<td>3.4</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>Personal Consumption Expenditures</td>
<td>3.9</td>
<td>0.5</td>
<td>3.8</td>
<td>3.5</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>Nonresidential Fixed Investment</td>
<td>4.8</td>
<td>11.5</td>
<td>8.7</td>
<td>2.5</td>
<td>5.4</td>
<td></td>
</tr>
<tr>
<td>Structures</td>
<td>1.3</td>
<td>13.9</td>
<td>14.5</td>
<td>-3.4</td>
<td>-3.9</td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>9.9</td>
<td>8.5</td>
<td>4.6</td>
<td>3.4</td>
<td>6.6</td>
<td></td>
</tr>
<tr>
<td>Intellectual Property</td>
<td>0.7</td>
<td>14.1</td>
<td>10.5</td>
<td>5.6</td>
<td>10.7</td>
<td></td>
</tr>
<tr>
<td>Residential Fixed Investment</td>
<td>11.1</td>
<td>-3.4</td>
<td>-1.3</td>
<td>-3.6</td>
<td>-4.7</td>
<td></td>
</tr>
<tr>
<td>Exports of Goods &amp; Services</td>
<td>6.6</td>
<td>3.6</td>
<td>9.3</td>
<td>-4.9</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>Imports of Goods &amp; Services</td>
<td>11.8</td>
<td>3.0</td>
<td>-0.6</td>
<td>9.3</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Government Consumption Expenditures &amp; Gross Investment</td>
<td>2.4</td>
<td>1.5</td>
<td>2.5</td>
<td>2.6</td>
<td>-0.4</td>
<td></td>
</tr>
<tr>
<td>Final Sales to Domestic Purchasers</td>
<td>4.0</td>
<td>1.9</td>
<td>4.0</td>
<td>2.9</td>
<td>2.1</td>
<td></td>
</tr>
</tbody>
</table>

### Level in Quarter at Seasonally Adjusted Annual Rate [Billions of Chained (2012) Dollars]:

<table>
<thead>
<tr>
<th></th>
<th>2017 Q4</th>
<th>2017 Q1</th>
<th>2017 Q2</th>
<th>2017 Q3</th>
<th>2018 Q3</th>
<th>2018 Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in Private Inventories</td>
<td>16.1</td>
<td>30.3</td>
<td>-36.8</td>
<td>89.8</td>
<td>96.8</td>
<td></td>
</tr>
<tr>
<td>Net Exports of Goods &amp; Services</td>
<td>-899.2</td>
<td>-902.4</td>
<td>-841.0</td>
<td>-949.7</td>
<td>-955.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis via Haver Analytics
Real Gross Domestic Product

Note: Projection is the median, central tendency, and range from the March 2019 Summary of Economic Projections. Red dots indicate median projections. Projections of change in real gross domestic product (GDP) are from the fourth quarter of the previous year to the fourth quarter of the year indicated.

Source: Bureau of Economic Analysis via Haver Analytics & Federal Reserve Board
Decomposition of Real GDP

Note: Productivity is calculated as real GDP per employee, from the Household Survey.

Source: Bureau of Economic Analysis and Bureau of Labor Statistics via Haver Analytics
Retail Sales

3 Month Annualized % Change

Month over Month % Change

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>-1.6</td>
<td>0.7</td>
<td>-0.2</td>
</tr>
<tr>
<td>x Gasoline</td>
<td>-1.2</td>
<td>0.9</td>
<td>-0.3</td>
</tr>
</tbody>
</table>

Note: Retail sales includes food services.

Source: Census Bureau via Haver Analytics
Consumer Spending and Income

Note: Income has been adjusted to account for temporary fiscal actions in 2008 and 2012-2013.

Source: Bureau of Economic Analysis via Haver Analytics
Personal Saving Rate

Source: Bureau of Economic Analysis via Haver Analytics

Note: Income has been adjusted to account for temporary events
Household Net Worth

Source: Z.1 Financial Accounts of the United States via Haver Analytics
Existing Single-Family Home Sales

Source: National Association of Realtors via Haver Analytics
New Single-Family Home Sales

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

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

3-Month Moving Average, Millions of Starts & Permits, Annual Rate

Source: Census Bureau via Haver Analytics
Real Investment in Nonresidential Structures

Source: Bureau of Economic Analysis via Haver Analytics
Real Private Construction Put In Place

Notes: Private nonresidential construction deflated using the price index for private fixed investment in nonresidential structures and private residential construction deflated using the private residential investment chain price index.

Source: Census Bureau via Haver Analytics
Real Nonresidential Fixed Investment

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

Source: Bureau of Economic Analysis via Haver Analytics
Real Investment in Intellectual Property

Percent change from previous quarter at annual rate

Q4 10.7%

Source: Bureau of Economic Analysis via Haver Analytics
Balance of International Trade

Note: Customs Value of Trade Balance

Source: Census Bureau via Haver Analytics
Exchange Value of the USD

Index, March 1973 = 100

Notes: Measured as the real broad trade-weighted exchange value of the United States Dollar.

Source: Board of Governors via Haver Analytics
Industrial Production

Source: Board of Governors via Haver Analytics
Capacity Utilization Rate: Manufacturing

Source: Board of Governors via Haver Analytics
Indexes of Manufacturing Activity

Source: Institute for Supply Management & Richmond Fed via Haver Analytics
Indexes of Non-Manufacturing Activity

Source: Institute for Supply Management & Richmond Fed via Haver Analytics
### ISM: Business Survey Indexes

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<th>MANUFACTURING BUSINESS:</th>
<th>NON-MANUFACTURING BUSINESS:</th>
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<td></td>
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<tr>
<td><strong>Feb.</strong></td>
<td><strong>Mar.</strong></td>
</tr>
<tr>
<td>Purchasing Managers Index</td>
<td>54.2</td>
</tr>
<tr>
<td>Production</td>
<td>54.8</td>
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<tr>
<td>New Orders</td>
<td>55.5</td>
</tr>
<tr>
<td>Employment</td>
<td>52.3</td>
</tr>
<tr>
<td>Supplier Deliveries</td>
<td>54.9</td>
</tr>
<tr>
<td>Inventories</td>
<td>53.4</td>
</tr>
<tr>
<td>Prices</td>
<td>49.4</td>
</tr>
<tr>
<td>Backlog of Orders</td>
<td>52.3</td>
</tr>
<tr>
<td>New Export Orders</td>
<td>52.8</td>
</tr>
<tr>
<td>Imports</td>
<td>55.3</td>
</tr>
</tbody>
</table>

**DIFFUSION INDEXES:** Numbers above 50 percent indicate more favorable responses towards economic activity.

Source: Institute for Supply Management via Haver Analytics
Manufacturers’ New Orders

Billions Current $

Source: Census Bureau via Haver Analytics
Core Capital Goods

Notes: Core capital goods are nondefense capital goods excluding aircraft.

Source: Census Bureau via Haver Analytics
Business Inventory/Sales Ratio

Source: Census Bureau via Haver Analytics
Nonfarm Payroll Employment

Quarterly average of monthly changes, thousands of persons

Monthly Change
Mar 196
Feb 33
Jan 312
Dec 227
Nov 196

Notes: White bar on the right is based on an incomplete quarter

Source: Bureau of Labor Statistics via Haver Analytics
Unemployment Rate

Notes: FOMC projection is the median, range, and central tendency for the Q4 levels, from the March 2019 meeting. Red dots indicate median projections.

Source: Bureau of Labor Statistics & Board of Governors via Haver Analytics
Measures of Labor Utilization

Source: Bureau of Labor Statistics via Haver Analytics
Non-Employment Index

Labor Market Flows

Note: *Percent of total employment. **Percent of total employment plus job openings.

Source: JOLTS via Haver Analytics
Labor Force Participation

Source: Bureau of Labor Statistics via Haver Analytics
Average Hourly Earnings

12 Month % Change of 3-Month Moving Average

Mar 3.3%
Feb 0.4%
Jan 0.1%
Dec 0.4%
Nov 0.3%

Monthly % Change

Source: Bureau of Labor Statistics via Haver Analytics
Employment Cost Index

Source: Bureau of Labor Statistics via Haver Analytics
Labor Productivity, Nonfarm Business

![Chart showing quarterly changes in labor productivity from 2007 to 2019. The chart includes a line graph with year-over-year percentage changes and a dashed line indicating the post-war average. Quarterly changes at an annual rate are listed as follows:

- Q4 18: 1.9%
- Q3 18: 1.8%
- Q2 18: 2.8%
- Q1 18: 0.6%

Source: Bureau of Labor Statistics via Haver Analytics]
Unit Labor Cost, Nonfarm Business

Year over Year % Change

Quarterly Change at Annual Rate
Q4 18  2.0%
Q3 18  1.6%
Q2 18  -2.8%
Q1 18  3.5%

Alternate Series

Notes: Alternate series is derived from the Employment Cost Index.

Source: Bureau of Labor Statistics via Haver Analytics
## Gauges of Inflation

### Expenditure Price Indexes

<table>
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<th>Dec.</th>
<th>Jan.</th>
<th>YoY %</th>
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</thead>
<tbody>
<tr>
<td>Personal Consumption Expenditures</td>
<td>0.7</td>
<td>-0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Core (excludes Food and Energy)</td>
<td>2.3</td>
<td>0.8</td>
<td>1.8</td>
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### Consumer Price Indexes

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<th>Feb.</th>
<th>YoY %</th>
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<tbody>
<tr>
<td>All Items</td>
<td>-0.2</td>
<td>2.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Core (excludes Food and Energy)</td>
<td>2.9</td>
<td>1.3</td>
<td>2.1</td>
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### Producer Price Indexes

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<th>Jan.</th>
<th>Feb.</th>
<th>YoY %</th>
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<tr>
<td>Finished Goods</td>
<td>-8.5</td>
<td>3.0</td>
<td>0.4</td>
</tr>
<tr>
<td>Core (excludes Food and Energy)</td>
<td>6.0</td>
<td>1.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Core Intermediate Goods</td>
<td>-3.5</td>
<td>1.2</td>
<td>2.1</td>
</tr>
<tr>
<td>Crude Goods</td>
<td>-68.9</td>
<td>-43.4</td>
<td>-8.8</td>
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### Spot Commodity Price Index

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<th>Feb.</th>
<th>Mar.</th>
<th>YoY %</th>
</tr>
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<tbody>
<tr>
<td>CRB Spot Commodity Price Index</td>
<td>0.0</td>
<td>3.1</td>
<td>-2.6</td>
</tr>
</tbody>
</table>

Notes: Core PCE Price Index includes expenditures on food services.

Source: BEA, BLS, & Commodity Research Bureau via Haver Analytics
Personal Consumption Expenditure Price Index

Notes: FOMC projection is the median, range, and central tendency for Q4/Q4 percent changes, from the March 2019 meeting. Red dots indicate median projections.

Source: Bureau of Economic Analysis & Board of Governors via Haver Analytics
Core Personal Consumption Expenditure Price Index

Notes: FOMC projection is the median, range, and central tendency for Q4/Q4 percent changes, from the March 2019 meeting. Red dots indicate median projections. Core PCE Price Index excludes expenditures on gasoline and food services.

Source: Bureau of Economic Analysis & Board of Governors via Haver Analytics
Consumer Price Indexes

Source: Bureau of Labor Statistics via Haver Analytics

MoM % Change
CPI: All Items
Core CPI

January
February

0.0%
0.2%
0.2%
0.1%


Source: Bureau of Labor Statistics via Haver Analytics

FEDERAL RESERVE BANK
OF RICHMOND
Richmond • Baltimore • Charlotte
Producer Price Indexes

12 Month % Change

February (percent)
All Finished Goods 0.4%
Core Finished Goods 2.7%

Core Finished Goods
All Finished Goods

Source: Bureau of Labor Statistics via Haver Analytics
Commodity Price Indexes

- PPI Core Intermediate Processed Materials (Left Axis)
- Commodity Research Bureau Spot Commodity Price Index (Right Axis)

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<tr>
<th>Price Indexes</th>
<th>February</th>
<th>March</th>
</tr>
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<tr>
<td>PPI Core Intermed. Goods</td>
<td>2.1%</td>
<td>---</td>
</tr>
<tr>
<td>CRBS Spot Commodities</td>
<td>-6.9%</td>
<td>-2.6%</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics & Commodity Research Bureau via Haver Analytics
Crude Oil Prices

Notes: Spot and Futures Prices are for Brent Crude Oil.

TIPS Inflation Compensation

Source: Federal Reserve Board /Haver Analytics
Federal Reserve System Assets

Note: Numbers may not add up due to rounding.

Source: Board of Governors via Haver Analytics
Monetary Policy Instruments

Source: Board of Governors via Haver Analytics
Real Federal Funds Rate

Note: The Real Federal Funds Rate is the difference between the effective Fed Funds rate and the lagged year-over-year change in the core PCE price index.

Source: Bureau of Economic Analysis & Board of Governors via Haver Analytics
Information received since the Federal Open Market Committee met in January indicates that the labor market remains strong but that growth of economic activity has slowed from its solid rate in the fourth quarter. Payroll employment was little changed in February, but job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Recent indicators point to slower growth of household spending and business fixed investment in the first quarter. On a 12-month basis, overall inflation has declined, largely as a result of lower energy prices; inflation for items other than food and energy remains near 2 percent. On balance, market-based measures of inflation compensation have remained low in recent months, and survey-based measures of longer-term inflation expectations are little changed.

Consistent with its statutory mandate, the Committee seeks to foster maximum employment and price stability. In support of these goals, the Committee decided to maintain the target range for the federal funds rate at 2-1/4 to 2-1/2 percent. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee's symmetric 2 percent objective as the most likely outcomes. In light of global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines what future adjustments to the target range for the federal funds rate may be appropriate to support these outcomes.

Source: Board of Governors
In determining the timing and size of future adjustments to the target range for the federal funds rate, the Committee will assess realized and expected economic conditions relative to its maximum employment objective and its symmetric 2 percent inflation objective. This assessment will take into account a wide range of information, including measures of labor market conditions, indicators of inflation pressures and inflation expectations, and readings on financial and international developments.

Voting for the FOMC monetary policy action were: Jerome H. Powell, Chairman; John C. Williams, Vice Chairman; Michelle W. Bowman; Lael Brainard; James Bullard; Richard H. Clarida; Charles L. Evans; Esther L. George; Randal K. Quarles; and Eric S. Rosengren.
Eurodollar Futures

Source: CME Group via Bloomberg
Note: Each dot in the chart represents the value of an FOMC participant’s judgment of the midpoint of the appropriate target range (or the appropriate target level) for the federal funds rate at the end of the calendar year. Projections made for the December 2018 meeting.
M2

12 Month % Change

Source: Board of Governors via Haver Analytics
Money Market Rates

Source: Board of Governors & Financial Times via Haver Analytics & Bloomberg
Capital Market Rates

Source: BofA Merrill Lynch & Board of Governors via Haver Analytics
Treasury Yield Curve

Source: Board of Governors via Haver Analytics
Risk Premium

Note: Risk Premium is defined as the difference in yields between BofA Merrill Lynch BBB and 10-year Treasury.

Source: BofA Merrill Lynch & Board of Governors via Haver Analytics