Economic Outlook and Monetary Policy

Federal Reserve Bank of Chicago
Academic Advisory Council Meeting
October 11, 2019

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Senior Vice President
Federal Reserve Bank of Chicago

The views expressed are my own and not necessarily those of the Federal Reserve Bank of Chicago or the Federal Reserve System
Labor Market Remains Healthy

Monthly Change in Nonfarm Payroll Employment* (thousands)

Unemployment Rate (percent)

* Employment change for April 2018-March 2019 adjusted for estimated effect of upcoming benchmark revisions. That adjustment and trend estimates from Chicago Fed staff calculations.

Source: Bureau of Labor Statistics from Haver Analytics and September 2019 Summary of Economic Projections
Wage Growth
(year-over-year percentage change)

Source: Bureau of Labor Statistics from Haver Analytics, University of Michigan Survey of Consumers, and FRB of Atlanta
Household Spending Solid

Real PCE Growth
(3-month annualized percentage change in the 3-month moving average)

Light Vehicle Sales
(millions)

Single Family Housing Starts and Permits
(millions)

Source: Census Bureau and Bureau of Economic Analysis from Haver Analytics
Business Investment, Manufacturing Soft

Nondefense Capital Goods ex. Aircraft (billions of $)

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Orders</td>
<td>68</td>
<td>66</td>
<td>68</td>
<td>70</td>
<td>72</td>
<td>70</td>
</tr>
<tr>
<td>Shipments</td>
<td>66</td>
<td>68</td>
<td>70</td>
<td>72</td>
<td>70</td>
<td>70</td>
</tr>
</tbody>
</table>

Private Nonresidential Structures (billions of $, saar)

<table>
<thead>
<tr>
<th>Year</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mfg. Purchasing Managers Index</td>
<td>500</td>
<td>450</td>
<td>400</td>
<td>350</td>
<td>300</td>
<td>250</td>
</tr>
</tbody>
</table>

Source: Census Bureau and Baker Hughes from Haver Analytics
Global Growth Slowdown

IMF World GDP Forecasts  
October 2018  July 2019  
(Annual % Change )
## Real GDP Forecasts

<table>
<thead>
<tr>
<th>Forecast Source</th>
<th>Q3</th>
<th>Q4</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macroadvisers (10/4)</td>
<td>1.5</td>
<td>2.0</td>
<td>2.1</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>Blue Chip (10/1)</td>
<td>2.0</td>
<td>1.8</td>
<td>2.2</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>FRB Atl GDPNow (10/4)</td>
<td>1.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOMC:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>September SEP (9/26/19)</td>
<td></td>
<td></td>
<td>2.2</td>
<td>2.0</td>
<td>1.9</td>
</tr>
<tr>
<td>December SEP (12/19/18)</td>
<td></td>
<td></td>
<td>2.3</td>
<td>2.0</td>
<td>1.8</td>
</tr>
</tbody>
</table>

SEP: Median forecast from FOMC Summary of Economic Projections
Inflation – Some Improvement, But Still Below Target

PCE Price Index
(12-month percent change)

<table>
<thead>
<tr>
<th></th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly</td>
<td>0.3</td>
<td>0.2</td>
<td>0.1</td>
</tr>
<tr>
<td>Yr/Yr</td>
<td>1.6</td>
<td>1.7</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Source: Bureau of Economic Analysis from Haver Analytics
Inflation Expectations Indicators Low

**Inflation Surveys**
(percent)

- University of Michigan Expected CPI Inflation: 5-10 Years Ahead
  - Over the years, the inflation expectations have shown a downward trend, indicating low inflation.

**TIPS 5F/5 Inflation Compensation**
(Percent)

- Over the years, the inflation compensation has also shown a downward trend, indicating low inflation expectations.

*Source: Federal Reserve Board, University of Michigan Survey of Consumers, and Survey of Professional Forecasters from Haver Analytics*
Dollar and Oil Prices

Exchange Rate and Import Prices
(index, 2012=100)

Brent Crude Oil Prices and Futures
(dollars)

Source: Federal Reserve Board, Bureau of Labor Statistics, Energy Information Administration, and CME from Haver Analytics
Financial Market Developments

S&P 500 Index

10 Year Treasury (percent)

Oct-4-2019

Source: Wall Street Journal and ICE/Bank of America Merill Lynch from Haver Analytics
Monetary Policy Path

<table>
<thead>
<tr>
<th>Medians</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept '19</td>
<td>1.9</td>
<td>1.9</td>
<td>2.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Dec '18</td>
<td>2.9</td>
<td>3.1</td>
<td>3.1</td>
<td></td>
</tr>
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</table>

End-of-year federal funds rate, FOMC Summary of Economic Projections
## Change in Conditions Since December 2018

<table>
<thead>
<tr>
<th><strong>December 2018</strong></th>
<th><strong>July-September 2019</strong></th>
</tr>
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<tbody>
<tr>
<td>- Labor markets, consumer spending strong</td>
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</tr>
<tr>
<td>- Business investment and manufacturing growth moderating, but still sound</td>
<td>- Business investment and manufacturing soft; business sentiment lower</td>
</tr>
<tr>
<td>- Foreign growth moderating, but not dramatically</td>
<td>- Foreign growth weaker; risks elevated</td>
</tr>
<tr>
<td>- Core inflation near 2 percent since February</td>
<td>- Core inflation slipped; financial mkt. inflation compensation falls further</td>
</tr>
</tbody>
</table>
Mid-Cycle Rate Adjustment

- Mitigate depressing effects of international developments on U.S. growth
- Manage downside risks to the economy
- Support return of inflation to symmetric 2 percent target
Overnight Rates and Open Mkt. Operations

Effective Federal Funds & Secured Overnight Financing (percent)

Secured Overnight Financing Rate
Effective Federal Funds Rate

Repurchase Agreements ($ Mil.)
Federal Reserve Liabilities, Reserve Balances

Trillions of $