Consensus Outlook - 2019

Thirty-second Annual Economic Outlook Symposium

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The views expressed herein are those of the author and do not necessarily represent the views of the Federal Reserve System or the Federal Reserve Bank of Chicago.
Review of Past Performance
The growth in real GDP was much stronger than forecast.

Real GDP
(percent change, annualized)

Forecasts: EOS 2017

Previous EOS Forecasts

Actual Data

2000 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18
Oil prices were predicted to remain unchanged, but increased markedly through the first three quarters of 2018.
While a bit more volatile, inflation came in just a bit higher than anticipated.
Investment was stronger than forecast.

**Business Fixed Investment**

(Percent change, annualized)
Inventories were added at a pace below what was anticipated.
While quite volatile, the trade weighted value of the dollar was close to the forecast.
The deterioration of the trade balance was larger than predicted

Net Exports of Goods and Services
(billions of constant dollars)
Industrial production growth was much stronger than forecast
The unemployment rate once again declined at a faster pace than was predicted.
While quite a bit volatile, consumer spending was somewhat stronger than forecast.
Similarly, light vehicle sales came in a bit above what was predicted
Housing starts were started off stronger than expected, but eased in the last two quarters close to what was expected.
Residential investment also started off strong at the end of last year, but has been declining through 2018.
The increase in longer-term rates were very accurately forecast.
The increases in short term interest rates was larger than predicted.
Forecast for 2019
Real GDP growth is expected to moderate throughout 2019 with an increase of 2.4% for the year.

*Excludes the two highest and two lowest forecasts
Oil prices are predicted to remain flat

Oil Prices - West Texas Intermediate
(dollars per barrel)
Inflation is forecast to rise 2.3% next year

CPI Inflation Rate
(percent change, annualized)
Business fixed investment is predicted to increase at a solid pace of 3.4% over the coming year.
Business inventories are anticipated to grow at a slightly faster, although moderating, pace in 2019.
The dollar is forecast to rise 1.8% next year
The trade balance is expected to deteriorate further in 2019.

Net Exports of Goods and Services
(billions of constant dollars)
Industrial output is forecast to increase at a moderate 2.1% next year.
The unemployment rate is projected to remain unchanged through the final quarter of next year at 3.7%
Personal consumption spending moderates to 2.4% in 2019

Personal Consumption Expenditures
(percent change, annualized)
Light vehicles sales are forecast to move down to 16.8 million units in 2019.
Housing starts are forecast to edge higher to 1.28 million next year.
Residential investment growth improves in 2019, gaining 1.8%
Ten-year interest rates are expected to increase by 35 basis points next year.

Treasury Ten-year Rate (percent)
Short-term interest rates are predicted to rise by 56 basis points in 2018

Treasury One-year Rate
(percent)

- 2000
- 2001
- 2002
- 2003
- 2004
- 2005
- 2006
- 2007
- 2008
- 2009
- 2010
- 2011
- 2012
- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
- 2019
<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP, current dollars*</td>
<td>4.5%</td>
<td>5.4%</td>
<td>4.6%</td>
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<tr>
<td>GDP Price Index, chain-type*</td>
<td>2.0%</td>
<td>2.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Real GDP, chained dollars*</td>
<td>2.5%</td>
<td>3.1%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Real Personal Consumption Expenditures*</td>
<td>2.7%</td>
<td>2.7%</td>
<td>2.4%</td>
</tr>
<tr>
<td>Real Business Fixed Investment*</td>
<td>6.3%</td>
<td>6.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Real Residential Investment*</td>
<td>3.8%</td>
<td>-2.2%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Change in Private Inventories **</td>
<td>$16.1</td>
<td>$57.1</td>
<td>$45.0</td>
</tr>
<tr>
<td>Net Exports of Goods and Services (billions of constant dollars)**</td>
<td>-$899.2</td>
<td>-$952.2</td>
<td>-$990.0</td>
</tr>
<tr>
<td>Real Government Consumption Expenditures and Gross Investment*</td>
<td>0.1%</td>
<td>2.3%</td>
<td>1.9%</td>
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* Q4 over Q4
** Q4 value
## Median Forecasts: Consensus Book Page 1

<table>
<thead>
<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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</thead>
<tbody>
<tr>
<td>Industrial Production*</td>
<td>3.0%</td>
<td>3.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Car &amp; Light Truck Sales (millions - calendar year including imports)</td>
<td>17.1</td>
<td>17.1</td>
<td>16.8</td>
</tr>
<tr>
<td>Housing Starts (millions of units)</td>
<td>1.21</td>
<td>1.26</td>
<td>1.28</td>
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<tr>
<td>Oil Price (dollars per barrel of West Texas Intermediate)**</td>
<td>$55.39</td>
<td>$69.26</td>
<td>$68.75</td>
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<tr>
<td>Unemployment Rate**</td>
<td>4.1%</td>
<td>3.7%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Consumer Price Index*</td>
<td>2.1%</td>
<td>2.4%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Treasury Constant Maturity One-year Rate**</td>
<td>1.55%</td>
<td>2.70%</td>
<td>3.26%</td>
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<tr>
<td>Treasury Constant Maturity Ten-year Rate**</td>
<td>2.37%</td>
<td>3.20%</td>
<td>3.55%</td>
</tr>
<tr>
<td>J.P. Morgan Trade Weighted OECD Dollar*</td>
<td>-4.1%</td>
<td>3.0%</td>
<td>1.8%</td>
</tr>
</tbody>
</table>

* Q4 over Q4
** Q4 value
Summary

- The economy is forecast to rise at a pace somewhat above trend in 2019.
- The unemployment rate is forecast to remain unchanged at a very low rate through the end of next year.
- Inflation is anticipated to increase somewhat above two percent next year.
- Manufacturing growth is expected to increase at a pace that is somewhat below its historical average.
- Light vehicles sales are forecast to ease to 16.8 million units in 2019.
- Housing starts are predicted to tick up to 1.28 million units next year.

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