Will it End? Prospects for Ongoing Economic Expansion After a Decade

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Matthew Martin
Regional Executive
Economy continues to be strong

- Economy appears to be slowing down, but towards trend:
  - Stronger than expected 2019Q1 GDP: 3.1%
  - Forecasts for Q2 have declined: private forecasters < 2.0%
  - Labor market continues to perform well overall: payroll growth averaged 151k over last three months through May; unemployment at low 3.6%.

- Data flow also suggests moderating growth:
  - Mixed picture from home sales
  - Softer industrial production and retail sales
  - Heightened uncertainty because of tariffs and trade talks
  - Return of stock market volatility
What triggers a recession?

- Monetary policy action
  - Volcker disinflation of 1981: runaway inflation
  - 1970s recessions: faulty data
- External shock
  - Oil price shocks of the 1970s
  - International rel. price shocks
- Debt imbalances and asset price volatility
  - Great Recession, Great Depression, Dot-com recession
- Expansions do not just die of old age:
  - Business “cycle” not deterministic (Australia as an example)
  - Information content of inverted yield curve is low
The Long-Term, Growth Picture

10-Year Annual Growth Rates

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
2019Q1 GDP confirms strength

Percent change from previous quarter at annual rate

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
Consumer spending and income holding up

12 Month % Change

Real Disposable Personal Income

Real Personal Consumption Expenditure

Month over Month % Change

<table>
<thead>
<tr>
<th>Income</th>
<th>February</th>
<th>March</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1</td>
<td>-0.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>February</th>
<th>March</th>
<th>April</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.1</td>
<td>0.9</td>
<td>0.0</td>
<td></td>
</tr>
</tbody>
</table>

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

Source: Bureau of Economic Analysis via Haver Analytics
New home construction has lagged, however

![Graphs showing millions of starts and permits, annual rate from 2000 to 2018. The graph includes a dashed line representing 1990-1999 average housing starts. The lines show a sharp decrease in starts and permits around 2008 and a recovery afterward.](image-url)

Source: Census Bureau via Haver Analytics
Single Family Housing Permits

YoY % Chg
3-month average

U.S.
North Carolina
Raleigh MSA

April 2019
US: -6.9%
NC: -6.5%
Raleigh: -6.7%

Source: Census Bureau via Haver Analytics
Business survey indexes are still positive

Diffusion Index

Source: ISM and FRBR via Haver Analytics
The US trade deficit has widened
Regional impacts from trade would vary by state

**International Trade as a Share of State GDP (2017)**

Trade Shares = (State Exports + State Imports) / State GDP

Source: US Census Bureau and Bureau of Economic Analysis
Job growth remains healthy overall ...

Quarterly average of monthly changes, thousands of persons

Monthly Change
May 75
Apr 224
Mar 153
Feb 56
Jan 312

Note: Nonfarm Payroll Employment

Source: Bureau of Labor Statistics via Haver Analytics
...while the unemployment rate keeps falling
Payroll Employment across North Carolina
Percent change from April 2018

<table>
<thead>
<tr>
<th>City</th>
<th>YoY % Chg (NSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asheville</td>
<td>3.2</td>
</tr>
<tr>
<td>Charlotte</td>
<td>2.5</td>
</tr>
<tr>
<td>U.S.</td>
<td>1.8</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1.5</td>
</tr>
<tr>
<td>Wilmington</td>
<td>1.5</td>
</tr>
<tr>
<td>Raleigh-Cary</td>
<td>1.2</td>
</tr>
<tr>
<td>Winston-Salem</td>
<td>1.2</td>
</tr>
<tr>
<td>Fayetteville</td>
<td>1.1</td>
</tr>
<tr>
<td>Hickory</td>
<td>1.0</td>
</tr>
<tr>
<td>Durham</td>
<td>0.9</td>
</tr>
<tr>
<td>Greensboro</td>
<td>0.6</td>
</tr>
<tr>
<td>Goldsboro</td>
<td>0.2</td>
</tr>
<tr>
<td>Rocky Mount</td>
<td>0.2</td>
</tr>
<tr>
<td>Burlington</td>
<td>0.0</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>-0.6</td>
</tr>
<tr>
<td>Greenville</td>
<td>-0.7</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics via Haver Analytics
Raleigh Employment has easily outpaced US and NC

Index, Dec. 2007=100

Source: Bureau of Labor Statistics via Haver Analytics
Payroll Employment by Sector
Percent change from April 2019

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total</th>
<th>U.S.</th>
<th>North Carolina</th>
<th>Raleigh (NSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining, Logging, &amp; Construction</td>
<td>3.6</td>
<td>1.8</td>
<td>1.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Trade, Transportation &amp; Utilities</td>
<td>2.6</td>
<td>2.4</td>
<td>2.4</td>
<td>2.6</td>
</tr>
<tr>
<td>Information</td>
<td>-0.6</td>
<td>0.1</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>2.6</td>
<td>2.4</td>
<td>2.1</td>
<td>2.6</td>
</tr>
<tr>
<td>Professional &amp; Business Services</td>
<td>2.5</td>
<td>2.4</td>
<td>1.7</td>
<td>2.4</td>
</tr>
<tr>
<td>Education &amp; Health Services</td>
<td>2.8</td>
<td>2.5</td>
<td>1.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Leisure &amp; Hospitality</td>
<td>3.4</td>
<td>2.8</td>
<td>1.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Other Services</td>
<td>1.8</td>
<td>0.6</td>
<td>0.8</td>
<td>1.8</td>
</tr>
<tr>
<td>Government</td>
<td>0.7</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Source: Bureau of Labor Statistics via Haver Analytics
MSA Unemployment Rates
Percent, April 2019, SA

April 2019

- Rocky Mount: 5.3%
- Fayetteville: 5.2%
- Jacksonville: 4.8%
- Greenville: 4.4%
- Goldsboro: 4.3%
- Greensboro (NSA): 4.2%
- North Carolina: 4.0%
- Burlington: 3.9%
- Wilmington: 3.9%
- Hickory: 3.8%
- Winston-Salem: 3.8%
- Charlotte: 3.7%
- U.S.: 3.6%
- Durham: 3.6%
- Raleigh-Cary: 3.5%
- Asheville: 3.2%

Source: Bureau of Labor Statistics via Haver Analytics
Labor market flow data are extremely strong

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

Source: JOLTS via Haver Analytics
Tight labor market showing up more in wage growth...

Average Hourly Earnings (Nominal)

May 3.2%

Source: Bureau of Labor Statistics via Haver Analytics
...and productivity has been rising

Labor Productivity, Nonfarm Business

Quarterly Change at Annual Rate
- Q4 18: 1.9%
- Q3 18: 1.8%
- Q2 18: 2.8%
- Q1 18: 0.6%

Year over Year % Change

Post-War Average (Labor Productivity)

Quarterly Change at Annual Rate
- Q1 19: 3.6%
- Q4 18: 1.3%
- Q3 18: 1.9%
- Q2 18: 2.9%

Source: Bureau of Labor Statistics via Haver Analytics
Inflation continues to be under target

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
Summary of Economic Projections: Federal Funds Rate

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 March 2019 meeting.

Source: Board of Governors
The policy picture has changed
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
The yield curve has inverted - in parts
An inverted yield curve?
10 year – 2 year Treasury yield
Energy price spikes are correlated with recessions
The federal debt remains a looming issue

Figure 1-8.

Federal Debt Held by the Public

Percentage of Gross Domestic Product


Actual Projected*

High and rising federal debt would reduce national saving and income, boost the government’s interest payments, limit lawmakers’ ability to respond to unforeseen events, and increase the likelihood of a fiscal crisis.

Source: Congressional Budget Office.

The extended baseline generally reflects current law, following CBO’s 10-year baseline budget projections through 2029 and then extending most of the concepts underlying those baseline projections for the rest of the long-term period (in this case, through 2049).
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.