Perspectives on Economic and Financial Market Outlook

Harvard Joint Center for Housing Studies
Policy Advisory Board Meeting
Cleveland, Ohio
June 14, 2018

Ellen Hughes-Cromwick
Key Points

• Global economy resilient, supported by financial conditions

• U.S. business cycle in its late stage

• Monetary policy removing stimulus -- financial conditions tightening into 2019

• Likely recession triggers: policy mistakes and sentiment downswing
Business and Financial Market Environment

What To Watch

• The U.S. economy can sustain 2 – 2.5% growth, but not 3% -- watching the Purchasing Managers’ Index (PMI) and Capital Goods Orders [Auto sales and housing starts]

• Financial conditions are tightening – watching the spread between 2-year and 10-year Treasury bond yields, BBB Corporate bond yield [including Fed watching], and inflation adjusted S&P 500

• Early warning signals may be a PMI reading at 50 and falling, combined with 10-year bond yield persistently above 3% and inflation at 2.5% or above
• JPMorgan’s global Purchasing Managers’ Index strong
• Any reading above 50 consistent with expansion
• Current track consistent with 3 – 3.5% global economic growth
• Inflation edging up – May reading at 2.8%
• Support for monetary policy stance

CPI-U: All Items, 1982-84=100

Y/Y %Change

Source: Bureau of Labor Statistics/Haver Analytics
• Core inflation also above 2% target
• Capital goods orders edging up slightly
• **Homebuilding activity steady increase**

![Housing Starts Chart](chart.png)

*Source: Census Bureau/Haver Analytics*
Contribution to Growth in Housing Starts Since Mid-2009
Percentage Points

<table>
<thead>
<tr>
<th>Region</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>54%</td>
</tr>
<tr>
<td>West</td>
<td>29%</td>
</tr>
<tr>
<td>Midwest</td>
<td>10%</td>
</tr>
<tr>
<td>Northeast</td>
<td>8%</td>
</tr>
</tbody>
</table>

Source: US Census Bureau and Haver Analytics; does not add to 100% due to rounding.
• Adjusting for quality, new home prices have increased at an annual rate of 3.5% since the low point in early 2009
• Quality adjusted existing single family home prices growth in 6% range
• Energy prices are firming; supply ample and U.S. at record production rates

Source: Energy Information Admin/Chicago Mercantile Exch/Haver Analytics
Global Liquidity From Four Major Central Banks
USD Trls

We expect G4 balance sheets will peak in Q1 2018.

Source: BofA Merrill Lynch Global Research, Haver Analytics
• Narrow spread between 2-year and 10-year Treasury bond yields distorted by global liquidity conditions

Source: Federal Reserve Board/Haver Analytics
Monetary policy firming after prolonged support for economy

**Forward Guidance:** “The Committee expects that further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee’s symmetric 2 percent objective over the medium term. Risks to the economic outlook appear roughly balanced.”

Source: Federal Reserve press release, June 13, 2018

# U.S. Outlook at a Glance

<table>
<thead>
<tr>
<th>Economic Indicator</th>
<th>2017 Act.</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP</td>
<td>2.3</td>
<td>2.5 – 3.0</td>
<td>2.0 – 2.5</td>
</tr>
<tr>
<td>Consumer Spending</td>
<td>2.8</td>
<td>2.5 – 3.0</td>
<td>2.0 – 2.5</td>
</tr>
<tr>
<td>Real Residential Construction</td>
<td>1.8</td>
<td>0.0 – 1.0</td>
<td>0.0 – 1.0</td>
</tr>
<tr>
<td>Housing Starts</td>
<td>1.21</td>
<td>1.3 – 1.4</td>
<td>1.3 – 1.5</td>
</tr>
<tr>
<td>Equipment Spending</td>
<td>4.8</td>
<td>5.0 – 10.0</td>
<td>0.0 – 5.0</td>
</tr>
<tr>
<td>Unemployment Rate</td>
<td>4.1</td>
<td>3.3 – 3.6</td>
<td>3.0 – 3.5</td>
</tr>
<tr>
<td>Federal Funds Rate</td>
<td>1.25 – 1.50</td>
<td>2.00 – 2.50</td>
<td>2.75 – 3.25</td>
</tr>
<tr>
<td>Number of 25 bps increases</td>
<td>3</td>
<td>3 - 4</td>
<td>2 - 3</td>
</tr>
<tr>
<td>10-Year Treasury Bond Yield</td>
<td>2.40</td>
<td>3.00 – 3.50</td>
<td>3.00 – 3.50</td>
</tr>
</tbody>
</table>
Top Five: Longest Economic Expansions in History

<table>
<thead>
<tr>
<th>Trough</th>
<th>Peak</th>
<th>Length Quarters</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1938</td>
<td>February 1945</td>
<td>27</td>
</tr>
<tr>
<td>February 1961</td>
<td>December 1969</td>
<td>35</td>
</tr>
<tr>
<td>November 1982</td>
<td>July 1990</td>
<td>31</td>
</tr>
<tr>
<td>March 1991</td>
<td>March 2001</td>
<td>40</td>
</tr>
<tr>
<td><strong>Current Expansion</strong></td>
<td><strong>As of Q2 2018</strong></td>
<td></td>
</tr>
<tr>
<td>June 2009</td>
<td>-</td>
<td>36</td>
</tr>
</tbody>
</table>

Note: Current cycle dates includes a projection that Q2 2018 will mark positive GDP.
U.S. Business Cycle Monitors

- BEA’s National Income and Product Accounts
- Billions of chained (2009) dollars
- Time series since WWII*
- Calculate absolute % change from trough for each of the 9 business cycles
- Compare average performance of the 9 cycles to current cycle performance
- In the following slides, the blue line is the current expansion and the green dashed line is the average of two prior cycles that have lasted longer than current one
- The data are measured from 6 quarters prior to the trough and 31 quarters beyond the trough

* For detailed components of consumer spending on services, analyzed 6 prior cycles
• Economic growth lower for longer in aftermath of financial crisis

Source: BEA, Haver Analytics.
• Consumers are spending at lower pace – on services

Real Consumer Spending on Services
Cumulative % Change From Trough Quarter
Average of Two Longest Expansions Compared to Current Cycle

Source: BEA, Haver Analytics.
• Housing construction spending similar to prior, long economic expansions

Real Residential Construction Spending
Cumulative % Change From Trough Quarter
Average of Two Longest Expansions Compared to Current Cycle

Quarters Before and After Trough

Source: BEA, Haver Analytics.
• Fiscal policy constrained when compared to the 1960s and 1990s expansions

Real Government Spending
Cumulative % Change From Trough Quarter
Average of Two Longest Expansions Compared to Current Cycle

Source: BEA, Haver Analytics.
• Stock market outperforming prior cycles as monetary policy channels into asset appreciation

Inflation Adjusted S&P 500
Cumulative % Change From Trough Quarter
Current Cycle Compared to the 1960s

Quarters Before and After Business Cycle

Source: Standard and Poor's, BLS, Haver Analytics.
Business Cycle Recap

• The current cycle’s longevity may be under threat as growth slows to a pace vulnerable to shocks

• Classic policy shock or surprise surge in oil prices don’t appear to be likely catalysts for a recession, but shocks are difficult to foresee

• Uncertainty about trade, health care and immigration policy has risen

• Stable, uninterrupted economic expansions can be self-reinforcing

• However it would be unwise for either monetary or fiscal policymakers to brush off concerns about the age of the business cycle

• They may not die of old age but they can become more vulnerable
Backup Slides
Trade and Tariff Policies

- Lumber
- Washing machines
- Solar panels
- Steel
- Aluminum
- Autos
Effective Tariff Rates

- Canada 0.9%
- China 3.5%
- Germany, UK, EU 1.6%
- Japan 1.4%
- Mexico 4.4%

Weighted mean applied tariff is the average of effectively applied rates weighted by the product import shares corresponding to each partner country.
WHERE IS GLOBAL GROWTH HAPPENING?
China and the United States account for over half of global growth

Over the next three years, it is estimated that the $75 trillion global economy will expand by another $6.5 trillion in size. Here are the economies that will generate that growth:

% OF EST. GLOBAL GROWTH (2017-2019) IN REAL GDP

China 35.2%
India 8.6%
Other 13.7%
EURO ZONE 7.9%
USA 17.9%
Indonesia 2.5%

SOURCE: Based on 2016 GDP estimates from IMF, and 2017-2019 growth projections from World Bank
Perspectives on China

Overleverage
Non-financial sector debt has gone from $6tn in 2007 to nearly $29tn today, according to the Bank of International Settlements. The debt, equivalent to 260% of GDP.

What is Social Financing to the Real Economy?
Social financing to the real economy refers to the total volume of financing provided by the financial system to the real economy, where real economy means domestic nonfinancial enterprises and households. The measure includes regular loans made in yuan or foreign currencies, trust loans, bankers acceptances, corporate bonds issuance, stock issuance of nonfinancial enterprises, payout by insurance companies, and real estate investments made by insurance companies, among others.
Source: People’s Bank of China (PBOC)

Wealth Management Products?
Wealth management products (WMPs) in China are investments that offer fixed rates of return well above regulated interest rates for deposits and are often used to fund investments in sectors where bank credit is restricted. They are typically actively managed by banks, with other firms commonly used as ‘channels’, but few are recorded on banks’ balance sheets. A key concern about such products is the moral hazard created by a history of banks bailing out unguaranteed WMPs.
Perspectives on China

China: Real GDP: Year-to-Year Percent Change

Latest Q1 2018 Est. 6.8%, consistent with H2 2017

Source: China National Bureau of Statistics/Haver Analytics
Perspectives on China Li Keqiang Index

- Rail Cargo Volume
- Electricity Consumption
- Bank Loans

The index, which comprises the annual growth rate of outstanding bank loans (40%), electricity consumption (40%), and rail freight (20%), shows a significantly more volatile trajectory for China’s growth than the official GDP.
Perspectives on China

Foreign Exchange Rate: People's Republic of China

EOP, Yuan/US$

Source: Federal Reserve Board/Haver Analytics
China: Aggregate Social Financing to the Real Economy

SA, 100 Mil. Yuan

Latest: USD 234 Bils

Source: People's Bank of China/Haver Analytics
China: Fund Balance of Bank's Wealth Management Products

EOP, NSA, Tril. CNY

Latest: USD 4.6 Trils

Source: WeMax/Haver
China: Credit Card Past Due More Than Six Months

EOP, NSA, 100 Mil. Yuan

Latest: USD 9.4 Bils

Memo: Credit Card Balance
As of Q2 2017: USD 730 Bils

Implies NPL = 1.3%

Source: People's Bank of China/Haver Analytics
China: Average Credit Line per Card

EOP, NSA, 10,000 Yuan

Latest: USD $3,300

Memo: GDP per capita: $7,000

Source: People's Bank of China/Haver Analytics
Latest: USD 5.6 Trils

Memo: 2016 Nominal GDP was USD 11 Trils

Source: People's Bank of China/Haver Analytics