Economic Outlook: The 2020-2023 Business Cycle

Presented by Brian Beaulieu

Monday, May 6
1:30 p.m. – 2:30 p.m.

Sponsored by East Penn
Manufacturer of Deka Batteries & Accessories
The 2020-2023 Business Cycle

BRIAN BEAULIEU
CEO & CHIEF ECONOMIST

ITR ECONOMICS

2018 Forecast Results
If you heard ITR around two years prior...

<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>US GDP</td>
<td>24</td>
<td>99.9%</td>
</tr>
<tr>
<td>US Ind. Production</td>
<td>34</td>
<td>99.4%</td>
</tr>
<tr>
<td>Europe Ind. Production</td>
<td>24</td>
<td>99.2%</td>
</tr>
<tr>
<td>Canada Ind. Production</td>
<td>27</td>
<td>97.1%</td>
</tr>
<tr>
<td>China Ind. Production</td>
<td>30</td>
<td>99.9%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>28</td>
<td>99.6%</td>
</tr>
<tr>
<td>Housing (Single Family Units)</td>
<td>26</td>
<td>99.2%</td>
</tr>
<tr>
<td>Employment (Private Sector)</td>
<td>30</td>
<td>99.4%</td>
</tr>
</tbody>
</table>

ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.
US Economy Stalls in 2019 and Into 2020

US Gross Domestic Product, SAAR, Chained 2012 $

US Gross Domestic Product
3-Month Moving Average

Quarter-over-Quarter Growth Rate
3/12 Rate-of-Change

- $18.8 trillion
- Phase: B
- Quarter-over-Quarter: 3.0%

Source: BEA

Manage the Business Cycles to Maximize Profits

US Industrial Production to Gross Domestic Product

Sources: FRB, BEA
Availability is a Huge Advantage

World Natural Gas Production by Region

<table>
<thead>
<tr>
<th>Producers</th>
<th>bcm</th>
<th>% of World Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>760</td>
<td>20.2</td>
</tr>
<tr>
<td>Russia</td>
<td>694</td>
<td>18.4</td>
</tr>
<tr>
<td>Iran</td>
<td>214</td>
<td>5.7</td>
</tr>
<tr>
<td>Canada</td>
<td>184</td>
<td>4.9</td>
</tr>
<tr>
<td>Qatar</td>
<td>169</td>
<td>4.5</td>
</tr>
<tr>
<td>China</td>
<td>142</td>
<td>3.8</td>
</tr>
<tr>
<td>Norway</td>
<td>128</td>
<td>3.4</td>
</tr>
<tr>
<td>Australia</td>
<td>105</td>
<td>2.8</td>
</tr>
<tr>
<td>Algeria</td>
<td>94</td>
<td>2.5</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>94</td>
<td>2.5</td>
</tr>
<tr>
<td>Rest of World</td>
<td>1,184</td>
<td>31.3</td>
</tr>
<tr>
<td>World</td>
<td>3,768</td>
<td>100</td>
</tr>
</tbody>
</table>

Sources: IEA

Freed Up Money Likely Not going to Capex

US Corporate Tax Rate and Gross Business Investment

Sources: Tax Policy Center, FRED
Global Issues

- Business Cycle
- Tariffs

Trade Stress Becomes Acute on the Downside of the Cycle

World Industrial Production Index to G7 Leading Indicator

Sources: CPB Netherlands Bureau For Economic Policy Analysis, OECD
Brands That Have or Will Be Increasing Prices Due to Tariffs

- TOYOTA
- WHIRLPOOL
- COCA-COLA
- WINNEBAGO
- MILLER COORS
- SAMUEL ADAMS
- CAMPBELL SOUP
- LG ELECTRONICS
- GENERAL MOTORS
- KLEENEX & HUGGIES
- POLARIS INDUSTRIES
- NEWELL BRANDS
  (Crock-pot, Rubbermaid, Yankee Candle, & Sharpie)

“I can’t just go to the shareholders and say, ‘You’re just going to have to accept my profit’s going to be $40 million less. It doesn’t work that way…”

- Gavin Hattersley, CEO MillerCoors

Neighbors, Trade Partners, Economically Linked

US Industrial Production Index to Canada Industrial Production

Source: FRB, Statistics Canada

12/12 Rates-of-Change
ITR Leading Indicator Works for Canada

Canada Industrial Production to ITR Leading Indicator

Production C$ - 12/12
Production C$ Forecast - 12/12
Indicator - Monthly

ITR Leading Indicator Works for Canada

Mexico Manufacturing Holding Up Well for Now

Mexico Manufacturing Production Index

Source: Mexico National Institute of Statistics and Geography
Perilous Height Is Not the Issue

S&P500 Stock Prices Index

Source: Wall Street Journal
TSX is Leading Canada’s General Economy

Canada Industrial Production to Canada Stock Price TSX Composite Index

US Mortgage Rate Will Be Heading Higher After this Cycle

Sources: Statistics Canada, The Economist

Source: Wall Street Journal
ITR’s Leading Indicator™ Says Problems Ahead

US Industrial Production to ITR Leading Indicator™
Reported in ITR Trends Report – ITR Advisor

Sources: FRB, ITR Economics
Leading Indicator System is a Powerful Tool

US Industrial Production Index to Leading Indicators

Sources: FRB, OECD, ISM, Yahoo Finance, IHS Markit

Copper is Also Signaling a Slowdown in Spending

US Copper Futures Prices to US Nondefense Capital Goods New Orders (excluding aircraft)

Sources: WSJ, Census Bureau
Searching for a Recession

ITR Retail Sales Leading Indicator to US Retail Sales’ 12/12

Retail Sales

Search Interest

Rates-of-Change (Search Interest has a 16 month lead time)
Sources: Google, US Census Bureau

Industry Drivers

Photo by ELEVATE from Pexels
First in Forecasts Since 1948

**Slowing Rise Indicated**

US Warehouse Buildings Construction

- 11.3%
- 4.6%
- $34.1

Source: Census Bureau

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**General Weakness Through 2019**

North America Light Vehicle Production

- -1.2%
- -0.4%
- 16.9

Source: Wards Auto
**Slowdown But No Breakdown**

US Food and Beverage Stores Retail Sales

- **Growth Rates:**
  - 1.4% (2010)
  - 2.6% (2012)

- **Data Source:** Census Bureau

**Good Long-Term Fundamentals**

US Chemicals & Products Production Index

- **Growth Rates:**
  - 2.6% (2010)
  - 3.7% (2012)

- **Data Source:** FRB

*Source: ITR Economics, First in Forecasts Since 1948*
Utilization Providing a Negative Signal

US Material Handling Equipment New Orders to US Manufacturing Capacity Utilization

Dragged Down by Weakness in the Automotive Market

North America Value of Robotics Shipments

Source: US Census Bureau, FRB

Source: Robotic Industries Association
The Long View

Prosperity in the Age of Decline

1. Demographics
2. Health Care Costs
3. Entitlements
4. Inflation
5. US National Debt

A Model for the Future

US Industrial Production Index

Great Depression

Roaring 20s (3 recessions)

Data Trends
Source: FRB
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Trends Report