Riding the Crest into 2020

Brian Beaulieu
CEO

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

<table>
<thead>
<tr>
<th>Category</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.
**Slowing Growth for 2019**

US Industrial Production Index

- **Annual Trend:** 109.2
- **Phase:** C
- **Year-over-Year:** 3.9%

**Ohio Grows When the US Rises**

US and Ohio Gross Domestic Product Growth Rate

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Source: FRB

Source: BEA
Cincinnati and Ohio Linkage
Ohio to Cincinnati MSA Gross Domestic Product

Manufacturing: A Growing Part of America
US Industrial Production Index to US Total Manufacturing Production Index
Manage the Business Cycles to Maximize Profits

US Industrial Production to Gross Domestic Product

-6.9%  -2.9%  -5.2%  -15.5%  3.2%

Sources: FRB, BEA

Year-over-Year, Quarter-to-Quarter (3/12)

Lower Taxes Likely to Provide a Temporary Boost

US Top Marginal Individual Tax Rates to Real GDP Growth Rate

Sources: Tax Foundation, BEA
Not All Freed Up Money Went to Capex

US Corporate Tax Rate and Gross Business Investment

Corporate Tax Rate %
Gross Business Investment (% of GDP)
Linear (Gross Business Investment (% of GDP))

Atlanta Federal Reserve Survey
W.S. Survey
Hard Data

Percent
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

Rates-of-Change

Source: 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

Source: Business Insider, “These popular brands say Trump’s tariffs will force them to raise prices”
Perilous Height Is Not the Issue

S&P500 Stock Prices Index

- Raw
- 12MMA

Source: Wall Street Journal

Data Trends

First in Forecasts Since 1948
CAPE Ratio

January 1900 – April 2019

Analysis prepared by: Baird Family Wealth Group April 2019

Source: Robert Shiller – Yale University

All Except for Steel

Commodity Prices

- 10.6% Steel
- -6.9% Copper
- -11.1% Alum
- -18.3% Zinc

3/12 Rates-of-Change

Source: WSJ, London Metal Exchange, BLS
First in Forecasts Since 1948

US Mortgage Rate Are Heading Higher in the Next Cycle

US 30-Year Mortgage Rate

Source: Wall Street Journal

Leading Indicators
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

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Leading Indicator System as a Powerful Tool

US Industrial Production Index to Leading Indicators

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

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Copper is Signaling a Slowdown in Spending

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

Sources: WSJ, Census Bureau

ITR’s Leading Indicator Says Cyclical Rise in 2019

US Private Nonresidential Construction to ITR Leading Indicator

Sources: US Census Bureau, ITR Economics
Ohio to Clermont County Personal Income

Billions of Dollars

Source: BEA, Annual data through 2017
**Clermont County Per Capita Personal Income**

- **Source:** BEA, Annual Data Through 2017
- **Thousands of Dollars**

<table>
<thead>
<tr>
<th>Year</th>
<th>Per Capita Income</th>
</tr>
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<tbody>
<tr>
<td>2004</td>
<td>$33,047</td>
</tr>
<tr>
<td>2017</td>
<td>$50,003</td>
</tr>
</tbody>
</table>

**State Population Growth Rates**

- **Source:** US Census Bureau
- **Percent Change from Population Estimates 2010 to 2018**

The map shows the growth rates of states with various shades indicating different percentages of growth. The color legend ranges from -2.5% to 16.7%, with 4.4% being the highest growth rate.
US to Ohio to Clermont County Population Trends

Overall Population Growth (2010-18)

- US: 6.0%
- Ohio: 1.3%
- Clermont County: 3.5%

*Clermont data point is from 2017

Source: 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
Clermont County Single-Family Housing Unit Building Permits

Source: Census Bureau

Cincinnati Vacancy Rates

Cincinnati, OH-KY-IN MSA

Source: Census Bureau
Ohio to Cincinnati Housing Price Index

_Cincinnati, OH-KY-IN Metro Area_

Same property sales/refinancing

Ohio to Cincinnati Housing Price Index

Ohio
Cincinnati

Raw Data, 1991 = 100
Source: Federal Housing Finance Agency

US to Ohio Unemployment Rates

Clermont County
4.2%

February 2019
OH 4.6%
US 3.9%

Source: BLS
In Search of More and More Labor

US Private Sector Employment

Private Sector Employment Growth 1.9% B
Job Openings 6.6 mils people 17.5% C

Automation/Robots Do Not Hurt Mfg Employment

RIA Shipments to US Total Manufacturing Employment

RIA Shipments, Bils $  Employment, Mil

Sources: Robotics Industries Association, Bureau of Labor Statistics
Wages Are Rising in Clermont County

Clermont County, OH Average Annual Wages

1.6%  3.1%  1.6%

$43.0

Thousands of Dollars

Source: BLS, Data through June 2018

Cyclical Rise in Prices Indicated

Consumer Price Index for Health Insurance

9.1%  3.0%

138.1

Source: Bureau of Labor Statistics
Rising as Expected


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

The Long View

Prosperity in the Age of Decline

Source: Bureau of Economic Analysis, US Census Bureau
First in Forecasts Since 1948

A Model for the Future

US Industrial Production Index

12MMA
3MMA

Great Depression

Roaring 20s (3 recessions)

Source: FRB

Data Trends

Issues Government Will and Won’t Tackle

US Federal Government Receipts and Payments

Current Tax Receipts
Consumption Expenditures
Current Transfer Payments
Interest Payments

Source: BEA
90 Day Trial Offer
Receive monthly updates on the economy

Text TR TRIAL to 444999 for a 90 day trial of our Trends Report

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#CEOInsights

ITR ECONOMICS

ITR Economics Sales Team
ABOUT BRIAN
Brian has been delivering workshops and economic analysis seminars in 7 countries to thousands of business owners and executives for the last 35 years. During that period he has also been consulting with companies who need a domestic and global perspective on how to forecast, plan, and increase their profits based on business cycle trend analysis.

He is on the Board of Directors of the Ariens Company, a global leading manufacturer of outdoor power equipment, and a member of the Investment Committee for NorthStar Financial Services, CLS Investments in Omaha, Nebr.

ABOUT ITR ECONOMICS
Founded in 1948, ITR Economics is the oldest, privately-held, continuously operating economic research & consulting firm in the United States. With a long-term 94.7% accuracy rating, ITR Economics has forecast major economic events, such as the 2008 recession, well in advance and provides reliable industry and company forecasts tailored to client's needs. ITR Economics also offers economic webinars, subscription periodicals, consultative reports, and data collection services.

TESTIMONIALS
“His presentation is always a highlight of the event. ITR has such a solid track record of forecast accuracy that he has instant credibility. Just as important, Brian is a master of weaving together different economic indicators to give the audience solid advice in a way that is understandable and even entertaining! I fully expect that we will continue to look to ITR Economics for insight that our members can use to improve their competitive advantage.” - Steven T. King, CAE, President, Pet Industry Distributors Association

“Wow, what a fantastic talk Brian. Your perspective, advise, data, analysis, and presentation were world class. That was one of the best talks that I’ve ever attended. My CFO and I will be looking more and more at 3MMA/12MMA metrics within our industry as we get our hands on more data. By the way, you’ve got a great sense of humor that was mixed in hilariously into an extremely professional discussion about US economics.” - Dave Handman, President, Sustineo

“Brian, I must tell you that you are absolutely one of the most engaging and knowledgeable speakers that we have ever had on economics. I am going to invest in with both feet and then clear the decks in 2028. I don’t want to be behind you. Your mix on humor and knowledge makes for an incredible time. Thank you so much for your insight.” - Jack Fleischer, Hermitage Lighting

BOOKING INFORMATION
To book a speaker from ITR Economics, please call 603.796.2500 or email itr@itreconomics.com.

Visit www.itreconomics.com and stay in touch with us through our blog and social media.
**Want to reduce your risk when deciding where and when to allocate your resources?**

Join the thousands of businesses who are doing just that by using ITR’s forecasting tools ranging from monthly subscriptions to onsite consultations on industry trends that have a direct impact on your business.

**ITR has a 94.7% Forecast Accuracy.**

Our unmatched 94.7% forecast accuracy at four quarters out since 1985 allows us to help business executives make strategic movements with confidence. Our team of expert economists are ready to coach your team on how to use economic foresight to truly maximize your profitability. We will work directly with you to customize a program that will meet your specific planning needs.

**Driving practical and profitable business decisions.**

Our mission is to drive practical, profitable business decisions and strengthen your company through strategic use of industry trends. Thousands of business leaders from around the world are turning to ITR's subscriptions, consultative programs, and onsite speaking engagements for guidance in increasing their foresight of what is to come for their business.

<table>
<thead>
<tr>
<th>Initiative</th>
<th>EVP Series</th>
<th>Trends Report</th>
<th>Company Forecasts</th>
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<tr>
<td>Understanding events impacting business activity</td>
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<td>Resource Allocation</td>
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<td>Benchmarking for gauging internal success</td>
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<td>Increasing internal forecasting accuracy/ability</td>
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"ITR’s insight and ability to relate global and US leading and lagging indicators to our industry was astounding and quite informative. I highly recommend ITR to anyone interested in sound knowledge of future economic conditions."

*Jim Rohr, Co-Chairman, National Shipbuilding and Research Program*