## 2014 Forecast Results

<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Forecast</th>
<th>Result</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US GDP</strong></td>
<td>15</td>
<td>$16.098 Trillion</td>
<td>$16.317 Trillion</td>
<td>98.7%</td>
</tr>
<tr>
<td><strong>US Ind. Prod.</strong></td>
<td>13</td>
<td>101.5 (12MMA)</td>
<td>104.1</td>
<td>97.4%</td>
</tr>
<tr>
<td><strong>EU Ind. Prod.</strong></td>
<td>14</td>
<td>100.6 (12MMA)</td>
<td>101.5</td>
<td>99.1%</td>
</tr>
<tr>
<td><strong>Canada Ind Prod</strong></td>
<td>9</td>
<td>350.1 (12MMA)</td>
<td>C$357.1</td>
<td>98.0%</td>
</tr>
<tr>
<td><strong>China Ind Prod</strong></td>
<td>21</td>
<td>564.9 (12MMA)</td>
<td>563.6</td>
<td>99.8%</td>
</tr>
<tr>
<td><strong>US Housing</strong></td>
<td>12</td>
<td>955 Ths. Units</td>
<td>1.0 mils. Units</td>
<td>94.7%</td>
</tr>
<tr>
<td><strong>US Retail Sales</strong></td>
<td>16</td>
<td>$2.751 Trillion</td>
<td>$2.808 Trillion</td>
<td>98.0%</td>
</tr>
<tr>
<td><strong>US Employment</strong></td>
<td>13</td>
<td>144.9 Million</td>
<td>146.3 Million</td>
<td>99.0%</td>
</tr>
</tbody>
</table>

*ITR Economics provides the best economic intelligence to reduce risk and drive practical and profitable business decisions.*
### Data Preparation

<table>
<thead>
<tr>
<th>Date</th>
<th>Raw</th>
<th>3MMT</th>
<th>3/12</th>
<th>12MMT</th>
<th>12/12</th>
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<tbody>
<tr>
<td>Nov-13</td>
<td>1.4</td>
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</tr>
<tr>
<td>Feb-14</td>
<td>1.4</td>
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</tr>
<tr>
<td>Mar-14</td>
<td>1.5</td>
<td>4.4</td>
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<tr>
<td>Apr-14</td>
<td>1.3</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-14</td>
<td>1.3</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun-14</td>
<td>1.6</td>
<td>4.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul-14</td>
<td>1.6</td>
<td>4.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aug-14</td>
<td>1.5</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep-14</td>
<td>1.7</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-14</td>
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<td>18.0</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Nov-14</td>
<td>1.7</td>
<td>5.0</td>
<td>18.2</td>
<td>18.6</td>
<td>15.9%</td>
</tr>
<tr>
<td>Dec-14</td>
<td>1.7</td>
<td>5.0</td>
<td>18.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan-15</td>
<td>1.7</td>
<td>5.1</td>
<td>15.9%</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>Feb-15</td>
<td>1.6</td>
<td>5.0</td>
<td>13.6%</td>
<td>18.8</td>
<td></td>
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<tr>
<td>Mar-15</td>
<td>1.7</td>
<td>5.0</td>
<td>13.6%</td>
<td>19.0</td>
<td>26.7%</td>
</tr>
<tr>
<td>Apr-15</td>
<td>1.5</td>
<td>4.8</td>
<td>14.3%</td>
<td>19.2</td>
<td>25.5%</td>
</tr>
<tr>
<td>May-15</td>
<td>1.5</td>
<td>4.7</td>
<td>14.6%</td>
<td>19.4</td>
<td>25.2%</td>
</tr>
<tr>
<td>Jun-15</td>
<td>1.9</td>
<td>4.9</td>
<td>16.7%</td>
<td>19.7</td>
<td>22.4%</td>
</tr>
<tr>
<td>Jul-15</td>
<td>1.7</td>
<td>5.1</td>
<td>13.3%</td>
<td>19.8</td>
<td>20.0%</td>
</tr>
<tr>
<td>Aug-15</td>
<td>1.7</td>
<td>5.3</td>
<td>12.8%</td>
<td>20.0</td>
<td>18.3%</td>
</tr>
<tr>
<td>Sep-15</td>
<td>1.9</td>
<td>5.3</td>
<td>10.4%</td>
<td>20.2</td>
<td>15.4%</td>
</tr>
<tr>
<td>Oct-15</td>
<td>1.7</td>
<td>5.2</td>
<td>18.0%</td>
<td>20.3</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

#### 3/12 Rate-of-Change

\[
\text{Rate-of-Change} = \frac{\text{October 2015 3MMT}}{\text{October 2014 3MMT}} \times 100 - 100
\]

\[
= \frac{5.3}{4.8} \times 100 - 100 = 10.4\%
\]

#### 12/12 Rate-of-Change

\[
\text{Rate-of-Change} = \frac{\text{October 2015 12MMT}}{\text{October 2014 12MMT}} \times 100 - 100
\]

\[
= \frac{20.3}{18.0} \times 100 - 100 = 12.7\%
\]
US, Colorado and the Rocky Mountains Annual GSP Growth Rate
World GDP, Trillions of US $, Current Prices

- United States: 22.5%
- China: 13.4%
- Japan: 6.0%
- *Germany: 5.0%
- United Kingdom: 3.8%
- France: 3.7%
- Brazil: 2.8%
- Italy: 2.7%
- India: 2.4%
- Canada: 1.9%
- Korea: 1.8%
- Spain: 1.8%
- Mexico: 1.7%
- All Others: 25.2%

*77.302 Trillion US$
Percent of 2014 World GDP

Data Source: IMF, *IMF Estimated Figures
Interest Rates for Long-Term Government Bonds

<table>
<thead>
<tr>
<th>Country</th>
<th>Latest Yield</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>2.65%</td>
</tr>
<tr>
<td>Austria</td>
<td>0.88%</td>
</tr>
<tr>
<td>Belgium</td>
<td>0.90%</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.49%</td>
</tr>
<tr>
<td>Canada</td>
<td>15.80%</td>
</tr>
<tr>
<td>Denmark</td>
<td>0.91%</td>
</tr>
<tr>
<td>Finland</td>
<td>0.95%</td>
</tr>
<tr>
<td>France</td>
<td>0.60%</td>
</tr>
<tr>
<td>Germany</td>
<td>7.67%</td>
</tr>
<tr>
<td>Greece</td>
<td>1.19%</td>
</tr>
<tr>
<td>Ireland</td>
<td>1.63%</td>
</tr>
<tr>
<td>Italy</td>
<td>0.32%</td>
</tr>
<tr>
<td>Japan</td>
<td>0.32%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>0.77%</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3.37%</td>
</tr>
<tr>
<td>Portugal</td>
<td>2.47%</td>
</tr>
<tr>
<td>Russia</td>
<td>10.19%</td>
</tr>
<tr>
<td>Spain</td>
<td>1.77%</td>
</tr>
<tr>
<td>Sweden</td>
<td>0.74%</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.83%</td>
</tr>
<tr>
<td>UK</td>
<td>2.05%</td>
</tr>
<tr>
<td>US</td>
<td>-0.25%</td>
</tr>
</tbody>
</table>
Global Leading Indicators

Data Source: Markit Economics

[Graph showing EZ Comp PMI, EU Manufacturing PMI, and JP Morgan Global MFG PMI with values such as 3.4%, 3.1%, and -3.1%]

1/12 Rates-of-Change

Data Source: Markit Economics
US Industrial Production to ITR Leading Indicator™
Reported in *ITR Trends Report – ITR Advisor*

USIP – 12/12 Indicator - Monthly

![Graph showing US Industrial Production and ITR Leading Indicator over time from 1980 to 2020 with the indicator plotted on the right axis and USIP on the left axis.](image-url)
Non-Manufacturing Purchasing Managers Index

Above 50 Indicates expansion

Data Source: Institute for Supply Management
Nondefense Capital Goods
New Orders w/o Aircraft

R-O-C

MMT

'96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16 '18 '20

3/12
12/12
3MMT
12MMT

-60 -40 -20 0 20 40 60

-1500 -1250 -1000 -750 -500 -250 0

0.1% -4.5%

$836.0

Billions of Dollars

ITR Economics
Crude Oil Futures Prices to Natural Gas Future Prices

[Graph showing the price comparison between Crude Oil and Natural Gas from 1986 to 2020.]

Raw Data
US Consumption of Crude Oil & Petroleum Products to Real Gross Domestic Product

Data Trends

Data Sources: EIA, BEA
Euros per US Dollars

Data Source: Wall Street Journal

18.8%
10.4%
0.885

1/12
12/12
Actual
12MMA

'05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19

MMAR-O-C
Business Cycle Drivers

- Inflation
- Interest Rates
- Employment
- Consumer Activity
Consumer Price Index

Rates-of-Change

0.3%
0.0%
Employment – Private Sector

Private Sector Employment Growth  2.5%  C
Job Openings  21.0%  C
Involuntary Part Time Employment  -11.3%  D
Quit Rate – High

Annual Data Trend
Colorado Unemployment Rate

Sept 2015

5.1 US
4.0 CO
US Overall Wage Growth

Percent

Raw Data
Mortgage Rates to Federal Funds

Data Sources: Federal Reserve Board, WSJ
FOMC Member Interest Rate Projections

Fed Open Market Committee

September 2015

Data Source: Federal Reserve
Total Retail Sales (deflated)

- Total Retail Sales: $2.23 Trillions of Dollars
- Annual Growth Rate: 2.4%
- Monthly Growth Rate: 2.2%
- Fiscal Years: 2018-2020
- Data Source: ITR Economics
Private Chemical +103.8%
Warehouse +40.2%
Private Manufacturing +46.8%
1. Near-Sourcing
2. Technology
3. Capital vs. Labor
4. Energy
5. Consumer base
National Defense Expenditures to Defense Capital Goods New Orders

Expenditures

Orders

12/12 Rates-of-Change

ITR Economics
Long-Term Depression Drivers

• Demographics

• Inflation

• Health Care Costs / Entitlements

• US National Debt

2030 - 2040
Look for More Opportunities in These Sectors

- Energy Distribution
- Water Distribution/Conservation
- Infrastructure / Seaports
- Vocational Education
- Health Care
- Food
- Mexico
- Housing
- Printed Electronics
- Robotics
- Security
- 3-D Printing
- Natural Resources (Harvesting/Conserving)
- Entertainment
ITR Management Objectives™
Preparation for the Rise Ahead

1. Budget for the rise...do you have enough....
2. Invest in customer market research to reduce price sensitivity
3. Make sure your training and retention programs are top notch
4. Marketing and advertising spending increasingly effective
5. Drive efficiencies with technology
6. Hire sales people and leaders
7. Lock in costs toward the middle of 2016
8. Expand credit offerings to garner market share
9. What are you going to do to avoid 2019?
It’s About **YOU!**

YOUR RISK,

YOUR PROFITABILITY

FREE Consultation

Contact us Today!

ITR@ITReconometrics.com

603.796.2500