<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Forecast</th>
<th>Actuals</th>
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<tbody>
<tr>
<td><strong>US GDP</strong></td>
<td></td>
<td><strong>$15.818 Trillion</strong></td>
<td><strong>$15.966 Dec</strong></td>
<td><strong>0.7%</strong></td>
</tr>
<tr>
<td><strong>US Ind. Prod.</strong></td>
<td>10</td>
<td>99.9 (12MMA)</td>
<td>99.6 Dec</td>
<td>-0.3%</td>
</tr>
<tr>
<td><strong>EU Ind. Prod.</strong></td>
<td>20</td>
<td>101.9 (12MMA)</td>
<td>100.6 Dec</td>
<td>-1.3%</td>
</tr>
<tr>
<td><strong>Canada Ind Prod</strong></td>
<td>15</td>
<td>98.7 (12MMA)</td>
<td>97.8 Dec</td>
<td>-0.8%</td>
</tr>
<tr>
<td><strong>China Ind Prod</strong></td>
<td>9</td>
<td>522.6 (12MMA)</td>
<td>520.1 Dec</td>
<td>-0.5%</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>12</td>
<td>945 Ths Units</td>
<td>923 Dec</td>
<td>-2.3%</td>
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<tr>
<td><strong>Retail Sales</strong></td>
<td>18</td>
<td>$2.189 Trillion</td>
<td>$2.200 Dec</td>
<td>0.5%</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td>24</td>
<td>144.3 Million</td>
<td>143.9 Dec</td>
<td>-0.3%</td>
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</tbody>
</table>
US Total Industrial Production

1/12 Rates-of-Change

Nov 2013

Feb 2013

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

-15 -10 -5 0 5 10 15

-15 -10 -5 0 5 10 15

Nov 2013

Feb 2013

12/12
World GDP, Bils of US $, Current Prices

Source: IMF

Percent of 2012 World GDP

71.707 Trillion US$
### Data Preparation

<table>
<thead>
<tr>
<th></th>
<th>Raw</th>
<th>3MMT</th>
<th>3/12</th>
<th>12MMT</th>
<th>12/12</th>
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<tr>
<td>Jan-13</td>
<td>1.4</td>
<td></td>
<td></td>
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<tr>
<td>Feb-13</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Mar-13</td>
<td>1.5</td>
<td>4.4</td>
<td></td>
<td></td>
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<tr>
<td>Apr-13</td>
<td>1.4</td>
<td>4.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May-13</td>
<td>1.5</td>
<td>4.4</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Jun-13</td>
<td>1.3</td>
<td>4.2</td>
<td></td>
<td></td>
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<tr>
<td>Jul-13</td>
<td>1.3</td>
<td>4.2</td>
<td></td>
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</tr>
<tr>
<td>Aug-13</td>
<td>1.6</td>
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<td></td>
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<tr>
<td>Sep-13</td>
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<td>4.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-13</td>
<td>1.5</td>
<td>4.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov-13</td>
<td>1.7</td>
<td>4.8</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Dec-13</td>
<td>1.6</td>
<td>4.8</td>
<td>18.0</td>
<td></td>
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<td>1.7</td>
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<td>18.3</td>
<td></td>
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<tr>
<td>Feb-14</td>
<td>1.7</td>
<td>4.9</td>
<td>18.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-14</td>
<td>1.7</td>
<td>5.0</td>
<td>14.1%</td>
<td>18.6</td>
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</tr>
<tr>
<td>Apr-14</td>
<td>1.6</td>
<td>5.0</td>
<td>13.6%</td>
<td>18.8</td>
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<tr>
<td>May-14</td>
<td>1.7</td>
<td>5.0</td>
<td>13.2%</td>
<td>19.0</td>
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<tr>
<td>Jun-14</td>
<td>1.5</td>
<td>4.9</td>
<td>15.1%</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td>Jul-14</td>
<td>1.5</td>
<td>4.7</td>
<td>13.5%</td>
<td>19.4</td>
<td></td>
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<tr>
<td>Aug-14</td>
<td>1.9</td>
<td>4.9</td>
<td>14.1%</td>
<td>19.6</td>
<td></td>
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<tr>
<td>Sep-14</td>
<td>1.7</td>
<td>5.1</td>
<td>11.3%</td>
<td>19.8</td>
<td></td>
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<td>Oct-14</td>
<td>1.7</td>
<td>5.3</td>
<td>11.5%</td>
<td>20.0</td>
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<tr>
<td>Nov-14</td>
<td>1.9</td>
<td>5.3</td>
<td>10.1%</td>
<td>20.1</td>
<td></td>
</tr>
<tr>
<td>Dec-14</td>
<td>1.7</td>
<td>5.3</td>
<td>10.5%</td>
<td>20.3</td>
<td>12.7%</td>
</tr>
</tbody>
</table>

### 3/12 Rate-of-Change

\[ \text{Rate-of-Change} = \frac{\text{December 2014 3MMT}}{\text{December 2013 3MMT}} \times 100 - 100 \]

\[ = \frac{5.3}{4.8} \times 100 - 100 = 10.5\% \]

### 12/12 Rate-of-Change

\[ \text{Rate-of-Change} = \frac{\text{December 2014 12MMT}}{\text{December 2013 12MMT}} \times 100 - 100 \]

\[ = \frac{20.3}{18.0} \times 100 - 100 = 12.7\% \]
US Industrial Production to ITR Leading Indicator

US IP

Indicator

'80 '82 '84 '86 '88 '90 '92 '94 '96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16

-21 -14 -7 0 7 14 21

-21 -14 -7 0 7 14 21

Indicator - Monthly
US IP - 12/12

USIP – 12/12
Indicator - Monthly
Generating the Quantitative Forecast

Internal Trends

Leading Economic Indicators

ITR Long Term Business Cycle Theory

News and Market Observations
Average Annual Worker and Employer Contributions to Premiums and Total Premiums for Single Coverage, 1999-2013

* Estimate is statistically different from estimate for the previous year shown (p<.05).

Canada Sawmills and Wood Preservation

Billions of 2007 Chained Canadian $
Employment – Private Sector

Annual Data Trend

Employment Mills of Jobs
Consumer Price Index – All Items

Rates-of-Change

www.itreconomics.com
Crude Oil Futures Prices

Light & Sweet $ per Barrel, Data Trends

'92 '94 '96 '98 '00 '02 '04 '06 '08 '10 '12 '14 '16
0 25 50 75 100 125 150

102.59 98.49

RAW 12MMA

www.itreconomics.com
Average Hourly Wages for Production & Nonsupervisory Employees

MARGIN PRESSURE

3/12

12/12

'84 '85 '86 '87 '88 '89 '90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16

2.2%

2.1%
Mortgage Rates to Federal Funds

Raw Data

-2  2  6  10  14  18  22


Mortgage Rates
Federal Funds
Corporate Bond Prices

Rates-of-Change

3/12
12/12

-14.1
Delinquency Rates on Consumer Loans

Consumer Loan Delinquency Rate
Consumer Credit Card Delinquency Rate

10 Year Average

3MMA Data Trends
University of Michigan Consumer Expectations Index

12/12 Rate-of-Change

www.itreconomics.com
Total Retail Sales (deflated)
S&P500 Stock Prices Index

Data Trends

Source: Wall Street Journal
Corporate AAA Bond Prices to the S&P 500

Source: Wall Street Journal

Source: Wall Street Journal

www.itreconomics.com
<table>
<thead>
<tr>
<th>Architecture Billings Index</th>
<th>Value</th>
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<tbody>
<tr>
<td>Northeast Region Architecture Billings Index</td>
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<tr>
<td>Institutional Sector Architecture Billings Index</td>
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<td>Midwest Region Architecture Billings Index</td>
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<td>Commercial/Industrial Sector Arch. Billings</td>
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<td>Residential Sector Architecture Billings Index</td>
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<td>South Region Architecture Billings Index</td>
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<td>Architecture INQUIRIES Index</td>
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Existing Home Sales

R-O-C

MMT

3/12
12/12
12MMT
3MMT


Millions of Units

www.itreconomics.com
Multi Unit Housing Starts

Thousands of Units

www.itreconomics.com
South Housing Starts

Thousands of Units N.S.A.

'94  '96  '98  '00  '02  '04  '06  '08  '10  '12  '14  '16

-150 -120 -90 -60 -30  0  30  60  90  120  150

3/12  12/12  3MMT  12MMT

14.8  13.7  462.7

MMT

R-O-C

3/12  12/12  3MMT  12MMT

www.itreconomics.com
Northeast Housing Starts

Thousands of Units N.S.A.

www.itreconomics.com
Home Improvement Construction Spending

Billions of $
# Construction Segments Annual Trend

<table>
<thead>
<tr>
<th>Sector</th>
<th>Phase</th>
<th>Year-over-year</th>
<th>Annual Data Trend In $$$</th>
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<tbody>
<tr>
<td>Total Public Construction</td>
<td>A</td>
<td>-2.2</td>
<td>Rising</td>
</tr>
<tr>
<td>Total New Construction</td>
<td>B</td>
<td>5.2</td>
<td>Rising</td>
</tr>
<tr>
<td>Total Health Care Facilities</td>
<td>D</td>
<td>-3.3</td>
<td>Declining</td>
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<tr>
<td>Private Medical Building Construction</td>
<td>C</td>
<td>5.9</td>
<td>Declining</td>
</tr>
<tr>
<td>Primary &amp; Secondary Bldg Construction</td>
<td>C</td>
<td>5.2</td>
<td>Rising</td>
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<td>Private Education Building</td>
<td>B</td>
<td>0.7</td>
<td>Rising</td>
</tr>
<tr>
<td>Total Office Building</td>
<td>B</td>
<td>1.2</td>
<td>Rising</td>
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<tr>
<td>Private Office Bldg Construction</td>
<td>B</td>
<td>10.1</td>
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<td>Private Lodging</td>
<td>B</td>
<td>30.5</td>
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<tr>
<td>Total Commercial Building</td>
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<td>Rising</td>
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<tr>
<td>Multi-Family Residential</td>
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<td>41.7</td>
<td>Rising</td>
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<tr>
<td>Airport Passenger Terminals</td>
<td>B</td>
<td>12.5</td>
<td>Rising</td>
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</table>
Commercial Buildings Construction

Billions of $
Total U.S. Public Debt (% of GDP)
Sequestration

Projected total federal spending

- With sequestration
- Without sequestration

Source: John Taylor, Bloomberg

Difference between the two (impact on spending)

Source: John Taylor
Health Care Spending

Average spending on health per capita ($US PPP)

Total expenditures on health as percent of GDP

Source: OECD Health Data 2010 (Oct. 2010)
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Costs by Age Categories

Healthcare Costs by Age

U.S. is spending much more for older ages


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Prosperity in the Age of Decline
How to Lead Your Business and Preserve Wealth Through the Coming Business Cycles

Brian Beaulieu | Alan Beaulieu

Published by Wiley Press

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July 2014

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U.S. Dependence on Foreign Oil Declining
Net imports as a share of domestic consumption

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tr>
<td>%</td>
<td>60.3%</td>
<td>59.8%</td>
<td>58.1%</td>
<td>56.8%</td>
<td>51.3%</td>
<td>49.1%</td>
<td>44.9%</td>
<td>40.2%</td>
<td>32.3%</td>
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Source: Energy Information Administration
US Manufacturing as a % of GDP (Value Added)

3MMA
<table>
<thead>
<tr>
<th>Company</th>
<th>Company</th>
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</thead>
<tbody>
<tr>
<td>Apple</td>
<td>Rolls Royce</td>
</tr>
<tr>
<td>Yamaha</td>
<td>Honda</td>
</tr>
<tr>
<td>Michelin</td>
<td>Lenovo</td>
</tr>
<tr>
<td>Wham-O</td>
<td>Airbus</td>
</tr>
<tr>
<td>Bayer Chemical</td>
<td>Toshiba</td>
</tr>
<tr>
<td>Caterpillar</td>
<td>Toyota</td>
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<tr>
<td>GE</td>
<td>Flextronics</td>
</tr>
<tr>
<td>NCR</td>
<td>Siemens</td>
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US Carbon Dioxide Emissions

Source: EIA.gov
Growing Income Disparity?

<table>
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<th>Year</th>
<th>Percentage</th>
<th>$0-50k</th>
<th>$50k-200k</th>
<th>$200,000 and over</th>
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<tr>
<td>1967</td>
<td>64.2%</td>
<td>61.4%</td>
<td>39.0%</td>
<td>0.6%</td>
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<tr>
<td>1970</td>
<td>63.6%</td>
<td>50.1%</td>
<td>45.9%</td>
<td>3.8%</td>
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</table>

Source: Census Bureau
Preparing for 2014-2017

1. Positive leadership modeling (culture turns to behavior)
2. Invest in customer market research (know what they value)
3. Training programs (people, process, internal metrics)
4. Review and uncover competitive advantages
5. Spend $ on new products, marketing, advertising
6. Improve efficiencies with investment in technology and software
7. Check systems for readiness to accommodate increased activity
8. Add Sales Staff and Hire Top People
9. Lock in costs
10. Judiciously examine credit
11. Work on “what’s next”
Opportunities:

► Energy Distribution
► Water Distribution/Conservation
► Exports from U.S.
► Vocational Education
► Health Care
► Food
► Mexico
► Housing
► Printed Electronics
► Alcohol
► Security
► 3-D Printing
► Natural Resources (Harvesting/Conserving)
► Entertainment
8 Must Watch Items

- ITR Leading Indicator
- Housing Starts
- Bond Market
- US Leading Indicator
- Purchasing Managers Index
- Retail Sales
- Employment
- Nondefense Capital Goods New Orders

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- Delivered Monthly

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Subject: “Brian is Cool”
With your contact information