The Road Ahead
Meeting Supply Chain Challenges

MHI 2013 ANNUAL MEETING AND EXECUTIVE CONFERENCE
SEPTEMBER 29 - OCTOBER 2, 2013 / ORLANDO, FL
## 2012 Forecast Results

<table>
<thead>
<tr>
<th></th>
<th>Duration</th>
<th>Forecast</th>
<th>Actuals</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP</td>
<td>12</td>
<td>$13.593 Trillion</td>
<td>$13.648</td>
<td>0.4%</td>
</tr>
<tr>
<td>US Ind. Prod.</td>
<td>31</td>
<td>97.2 (12MMA)</td>
<td>97.2</td>
<td>0.0%</td>
</tr>
<tr>
<td>EU Ind. Prod.</td>
<td>12</td>
<td>100.4 (12MMA)</td>
<td>98.8</td>
<td>-1.6%</td>
</tr>
<tr>
<td>CA Ind. Prod.</td>
<td>8</td>
<td>96.7</td>
<td>96.7</td>
<td>0.0%</td>
</tr>
<tr>
<td>Retail Sales</td>
<td>30</td>
<td>$2.186 Trillion</td>
<td>$2.131</td>
<td>-2.5%</td>
</tr>
<tr>
<td>Housing</td>
<td>6</td>
<td>743 Ths Units</td>
<td>780</td>
<td>5.0%</td>
</tr>
<tr>
<td>Employment</td>
<td>33</td>
<td>143.9 Million</td>
<td>142.5</td>
<td>-1.0%</td>
</tr>
<tr>
<td>CPI</td>
<td>9</td>
<td>2.8%</td>
<td>2.1%</td>
<td></td>
</tr>
</tbody>
</table>
US Industrial Production to Gross Domestic Product

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

-14.6%  -12  -10  -8  -6  -4  -2  0  2  4  6  8  10  12

-7.1%  -5.3%  -3.1%  2.0%
• Annual Trend: 98.2
• Phase: C
• Year-over-Year: 2.4%

Industry Outlook 2013: 2.6%
Real Gross Domestic Product

Trillions of $

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### Data Preparation

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

\[
\text{Rate-of-Change} = \frac{\text{July } 2013 \, 3MMT}{\text{July } 2012 \, 3MMT} \times 100 - 100
\]

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

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

\[
\text{Rate-of-Change} = \frac{\text{July } 2013 \, 12MMT}{\text{July } 2012 \, 12MMT} \times 100 - 100
\]

\[
= \frac{20.3}{18.0} \times 100 - 100 = 12.7\%
\]
Phase 2 – Accumulate the Inputs

Company A

Indicator - 1/12

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

-45 -30 -15 0 15 30 45

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

-21 -14 -7 0 7 14 21

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US Industrial Production Index to Material Handling Equipment New Orders

12/12 Rates-of-Change
US Industrial Production to Beverage Production

12/12 Rates-of-Change

3.3%
US Industrial Production to Wholesale Trade Durable Goods

12/12 Rates-of-Change

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US Industrial Production to Wholesale Trade Nondurable Goods

12/12 Rates-of-Change

US IP

Wholesale

11/11 Rates-of-Change

3.6%

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US Industrial Production to Foods Production

12/12 Rates-of-Change
US Industrial Production to Total Manufacturing Production Index NSA

12/12 Rates-of-Change


Manufacturing

US IP

-15 -14 -13 -12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8

2.6%
2.4%

2013 2014 2015 2016

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15.0% B

US Industrial Production to Industrial Machinery New Orders

12/12 Rates-of-Change
US Industrial Production to North America Light Vehicle Production

Index

Production


5.1%
US Industrial Production to Mexico Light Vehicle Production

US

Mexico

12/12 Rates-of-Change
US/Global Recovery – Still Some Life Left

- Leading indicators pointing up
- Stimulative monetary policy
- Employment rising (companies right-sized)
- Banks are lending
- Retail Sales are rising
- Construction is improving
- Deficit spending continues
Delinquency Rates on Consumer Loans

- Consumer Loan Delinquency Rate
- Consumer Credit Card Delinquency Rate

3MMA Data Trends

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One (or many) bright spot(s): the shale ‘gale’

Source: EIA Annual Energy Outlook, 2008 to 2011
US Manufacturing as a % of GDP (Value Added)

3MMA

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US Carbon Dioxide Emissions

Source: EIA.gov

Oct 1995: 5450 MMT
Dec 2012: 5289.9 MMT

Million Metric Tons added
Commodity Price Index

Steel: $365 per Gross Ton
Oil: $92 per Barrel
Copper: $3.29 per Pound

3MMA Index Dec 2009=100
Not out of the woods yet: Concerns for 2014

- Stagnant wage growth
- Ongoing high unemployment
- Food, fuel and rent inflation
- Higher payroll and Affordable Care Act taxes
- Unclear deficit reduction plan
- Looming bond and stock bubble
International Comparison of Spending on Health, 1980-2008

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

Sequestration

Projected total federal spending

- With sequestration
- Without sequestration

Difference between the two (impact on spending)

Source: John Taylor, Bloomberg
Budget watchers expect a rosier fiscal picture in the coming years, but large challenges loom as Baby Boomers age. Federal spending and revenue as a percentage of U.S. gross domestic product:

- **Outlays**
  - Average outlays, 1973 to 2012 (21.04%)

- **Revenue**
  - Average revenue, 1973 to 2012 (17.90%)

Source: Congressional Budget Office

The Wall Street Journal

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Europe Imports and Exports

Export Volume
Import Volume

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Global Leading Indicators

1/12 Rates-of-Change

OECD Total
EU Manufacturing PMI
JP Morgan Global MFG PMI

added
Nondefense Capital Goods
New Orders w/o Aircraft

Billions of $
US Leading Indicator

Graph showing the trend of the US Leading Indicator from 1994 to 2016. The actual values are represented by an orange line, while the 12-month moving average (12MMA) is shown in blue. The graph indicates a significant peak around 2007, followed by a decline and then recovery.

The actual value in 2016 is indicated as 94.6.
Corporate Bond Prices

Rates-of-Change

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Housing Affordability Index

Monthly Index

Source: National Association of Realtors

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US Industrial Production to Warehouse Buildings Construction, Manufacturing Buildings Construction and Private Food, Beverage and Tobacco Construction

Annual data trends

- Warehouse: 15.4% B
- Buildings: Mfg 2.8% C, -3.9% D
- Food: 6.9% B
# Construction Segments Annual Trend

<table>
<thead>
<tr>
<th>Sector</th>
<th>Phase</th>
<th>Year-over-year</th>
<th>Annual Data Trend In $$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Public Construction</td>
<td>D</td>
<td>- 3.2%</td>
<td>Declining</td>
</tr>
<tr>
<td>Total New Construction</td>
<td>C</td>
<td>8.0%</td>
<td>Rise slowing</td>
</tr>
<tr>
<td>Total Health Care Facilities</td>
<td>B</td>
<td>0.1%</td>
<td>Mild Rise</td>
</tr>
<tr>
<td>Private Medical Building Construction</td>
<td>C</td>
<td>11.5%</td>
<td>Rising</td>
</tr>
<tr>
<td>Primary &amp; Secondary Bldg Constr.</td>
<td>B</td>
<td>4.8%</td>
<td>Rising</td>
</tr>
<tr>
<td>Private Education Building</td>
<td>C</td>
<td>6.1%</td>
<td>Decline</td>
</tr>
<tr>
<td>Total Office Building</td>
<td>C</td>
<td>4.9%</td>
<td>Rise slowing</td>
</tr>
<tr>
<td>Private Office Bldg Construction</td>
<td>B</td>
<td>18.5%</td>
<td>Rise slowing</td>
</tr>
<tr>
<td>Private Lodging</td>
<td>C</td>
<td>23.5%</td>
<td>Rising</td>
</tr>
<tr>
<td>Total Commercial Building</td>
<td>B</td>
<td>2.1%</td>
<td>Rising</td>
</tr>
<tr>
<td>Multi-Family Residential</td>
<td>B</td>
<td>53.0%</td>
<td>Rising</td>
</tr>
<tr>
<td>Airport Passenger Terminals</td>
<td>B</td>
<td>9.8%</td>
<td>Accelerated Rise</td>
</tr>
</tbody>
</table>

The phases are as follows:
- **A**: Recovery
- **B**: Accelerating Growth
- **C**: Slower Growth
- **D**: Recession
Look for More Opportunities in these Sectors

- Energy Distribution
- Water Distribution/Conservation
- Exports from U.S.
- Vocational Education
- Health Care
- Food
- Mexico
- Housing
- Funeral Services
- 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

Available from ITR via ITR Trends Report, the ITR Advisor, or on the web
Phase Management Objectives™

Preparing for 2013-2015

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”
Complimentary Copy of the ITR Advisor

- Concise 4 Page Report
- Excellent Economic “Snap Shot”
- Consists of Current Events, Brief Industry Segments, Snap Shot Indicators, Readers' Questions, Fed Notes, ITR Opportunity Index, and more
- Delivered Monthly

Email: kimberly@ITReconomics.com
Subject: “Alan is Cool”
With your contact information
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MHI would like your feedback on this year’s lineup of Executive Conference speakers. We will use this information in planning future programming and events.

Please pick up a flyer to scan the QR code or go to: www.mhi.org/surveys to complete a short, one-question survey for this session.

Thank you.
Alan Beaulieu

One of the country’s most informed economists, Alan Beaulieu is a principal of ITR Economics™ where he serves as President. He leads the company’s European office and serves as chief economist for numerous US and European trade associations. He is co-author of *Make Your Move*, a book on profiting in business cycle changes, and is a contributing editor for *Industry Week* magazine.

**Rave Reviews**

“I was at the ACG meeting in St. Louis this past Friday where you presented…Your program was really fantastic…Thank you for an honest (and very well documented and intelligent!) and encouraging presentation…You truly inspired me.”

Kevin Miquelon, President
Pfoodman Holdings, LLC

“His insight into our business, a track record of accurate forecasting, and unparalleled knowledge of global markets has earned him the respect and appreciation of key business leaders in our industry.”

Hans Hanegreefs, Executive Vice President
European Power Transmission Distributors Association

“The lessons and strategies you shared as part of the Strategies for a Tough Economy panel were of enormous value to the more than 700 entrepreneurs and small business partners in attendance.”

Mark Herlyn, Vice President, Advertising,
*New York Times*

“I was in the audience -- mouth wide open, jaw dropped -- listening to your entertaining, inspiring and surprising economic reflections yesterday Thank you for giving such a candid and intelligent take on the recovery and what it will take to be successful in the next few years.”

Lida Citroën
LIDA360, LLC

**About Alan**

Since 1990, Alan Beaulieu has given over 5,000 presentations to business leaders, corporate executives, and trade association members at meetings and conferences across the globe. He has spoken to thousands of business leaders in sectors such as manufacturing, healthcare, distribution, real estate, construction, and technology.


**About Today’s Presentation**

Alan’s presentations cover a wide variety of topics including short- and long-term global economic forecasts, regional economic updates, an outlook on inflation, and the relationship of political events and economic growth. He details what economic indicators executives should follow and provides proven strategies for leveraging economic forecasts at the company level.

**About ITR Economics™**

Founded in 1948, ITR Economics is the oldest, privately-held, continuously operating economic research and 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 the client’s needs. ITR Economics also offers economic webinars, subscription periodicals, consultative reports, and data collection services.

**Contact Us**

To book a speaker from ITR Economics, please call Erin at 603.796.2500.

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ITR Economics™ mission is to provide accurate, objective analysis of entire economies and specific markets in order to assist American and International companies with timely and effective business decisions. A brief description of our services follows.

**ITR Trends Report™**

Trends, forecasts, analysis, charts, and text for the US, major foreign economies, and specific markets, commodities and exchange rates are provided monthly via the ITR Trends Report.

Want to see where a trend is taking us? You will through the ITR Trends Report. When will the trend turn, how high is high, and how low is low are some of the questions answered each month for a plethora of economic factors.

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We take your company’s sales data history, convert it into a rate-of-change format, chart the data against leading indicators and U.S. market indicators, analyze the results, and present you with your own company charts, giving you a view of the future. We determine which indicators lead your business and by how many months. A follow-up phone consultation is included. We make it easy to keep the charts current from our website. A Trendcast costs $4500.00. To schedule a Trendcast, please call Kimberly at 603-796-2500.

**Consulting Services:** ITR Economics provides a variety of consulting services from quarterly company and market reports to due diligence reports to company and market/industry forecasts.

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We offer 3-year company forecasts which give you revenue estimates quarter by quarter. These are delivered as excel files and can be updated for years to come. A phone consultation with your management team is also included in the price of $4800.00.

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- Long-term views for key market sectors
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- Executive summary
- "Trends Report at a Glance" summary
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If applicable, who was the presenter at the event you attended?_____________