Weekly Chemistry and Economic Trends

ACC Economics & Statistics
21 August 2015

Macroeconomic Status

Our running tab of positive indicators for the macroeconomic status was 15 out of 20 this week. Thus, we continue to post a green banner.

Consumer Prices ▲0.1%; ▲0.2% Y/Y
Existing Home Sales ▲2.0%; ▲10.3% Y/Y
Housing Starts ▲0.2%; ▲10.1% Y/Y
Building Permits ▼16.3%; ▲7.5% Y/Y
Leading Economic Indicators ▼0.2%; ▲5.0% Y/Y
Empire State Survey ▼18.8 points to -14.9
Philly Fed Survey ▲2.6 points to +8.3

The reports for the U.S. economy were generally positive this week. The consumer price report shows that inflation remains well contained. The housing reports indicate that existing homes sales and housing starts continued to build momentum, though building permits retreated. Single family starts rose to the highest level in nearly eight years while existing home sales hit pre-recession levels. Two regional surveys were released with New York manufacturers experiencing decline while manufacturers' activity in the Philadelphia region expanded.

In general, economists' expectations for the rest of 2015 and 2016 remain positive although our forecasters are more muted in their outlook. The LEI slipped in July (largely due to weak building permit figures) but continue to point to moderate growth through the remainder of the year. Our chemicals activity barometer (CAB) will be released next Tuesday and will provide insight from the August data.

Beyond the U.S., there has been continued news emanating from China signaling a pronounced slowdown (and even decline) among many indicators. The recent retreat in energy prices reflects this in addition to continued over-supply in oil markets. In Europe, PMI data for August suggest that the Eurozone economy continues to improve, despite the slowdown in China and other emerging markets.

Business of Chemistry Status

For the business of chemistry, the indicators bring to mind a green banner for basic and specialty chemicals.

Oil ▼$46.26 (Thursday)
Natural Gas ▼$2.71 (Thursday)
Railcar Loadings ▼1,658 from a week ago; ▼0.4% Y/Y (13-week moving average)
U.S. CPRI ▲0.3%; ▲3.7% Y/Y
U.S. Specialty Chemicals Market Volumes ▲0.8%; ▼0.1% Y/Y

Turning to chemistry, U.S. regional production rose in July, with the largest gains in the Gulf Coast and Southeast regions. Compared to last year, chemical production remained ahead in all regions. After six months of declines, U.S. specialty chemicals market volumes entered the 3rd quarter on a stronger note. Out of the 28 specialty chemical segments that we monitor, 25 expanded in July. Open our full report for more details.

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U.S. CPRI

ACC's U.S. Chemical Production Regional Index (U.S. CPRI) rose by 0.3% in July, following a revised 0.2% gain in June and flat growth in May.

Over the same period, chemical production by segment was mixed. There were gains in the output of organic chemicals, inorganic chemicals, synthetic rubber, plastic resins, agricultural chemicals and pharmaceuticals. These gains were offset, however, by declines in the production of industrial gases, consumer products, coatings, manufactured fibers, and other specialties.

Production Volumes % Ch. Y/Y, 3MMA	Apr-15	May-15	Jun-15	Jul-15
Total - United States	**4.5**	**4.3**	**4.1**	**3.7**
Gulf Coast	2.4	2.6	3.3	3.8
Midwest	4.4	4.1	3.8	3.5
Ohio Valley	4.1	4.0	4.3	4.1
Mid-Atlantic	5.0	4.5	3.9	3.5
Southeast	4.1	4.0	3.9	3.6
Northeast	6.1	5.4	4.6	3.9
West Coast	4.8	4.4	3.8	3.3

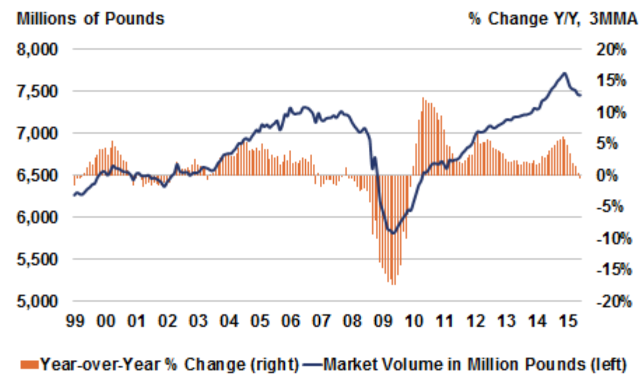
Nearly all manufactured goods are produced using chemistry in some form or another. Thus, manufacturing activity is an important indicator for chemical production. On a three-month-moving average (3MMA) basis, manufacturing activity edged higher by 0.2% in July, following gains in May and June. Production expanded in several chemistry-intensive manufacturing industries, including motor vehicles, construction supplies, computers, plastic products, and furniture.

Compared to July 2014, U.S. chemical production was ahead by 3.7% on a year-over-year (Y/Y) basis, a weakening trend. Chemical production remained ahead of year ago levels in all regions.

U.S. SPECIALTY CHEMICALS MARKET VOLUMES

ACC also reported that, following 6 months of declines, U.S. specialty chemicals market volumes entered the 3rd quarter on a stronger note, rising 0.8% in July. Market activity remains 2.6% from its December peak. Thus far in 2015, weakness in oilfield chemicals and other segments have weighed on overall volumes. Of the 28 specialty chemical segments we monitor, 25 expanded in July. This is up from 11 in June and only eight in May. Of the remaining segments in July, two declined and one was flat. The segments experiencing large gains (1.0% and over) in market volumes included: adhesives and sealants, antioxidants, biocides, catalysts, construction chemicals, electronic chemicals, foundry chemicals, mining chemicals, paint additives, paper additives, plastic additives, plasticizers, and rubber processing chemicals.

Total Specialty Chemical Market Volume



Source: American Chemistry Council

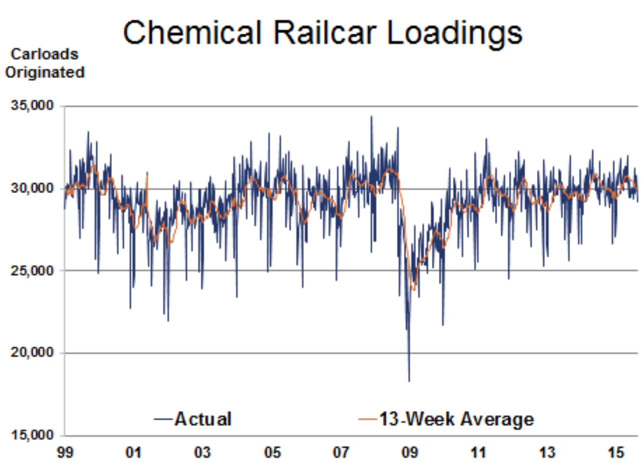
Market Volumes (% Change Y/Y - 3MMA)	Apr 15	May 15	June 15	July 15
Total Specialties	**2.3**	**1.3**	**0.5**	**-0.1**
Adhesives & Sealants	4.7	5.3	5.4	3.9
Antioxidants	7.6	7.4	6.6	6.0
Biocides	5.5	4.7	4.4	4.1
Catalysts	2.8	3.0	3.2	3.2
Coatings	4.1	3.6	3.6	3.2
Construction Chemicals	2.3	3.2	4.7	4.8
Corrosion Inhibitors	2.7	1.2	0.1	-0.6
Cosmetic Additives	14.8	12.7	11.7	10.5
Dyes	4.1	3.5	2.8	2.7
Electronic Chemicals	12.9	13.7	13.1	13.0
Flame Retardants	7.1	5.6	4.5	3.6
Flavors & Fragrances	6.8	6.2	5.6	5.3
Food Additives	2.5	2.9	2.5	2.8
Foundry Chemicals	3.3	2.2	1.1	0.3
Industrial & Institutional Cleaners	2.8	2.8	2.6	2.5
Lubricant Additives	2.1	3.4	4.4	3.9
Mining Chemicals	-2.2	-4.7	-6.1	-6.4
Oilfield Chemicals	-7.2	-12.1	-15.3	-17.0
Paint Additives	-3.2	-0.8	2.3	2.1
Paper Additives	-1.0	-0.8	-1.7	-1.1
Pigments	-2.0	-2.0	-1.8	-2.4
Plastic Additives	-0.4	-0.5	-1.2	-1.3
Plasticizers	-1.0	-1.2	-2.0	-2.3
Plastic Compounding	4.4	3.4	2.4	2.4
Printing Ink	4.1	4.5	4.5	4.1
Rubber Processing	6.0	7.0	6.2	6.1
Textile Specialties	5.3	4.0	3.7	3.1
Water Management Chemicals	4.9	4.4	4.0	3.7

The index stood at 106.5% of its average 2012 levels. This is equivalent to 7.52 billion pounds. The overall specialty chemicals volume index was off 0.1% Y/Y on a 3MMA basis. Year-over-year comparisons were generally in the 4.0% to 6.8% range during 2012-2014 but since February 2015, they have been below that range as the downturn in the oil and gas sector affected headline volumes. Weakness has spread to other segments as well. Still, on a Y/Y basis, gains are fairly widespread among most market and functional specialty chemical segments. Compared to last year, July volumes were up in 21 segments and down in only seven segments. However, with few exceptions, year-earlier comparisons have been moderating.

Chemistry directly touches over 96% of all manufactured goods and trends in these specialty chemical segments provide a detailed view of trends in manufacturing. The data represent the sales volume of various specialty chemical markets indexed where the average 2012 volume is equal to 100. Thus, a current reading of 106.5, for example, implies that the market volume of that segment is 6.5% above the average 2012 volumes. The data include 28 market and functional specialty chemical segments. There is some duplication. For example, pigments (a functional market) are included in paint additives, plastic additives, and other market-oriented specialty chemicals. These specialty chemical market indexes cover the U.S. markets for market and functional specialty chemical segments and are based upon the synthesis of annual market research data and monthly economic data. A spreadsheet with monthly history back to January 1997 as well as notes on the methodology is available for ACC members on MemberExchange.

CHEMICAL RAILCAR LOADINGS

According to the Association of American Railroads (AAR), for the week ending 15 August (week 32), railcar loadings of polymers and basic chemicals (blue line) fell by 1,658 to 29,196 railcars. Compared to the same week last year, loadings were off 3.6% Y/Y but were up 0.3% YTD. Loadings have been on the rise for seven of the last 13 weeks.



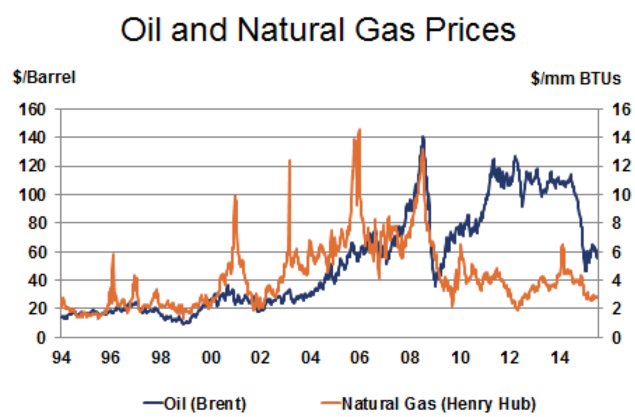
Source: Association of American Railroads

The railcar loadings data are the best 'real time' indicator of industry — especially basic chemicals and polymers — activity. Because the data are fairly erratic, we employ a moving average to smooth out seasonal irregularities. The 13-week moving average of railcar loadings is down slightly 0.4% Y/Y, reflecting somewhat steady activity over the past several months.

ENERGY

Natural gas inventories rose by 53 BCF during the week ending 14 August according to the Energy Information Administration (EIA). The slightly below-average build brings inventories to 3,033 BCF, 19.2% above this time last year and 2.7% above the five-year average. Inventories remain within the five-year historical range.

With concerns over weak global economic growth and continued over-supply, **oil prices** declined this week, closing at $46.26 per barrel yesterday (Thursday). A year ago, oil was $99.92 per barrel. Thus, recent prices represent a 53.7% Y/Y decline. With strong gains in building stocks, **natural gas prices** (the benchmark Henry Hub), closed at $2.71 per million BTUs on Thursday, down from $3.88 a year ago. Thus, recent prices represent a 30.2% Y/Y decline.



Source: Energy Information Administration

At 17.1, the ratio of oil prices to natural gas <u>improved</u> from 16.4 a week ago. One year ago, the ratio was 25.7. As a rough rule, when the ratio is above 7, the competitiveness of Gulf Coast-based petrochemicals and derivatives vis-à-vis other major producing regions is enhanced. The ratio has been above 7 for several years. In the US, nearly 90% of ethylene, for example, is derived from natural gas liquids while in Western Europe, over 85% is derived from naphtha, gas oil and other light distillate oil-based products. Historically, other factors (co-product prices, exchange rates, capacity utilization, etc.) have played a role in competitiveness as well. The current ratio is favorable for US competitiveness and exports of petrochemicals, plastics and other derivatives.

According to Baker-Hughes, for the week ending 14 August the North American **natural gas rig count** fell by two to 211 rigs. One year ago the rig count was 321 rigs. During the same week, the **oil rig count** rose by two to 672 rigs. One year ago the rig count was 1,589 rigs.

SURVEY OF FORECASTERS

Every month, ACC's Economics & Statistics Department collects the forecasts from a number of economic professionals who have a track record for accuracy and expert knowledge of manufacturing. Most, from industrial companies or consultancies, have expertise in the dynamics of the manufacturing sector. In the accompanying table, the data presented are strict averages of their input.

August Economic Forecasters Survey Results *% change Y/Y* *(Unless noted otherwise)*	**12**	**13**	**14**	**15**	**16**
GDP	2.2	1.5	2.4	2.3	2.7
Consumer Spending	1.5	1.7	2.7	3.1	3.0
Business Investment	9.0	3.0	6.2	2.7	4.7
Industrial Production	2.8	1.9	3.7	2.0	2.6
Light Vehicle Sales (mm)	14.4	15.5	16.5	17.1	17.1
Housing Starts (mm)	0.78	0.93	1.01	1.12	1.31
Consumer Prices	2.1	1.5	1.6	0.3	2.0
10-Year Treasury Notes (%)	1.80	2.35	2.54	2.49	3.15
Unemployment Rate (%)	8.1	7.4	6.2	5.3	5.0
$/Euro	1.29	1.33	1.33	1.10	1.09

Our economists expect the economy in 2015 to rise by only 2.3% in 2014, off 0.2 percentage points from expectations last month. Consumer spending is expected to rise 3.1%, off 0.2 percentage points from last month. In contrast, the outlook for business investment retreated by 0.8 percentage points to an expected gain of 2.7% this year. Expectations for light vehicle sales are still at 17.1 million units, up by 200,000 units from last month. Expectations for 2015 housing starts are for 1,117,000 units, up 8,000 units from last month's survey. Expectations for inflation include a 0.3% rise in headline consumer prices. With weakness in the oil and gas sector, industrial production is expected to rise only 2.0% in 2015, off 0.3 percentage points from last month. Industrial output is a more meaningful benchmark than GDP for comparing performance of basic and specialty chemicals and the effects of the higher U.S. dollar are clearly being manifested in the forecasters' outlook. The unemployment rate is expected to average 5.3% for the year, off slightly from last month. The 10-year Treasury note is expected to average 2.49% in 2015.

In general, expectations for 2016 remain positive. Economic growth is expected to average 2.7%. Growth will be led by increased business investment, which is anticipated to grow 4.7%, a gain that is off 0.4 percentage points from last month. Consumer spending is expected to rise 3.0%, a level up 0.1 percentage points from last month. Overall consumer prices are expected to rise 2.0% in 2016 and the unemployment rate is expected to average 5.0%. The former is the same as last month while the latter is off 0.1 percentage points from last month. The 10-year Treasury note is expected to average 3.15% in 2016. Turning to the real economy, light vehicle sales are expected to hold steady at 17.1 million units in 2016 and housing starts will rise to 1.31 million. Expectations for housing starts were revised down by 4,000 units from last month's survey. The forecasters expect a 2.6% gain for industrial production in 2016. This is off 0.3 percentage points from last month.

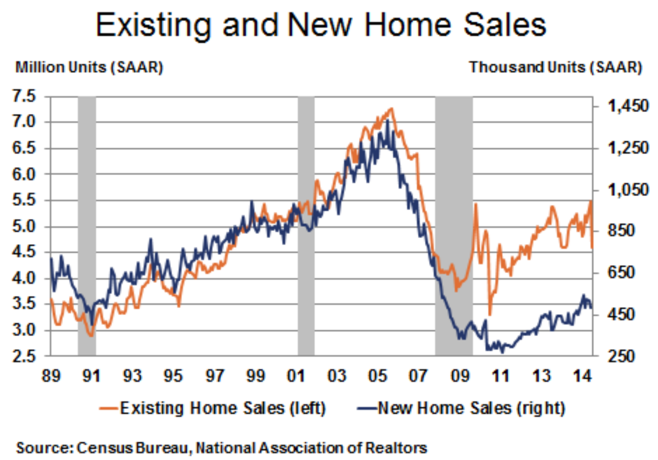
The latest forecasters' survey results (including the range of responses, historical data and farther forecasts) are available on MemberExchange for ACC members (see details under For More Information).

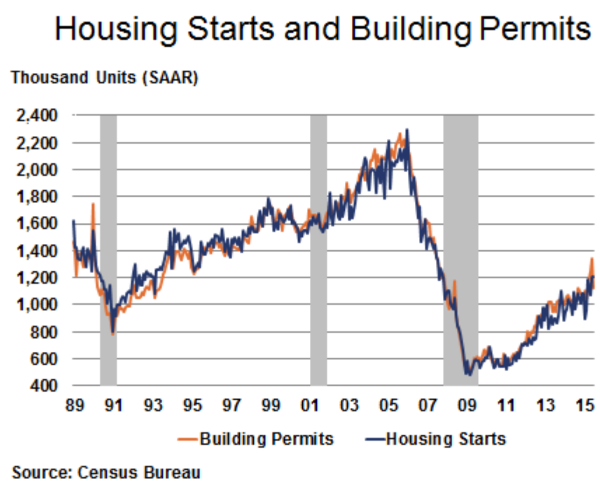
INDICATORS IN DETAIL

Note that economic statistics tend to be somewhat erratic in nature. Seasonality often plays a role and one must be careful in placing too much emphasis on a single month's figures. Analysts often use a three-month moving average (3MMA) or employ Y/Y comparisons to deal with the volatility.

According to the Bureau of Labor Statistics (BLS) **consumer prices** increased 0.1% in July. This marks a deceleration from June's 0.3% gain. Energy prices rose at a similar pace and were led by higher gasoline prices. Most other energy sources declined during the month. Food prices rose 0.2% in July. Consumer prices less food and energy -- or core consumer prices – also increased 0.1% in July, after a 0.2% increase in June. Prices for shelter, lodging, apparel and medical care advanced largely offsetting declines in prices for air travel, light vehicles, and household furnishings and operations. Over the last 12 months, headline consumer prices increased 0.2% Y/Y and marks and extended period of low year-earlier comparisons. For the fourth month in a row, core consumer prices were up 1.8% Y/Y. Inflation remains contained.

Despite low inventories and rising prices, **existing home sales** rose steadily for the third consecutive month in July, according to the National Association of Realtors. Home sales rose 2.0% to a 5.59 million unit annual rate, the highest pace since February 2007, and were up 10.3% Y/Y. Inventories edged lower by 0.4% to 2.24 million homes available for sale. That represents a 4.8-month supply down from June. The median price was up 5.6% Y/Y to $234,000. First-time home buyers are struggling with low inventories, especially in the lower price ranges. *This report is important to the business of chemistry. Existing home sales, for example, generate sales of chemistry through purchases of paints and coatings, new furniture, carpet, resilient flooring, window treatments, appliances, and fixtures. In architectural coatings, about 80% is tied to existing home sales.*

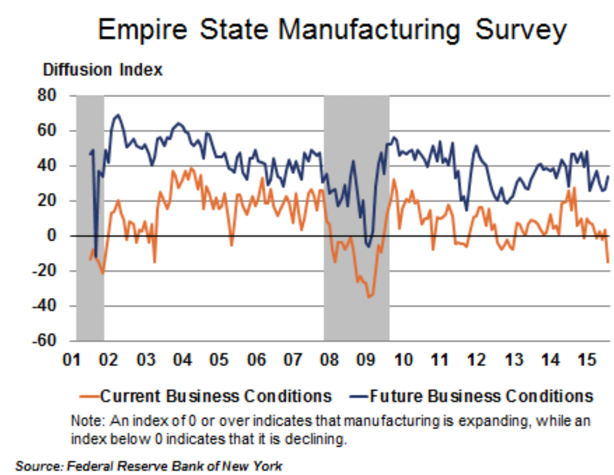




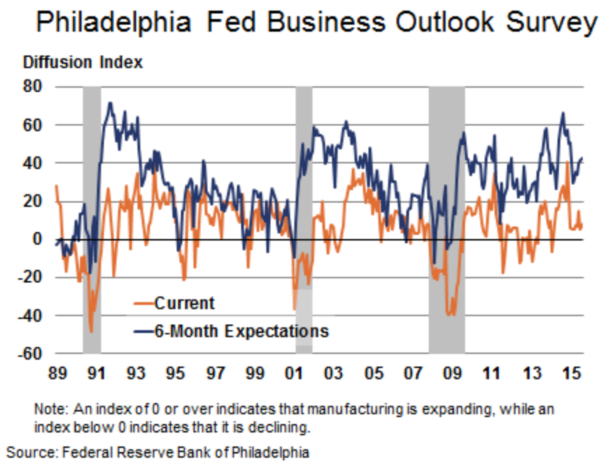
The housing sector built momentum in July, as single-family starts rose to the highest level in nearly eight years, according to the Census Bureau. Overall **housing starts** rose just 0.2%, but a decline in starts in the multi-family segment was made up for by a 12.8% surge in single-family starts which have lagged in recent months. There were gains in the single-family market across all regions. Compared to last year, single family starts were up 19.0% Y/Y while overall housing starts were up 10.1% Y/Y. Forward-looking **building permits** slipped by 16.3% with sharp declines in multi-family. Single family permits also edged lower. Compared to a year ago, overall permit activity was up 7.5% Y/Y, with a 6.1% Y/Y gain in single-family. *This is a key indicator for the business of chemistry because housing is an important end-use market for chemistry products in the form of paints, wire insulation, house-wrap, sealants, roofing materials, resilient flooring, vinyl siding, etc. New housing also generates sales of appliances, furniture, carpet, fixtures, and window treatments. In total, each start engenders on average over $15,000 worth of chemistry.*

The National Association of Home Builders (NAHB) reported that **builder confidence** rose one point to 61 in August. The subcomponents of this indicator measuring buyer traffic and current sales conditions both increased, while the component measuring future sales was stable. All regions either held steady or improved, with the West and Midwest showing the largest gains. Homebuilder sentiment is at its highest level in 10 years.

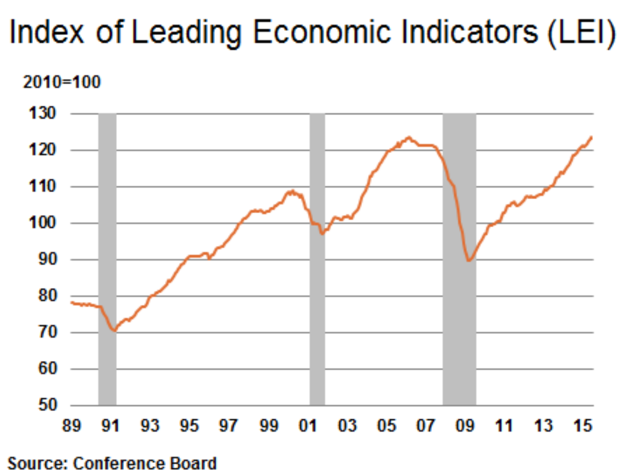
The **Empire State Manufacturing Survey** prepared by the **New York** Federal Reserve, is sort of a bellwether of manufacturing activity in the rest of the nation because it is the first index of manufacturing activity that is released every month. The latest *Empire State Manufacturing Survey* indicates that business activity declined for New York manufacturers. The headline general business conditions index tumbled a worse-than-expected 18.8 points to -14.9, its lowest level since 2009. (With this type of diffusion index, a reading above 0 indicates expanding regional business activity, while a reading below 0 signals contraction.) The new orders and shipments indexes also fell sharply, to -15.7 and -13.8 respectively, pointing to a marked decline in both orders and shipments. The inventories index dropped to -17.3, signaling that inventory levels were lower. Price indexes showed that input prices were slightly higher, while selling prices were flat. Labor market indicators suggested that employment levels and hours worked were little changed. Indexes for the six-month outlook registered somewhat greater optimism than in July, with the future general business conditions index rising 6.6 points to 33.6.



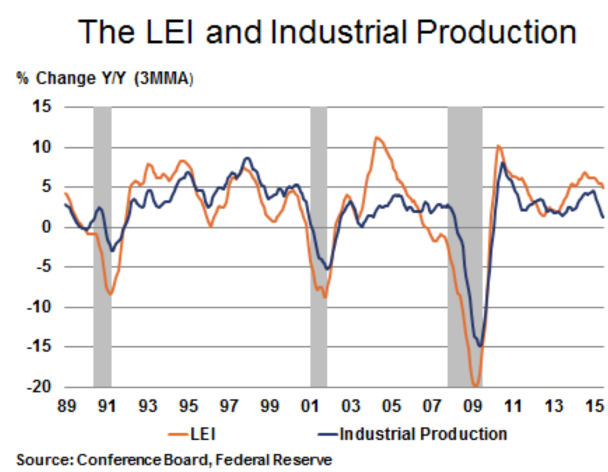
The **Business Outlook Survey** prepared by the **Philadelphia** Federal Reserve indicated that activity in the region's manufacturing sector increased in August. The indicators for general activity are holding fairly steady and suggest modest growth. The survey's broadest measure of manufacturing conditions, the diffusion index of current activity, increased 2.6 points to 8.3 in August. (With this type of diffusion index, a reading above 0 indicates expanding regional business activity, while a reading below 0 signals contraction.) This index has hovered in a low range since the beginning of 2015, far below the highs of late 2014. While firms reported increased shipments compared with the prior month, the current indicators for new orders and employment suggest steady conditions. The diffusion index for future activity increased 1.6 points to 43.1 this month and remains well entrenched as an indicator of continued growth in the region's manufacturing sector over the next six months.



Both surveys cover regions where chemicals production and customer activity occurs. In particular, the Philadelphia region is home to a number of chemical companies with strong a regional focus in fine and other specialty chemicals, finished pharmaceuticals, and some inorganic chemicals. New York hosts a large chemical industry presence with $30 billion in shipments.



The Conference Board reported that its **leading economic index (LEI)** for the United States fell an unexpected 0.2% in July. This follows a 0.6% increase in both June and May. Seven of the 10 indicators that make up the LEI increased during July. The positive contributors - beginning with the largest positive contributor – were the interest rate spread; new unemployment claims; the Leading Credit Index; the ISM new orders index; consumer expectations; new orders for consumer goods; new orders for capital goods excluding aircraft. The sharp drop in building permits was a factor in the July LEI weakness. At the same time, the coincident economic index (CEI), a measure of current economic conditions, increased 0.7% in July with strengths among the coincident indicators remaining very widespread. The lagging economic index also continued to increase, but at a slightly faster rate than the CEI. As a result, the coincident-to-lagging ratio (itself an important leading indicator) slipped slightly. These composite economic indexes are the key elements in an analytic system designed to signal peaks and troughs in the business cycle. The leading, coincident, and lagging economic indexes are essentially composite averages of several individual leading, coincident, or lagging indicators. They are constructed to summarize and reveal common turning point patterns in economic data in a clearer and more convincing manner than any individual component – primarily because they smooth out some of the volatility of individual components. Taken together, the composite indexes continue to point to moderate growth through the remainder of the year. See www.conference-board.org for details. *This indicator is important to the business of chemistry as the Y/Y change in industrial production generally follows the Y/Y change in the LEI. The LEI is up 4.1% Y/Y. It is up 5.0% Y/Y on a three-month moving (3MMA) basis. Industrial production is an important indicator for underlying demand for basic and specialty chemicals. Our chemicals activity barometer (CAB) will be released next week and will provide insight from the August data.*



NEXT WEEK

Economic reports released next week include advance durable goods, new home sales, GDP, personal income and consumer spending.

UPCOMING EVENTS OF INTEREST

"Shaping the Future at Chemours"
Mark P. Vergnano, President and CEO
The Chemours Company
9 September 2015
ACS NY Section – Chemical Marketing & Economics
Penn Club of New York
New York, NY
www.cmeacs.org

Platts 5th Annual NGLs Conference and 3rd Annual Petrochemical Seminar
Houston, TX
9-11 September
www.platts.com

8th ICIS World Chemical Purchasing Summit
ICIS
10-11 September 2015
Hyatt Boston Harbor
Boston, MA
www.icisconference.com/worldchemicalpurchasing

"Making Money Investing in Chemicals: a Private Equity Perspective"
Eytan Tigay (Managing Director, Rhône Capital)
Société de Chimie Industrielle Luncheon
16 September 2015
Yale Club of New York
www.societe.org

2nd ICIS Oxo-Alcohols Americas Conference
ICIS
22-23 September 2015
Houston, TX
www.icisconference.com

2015 World Fertilizer Conference
The Fertilizer Institute's (TFI
27-29 September 2015
Westin Copley Place/Fairmont Copley Plaza hotels
Boston, MA
www.tfi.org

57th NABE Annual Meeting
10-13 October 2015
Grand Hyatt Washington
Washington, DC
www.nabe.com

24th Annual FlexPO Conference
"Chemical Industry Game-Changers: What's Next?"
Chemical Market Resources, Inc.
20-22 October 2015
The Woodlands Waterway Marriott
Houston, TX
www.cmrhoutex.com/pages/conferences/flexpo.php

FOR MORE INFORMATION

For ACC members, our section of the members-only extranet, MemberExchange, contains a plethora of data, economic analyses, presentations, outlooks, weekly economic updates, and much more. You can access frequently updated data files (which provide the most recent and historical data for the business of chemistry - including trade data) as well as the economic data that enable you to track worldwide industry trends, follow developments as they unfold and gain insight into the long-term outlook. These include the indicators covered in this weekly report. To request access to the site, go to: https://memberexchange.americanchemistry.com, and select "Economics and Statistics," and complete the registration process.

In addition to this weekly newsletter, ACC offers monthly, semi-annual and annual economic data publications that enable users to track worldwide industry trends, follow developments as they unfold and gain insight into the long-term outlook. These products contain comprehensive statistics and analyses that cover worldwide production, trade, shipments, inventories, price indices, energy, employment, investment, R&D, EH&S, financial performance measures, macroeconomic data, plus MUCH more. To order, call 301-617-7824 or visit ACC online at http://americanchemistry.com/thestore.

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Note on the color codes: The banner colors represent observations about the current conditions in the overall economy and the business of chemistry. For the overall economy we keep a running tab of 20 indicators. The banner color for the macroeconomic section is determined as follows:

Green – 13 or more positives
Yellow – between 8 and 12 positives
Red – 7 or fewer positives

For the chemical industry, there are fewer indicators available. As a result we rely upon judgment whether production in the industry (defined as chemicals excluding pharmaceuticals) has increased or decreased three consecutive months).

ECON & STATS DEPARTMENT RESOURCES

ACC MEMBER BENEFITS
ACC Members Receive a $500 Discount to Chemical Week Regulatory Watch! Learn more: www.chemweek.com