Weekly Chemistry and Economic Trends

ACC Economics & Statistics
24 October 2014

Macroeconomic Status

Our running tab of positive indicators for the macroeconomic status was 17 out of 20 this week. Thus, we continue to post a green banner.

Consumer Prices ▲0.1%; ▲1.7% Y/Y
Existing Home Sales ▲2.4%; ▼1.7% Y/Y
New Home Sales ▲0.2%; ▲17.0% Y/Y
Leading Economic Indicators ▲0.8%; ▲6.3% Y/Y

The economic reports this week were few but mostly positive. While existing home sales rebounded, sales of new homes only budged from a downwardly revised pace the month before. The consumer price report still shows no evidence of broad-based inflation. Energy prices were down for the third month in a row but, prices for food and other goods were higher.

The Conference Board reported that its index of Leading Economic Indicators (the LEI) rose in September, following flat growth in August. Among the ten components of the LEI, the financial components, along with initial claims for unemployment insurance and new manufacturing orders, made the largest positive contributions this month. Overall, the report suggests continued moderate growth through the end of the year.

Business of Chemistry Status

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

Oil ▲$86.83 (Thursday)
Natural Gas ▼$3.60 (Thursday)
Railcar Loadings ▼743 from a week ago; ▲0.3% Y/Y (13-week moving average)
US CPRI ▲0.6%; ▲2.4% Y/Y
Global CPRI ▲0.1%; ▲3.2% Y/Y

Turning to chemistry, U.S. production increased during last month. Chemical output grew in all regions. The railcar loadings, however, suggest some softness in recent activity. At the global level, production rose in September but only just barely. Comparisons to the year prior, however, have been solid. On that basis, production gains occurred in all regions except Central & Eastern Europe.

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US CPRI

According to the American Chemistry Council (ACC), the **U.S. Chemical Production Regional Index** (U.S. CPRI) continued to expand, rising by 0.6% in September following an upwardly revised 0.6% gain in August. Chemical output remained ahead of month ago levels in all regions.

Also measured on a three-month moving average (3MMA) basis, chemical production by segment was mixed. There were gains in the output of organic chemicals, chlor-alkali and other inorganic chemicals, synthetic dyes and pigments, industrial gases, consumer products, pesticides, coatings, adhesives and pharmaceuticals. These gains were partially offset by declines in the production of plastic resins, fertilizers, and synthetic fibers.

Nearly all manufactured goods are produced using chemistry in some form or another. Thus, manufacturing activity is an important indicator for chemical production. Manufacturing output continued to advance, growing by 0.3% (3MMA) during September. Production expanded in several chemistry-intensive manufacturing industries, including appliances, motor vehicles, aerospace, construction materials, machinery, computers and electronics, rubber products, structural panels, textiles, and furniture.

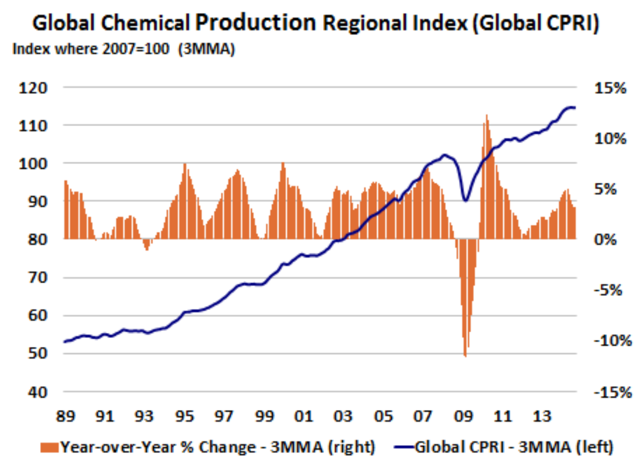
Compared to September 2013, total chemical production in all regions was ahead by 2.4% on a year-over-year (Y/Y) basis, a strengthening trend. Chemical production was up from a year ago in all regions.

Production Volumes % Change Y/Y, 3MMA	Jun-14	Jul-14	Aug-14	Sep-14
Total – U.S.	**0.7**	**0.8**	**1.5**	**2.4**
Gulf Coast	-0.2	-0.4	-0.2	0.5
Midwest	0.7	0.9	1.6	2.4
Ohio Valley	0.9	1.0	1.8	2.9
Mid-Atlantic	0.8	1.1	1.9	2.7
Southeast	0.5	0.6	1.2	2.1
Northeast	1.2	1.8	2.7	3.8
West Coast	0.8	1.1	1.8	2.6

The chemistry industry is one of the largest industries in the United States, an $812 billion enterprise. The manufacturing sector is the largest consumer of chemical products, and 96% of manufactured goods are touched by chemistry. The U.S. CPRI was developed to track chemical production activity in seven regions of the United States. It is comparable to the U.S. industrial production index for chemicals published by the Federal Reserve. The U.S. CPRI is based on information from the Federal Reserve. To smooth month-to-month fluctuations, the U.S. CPRI is measured using a 3MMA. Thus, the reading in September reflects production activity during July, August, and September.

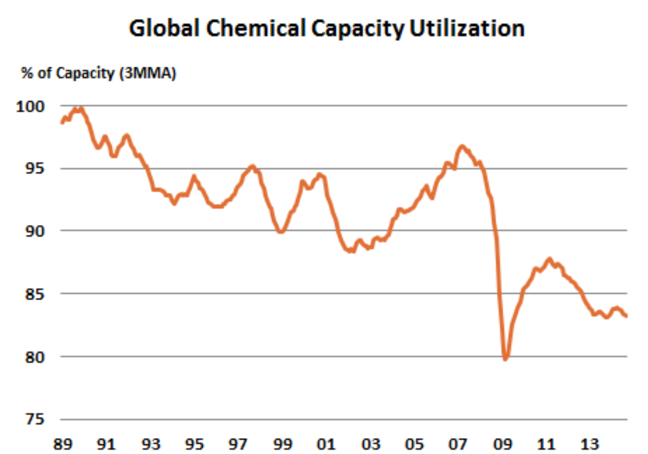
GLOBAL CPRI

ACC's Global Chemical Production Regional Index (Global CPRI) rose 0.1% on a 3MMA basis in September indicating that production in the 3rd quarter ended on a slow note. Gains in production were centered in North America (aided by the shale gas revolution) with nominal gains in Central & Eastern Europe and Asia-Pacific. Over the same period, chemical industry production contracted elsewhere. The Global CPRI was up 3.2% Y/Y on a 3MMA basis and stood at 114.7% of its average 2007 levels in September.



Source: American Chemistry Council

During September, capacity utilization in the global business of chemistry slipped by 0.1 percentage points to 83.2%. This is the same level as it was a year ago but below the long-term (1987-2013) average of 92.0%.



Source: American Chemistry Council

Chemical production in North America has generally been on an upward trend since December 2008 but the pace of growth has been very slow. Regional production rose 0.6% in September, indicating continued recovery aided by competitiveness developments from shale gas. Headline U.S. production increased during September as well. Within basic chemicals, production increased, with a strong gain in inorganic chemicals and nominal gain in bulk petrochemicals and organic intermediates offsetting weakness in plastic resins, synthetic rubber and manufactured fibers. Production of specialty chemicals accelerated in September, with gains in adhesives and sealants, coatings and most other specialty segments. Production rose in pharmaceuticals, consumer products and in agricultural chemicals. The railcar loadings data for chemicals is improving, suggesting further momentum in October. During September, Mexican chemical production activity expanded but Canadian activity softened. In the U.S., even with a competitive edge and somewhat stronger recovery, production has been limited by weakness elsewhere in the globe. Overall, North American regional production of chemicals was up 2.2% Y/Y.

Weakness in the region's economies continue to affect performance and chemical industry output in Latin America fell for the ninth consecutive month during September. Production was off 4.0% Y/Y. Compared to last year, chemical production was off in Brazil, Argentina, Chile, Peru, Uruguay and Venezuela but up in Columbia.

Chemical production in Western Europe was weak again in September and the possibility of a tertiary recession is now affecting the year-over-year comparisons of regional production. In September, production was up 2.8% Y/Y. Year-over-year gains occurred in France, Italy and the United Kingdom as well as in Austria, Belgium, Denmark, Ireland, Norway and Spain. Year-earlier comparisons were negative for Germany, as well as in Greece, The Netherlands and Portugal. There continues to be volatility in the data for Ireland, which is hindering confidence in the underlying time series and making it hard to discern underlying trends.

Chemical industry production rose 0.1% in Central and Eastern Europe during September. Production was weak in Russia and the Ukraine but stronger elsewhere in the region. Compared to September last year, regional production was off 2.6% Y/Y. Year-earlier gains in Bulgaria, the Czech Republic, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia were offset by declines in Croatia, Estonia, Russia and the Ukraine. The conflict in the Ukraine is weighing on the region's chemical industry performance.

Chemical production in Africa and the Middle East slipped 0.3% in September but was still up 5.8% Y/Y. Africa and the Middle East had the strongest Y/Y regional performance despite economic weakness and ongoing conflict facing some of the region's countries. Comparisons to last year were positive in Jordan, Turkey and the Gulf Region but production was down in Israel, South Africa and Tunisia.

Chemical production in the Asia-Pacific region rose just 0.1% during September but performance continues to be solid on a Y/Y basis. Chemicals production was up 5.6% Y/Y in September. Many of the nations in this region are early in the global supply chain and activity has improved. Strong year-earlier comparisons were seen in China, Malaysia and Singapore while gains were more modest in Australia, Pakistan, South Korea, Taiwan and Thailand. India's production was flat compared to a year earlier. Chemical industry performance has been weak in Japan, New Zealand and The Philippines.

Production Volumes (% Change Y/Y - 3MMA)	**June 14**	**July 14**	**Aug 14**	**Sept 14**
World Total - Chemistry	**3.9**	**3.4**	**3.2**	**3.2**
North America	0.6	0.8	1.4	2.2
United States	0.7	0.8	1.5	2.5
Canada	0.0	1.8	3.9	4.0
Mexico	-0.8	-2.1	-3.5	-3.5
Latin America	-1.6	-2.4	-3.1	-4.0
Brazil	-1.5	-2.7	-2.9	-3.2
Other	-1.8	-2.2	-3.4	-4.9
Western Europe	3.9	3.5	3.2	2.8
France	-1.1	-1.1	-0.3	0.2
Germany	0.1	-1.1	-0.6	-0.1
Italy	0.9	0.7	1.5	1.6
United Kingdom	-0.2	0.0	1.6	2.7
Belgium	10.2	8.4	5.4	3.6
Ireland	50.2	51.6	43.4	35.0
Netherlands	4.1	1.7	0.4	-0.2
Spain	1.7	1.7	1.1	1.9
Sweden	-4.3	-3.1	-4.4	-6.4
Switzerland	-1.1	-0.9	-0.6	-0.4
Other	2.9	2.2	3.4	1.7
Central & Eastern Europe	-2.7	-3.8	-3.9	-2.6
Russia	-8.5	-10.1	-10.9	-9.4
Other	2.7	2.3	2.8	3.8
Africa & Middle East	6.4	6.3	6.3	5.8
Asia-Pacific	6.5	5.8	5.4	5.3
Japan	4.8	2.4	0.5	-0.8
Asia-Pacific ex. Japan	6.8	6.5	6.4	6.5
China	9.6	8.8	8.8	9.3
India	0.5	3.3	1.7	0.0
Australia	0.3	0.4	0.4	0.3
South Korea	2.1	0.7	0.4	0.5
Singapore	8.0	8.9	9.0	8.1
Taiwan	6.6	5.5	4.2	3.3
Other Asia-Pacific	0.2	1.8	3.2	4.2

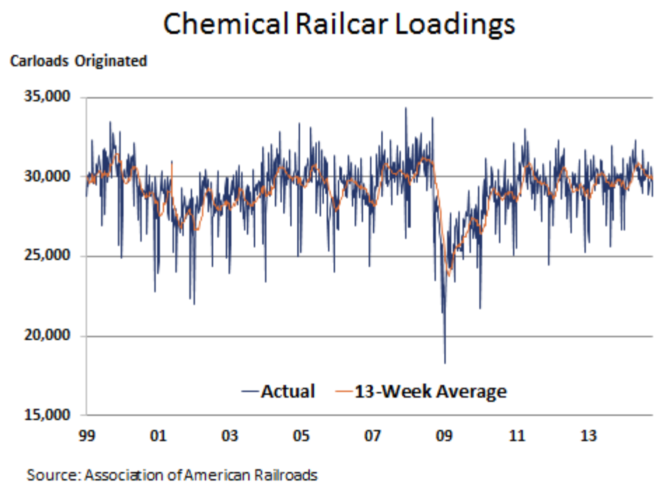
Production Volumes (% Change Y/Y - 3MMA)	June 14	July 14	Aug 14	Sept 14
World Total - Chemistry	**3.9**	**3.4**	**3.2**	**3.2**
Pharmaceuticals	7.0	5.8	4.7	4.2
Total Chemistry, ex Pharma	3.0	2.6	2.9	2.9
Agricultural Chemicals	-0.9	-1.9	-1.0	0.9
Consumer Products	5.0	4.8	4.8	4.5
Basic Chemicals	2.9	2.7	2.7	2.7
Inorganic Chemicals	1.9	2.7	3.1	2.9
Petrochemicals & Organic Chemicals	1.5	0.6	0.4	0.8
Plastic Resins	5.4	5.8	6.4	6.2
Synthetic Rubber	0.5	-0.2	-0.9	-1.6
Manufactured Fibers	3.6	2.7	2.0	0.6
Specialty Chemicals	3.5	3.3	3.2	3.3
Coatings	3.0	2.2	1.6	1.3
Other Specialties	3.5	3.6	3.9	4.1

All segments of the business of chemistry have improved from the trough of the recession with the most pronounced recovery having occurred in the cyclical segments. Thus far in 2014, however, the monthly growth pattern has not been strong. During September, results were largely mixed, with global weakness in consumer products, inorganic chemicals, plastic resins, synthetic rubber and manufactured fibers and gains in agricultural chemicals, bulk petrochemicals, coatings and other specialty chemicals. Pharmaceuticals production was flat. Year-over-year comparisons were strongest in plastic resins followed by consumer products, pharmaceuticals, and other specialties. With the exception of synthetic rubber where Y/Y comparisons are negative, production in most other segments lags but is still positive compared to one year earlier.

ACC's Global CPRI measures the production volume of the business of chemistry for 33 key nations, subregions, and regions, all aggregated to the world total. The index is comparable to the Federal Reserve Board (FRB) production indices and features a similar base year where 2007=100. This index is developed from government industrial production indices for chemicals from over 65 nations accounting for about 98% of the total global business of chemistry. Because foreign data are often non-seasonally adjusted or at best working day adjusted, ACC attempts to present the data on a seasonally adjusted basis comparable to that of the United States and Canada. As a result, it will differ from (and hopefully improve upon) official government statistics of some nations. In many cases, ACC created indices of production based on actual production data (weighted according to industry structure) and other data. The Global CPRI measures production activity generally consistent with the overall industry nomenclature of NAICS 325, the EU NACE 20 and 21 (Rev. 2), and the UN's ISIC 351 and 352 industries. That is, the index measures production of pharmaceuticals, soaps and detergents, personal care products, fertilizers, and other downstream products in addition to measuring inorganic chemicals, organic chemicals, plastic resins, synthetic fibers, synthetic rubber, adhesives and sealants, coatings, and other specialty chemicals. Data, charts, and this monthly report are available for ACC members on MemberExchange or by email distribution [send your request to Emily Sanchez].

CHEMICAL RAILCAR LOADINGS

According to the Association of American Railroads (AAR), for the week ending 18 October (week 42), railcar loadings of polymers and basic chemicals (blue line) fell by 743 to 28,843 railcars. Compared to the same week last year, loadings were down 4.6% Y/Y and were up 1.3% YTD. Loadings have been on the rise for 8 of the last 13 weeks.

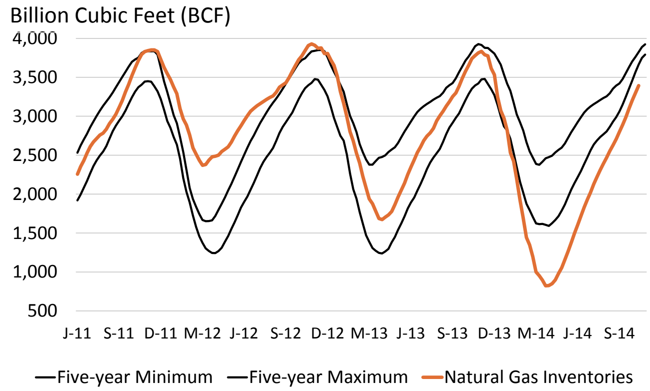


The railcar loadings data are the best 'real time' indicator of industry — especially basic chemicals and polymers — activity. Because the data are fairly erratic, we employ a 13-week moving average (MA) to smooth out seasonal irregularities. The 13-week MA of railcar loadings is up slightly by 0.3% Y/Y, indicating improving activity.

ENERGY

The Energy Information Administration (EIA) reported another above-average build of 94 billion cubic feet (BCF) in **natural gas inventories** during the week ending 17 October. Stocks were 9.0% lower than last year at this time and 9.1% below the five-year average. At 3,393 BCF, total gas inventories remain below the five-year historical range. Inventories have been rebuilt at a fast clip since the end of last winter, however the end of the rebuild season is nearing as cooler weather begins to arrive across much of the country.

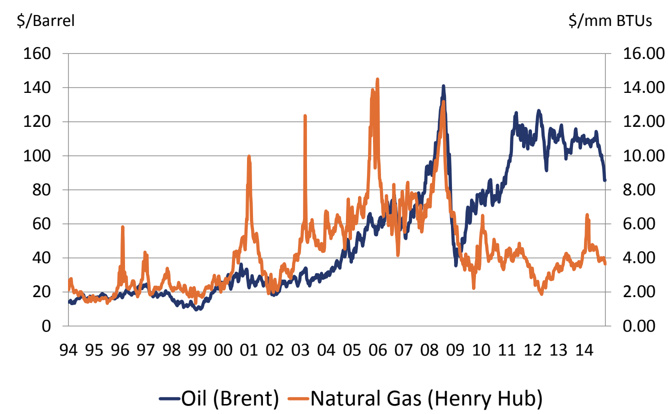
Natural Gas Inventories



Source: Energy Information Administration

Oil prices continued to be volatile, but ended the week ahead at $86.83 per barrel yesterday (Thursday), on better economic news. Prices were also higher on the realization that Saudi Arabia cut deliveries in September. A year ago, oil was $107.99 per barrel. Thus, recent prices represent a 19.6% Y/Y decline. With continued strong builds in inventories and long-range forecasts suggesting a mild start to the winter heating season, **natural gas prices** (the benchmark Henry Hub), closed at $3.60 per million BTUs on Thursday, down from $3.80 last Thursday. A year ago, the price was $3.66 per million BTUs. Thus, recent prices represent a 3.1% Y/Y decline.

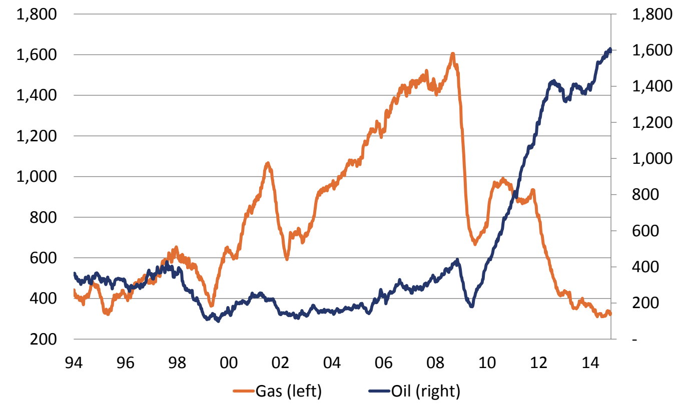
Oil and Natural Gas Prices



Source: Energy Information Administration

At 24.1:1, the ratio of oil prices to natural gas was improved compared to 22.1:1 a week ago. As a rough rule of thumb, when the ratio is above 7, the competitiveness of Gulf Coast-based petrochemicals and derivatives vis-à-vis other major producing regions is enhanced. We've been above 7 for several years. In the U.S., 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. Thus, the current ratio is favorable for U.S. competitiveness and exports of petrochemicals, plastics and other derivatives.

Oil and Natural Gas Rig Count



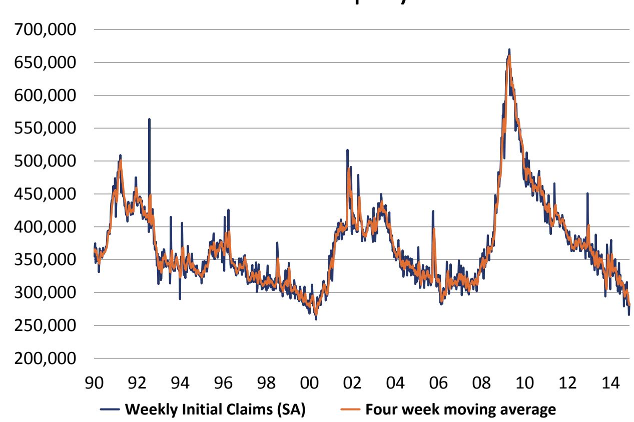
Source: Baker-Hughes

According to Baker-Hughes, for the week ending 17 October the North American **natural gas rig count** rose by 8 to 328 rigs. One year ago the rig count was 372 rigs. During the same week, the **oil rig count** fell by 19 to 1,590 rigs. One year ago the rig count was 1,361 rigs.

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.

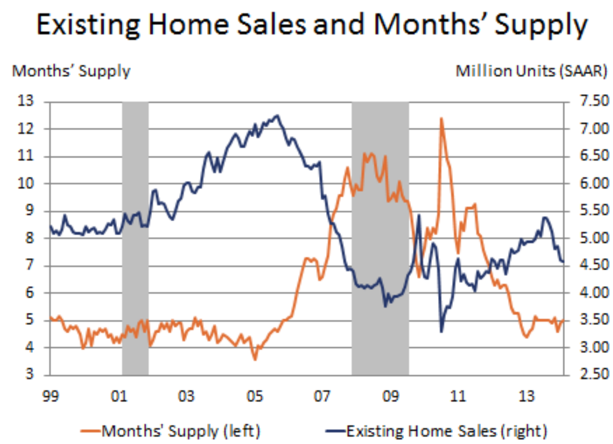
Initial Claims for Unemployment Insurance



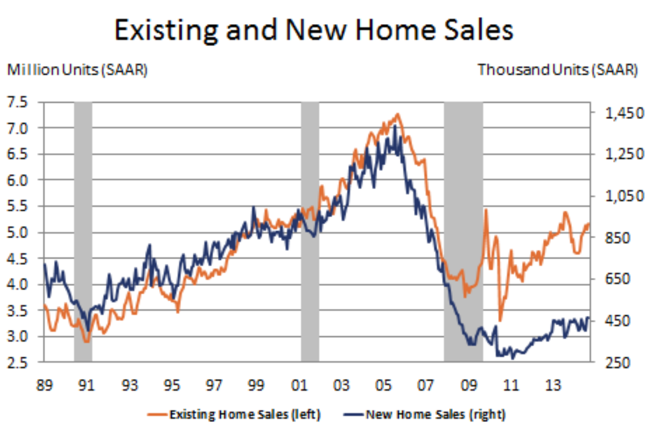
Source: Department of Labor

The Department of Labor reported that **initial unemployment claims** rose by 17,000 to 283,000 during the week ending October 18. The 4-week moving average was 281,000, a decrease of 3,000 from the previous week's revised average. This is the lowest level for this average since May 6, 2000.

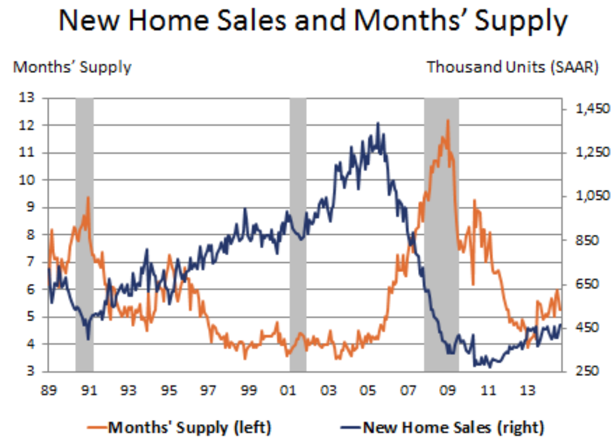
According to the National Association of Realtors, **existing home sales** rebounded in September, rising by 2.4% to a 5.17 million pace. It was the second highest pace this year. All major regions except for the Midwest experienced gains in September. Compared to a year ago, however, sales were off by 1.7%. Total housing inventory at the end of September fell 1.3% to 2.30 million existing homes available for sale, representing a 5.3-month supply at the current sales pace. Despite fewer homes for sale in September, unsold inventory is still 6.0% higher than a year ago, when there were 2.17 million existing homes available for sale. The median existing-home price rose by 5.6% Y/Y to $209,700. This marks the 31st consecutive month of year-over-year price gains. Low interest rates and continued gains in the labor market are providing support to a gradual housing recovery.



Source: National Association of Realtors



Source: Census Bureau, National Association of Realtors



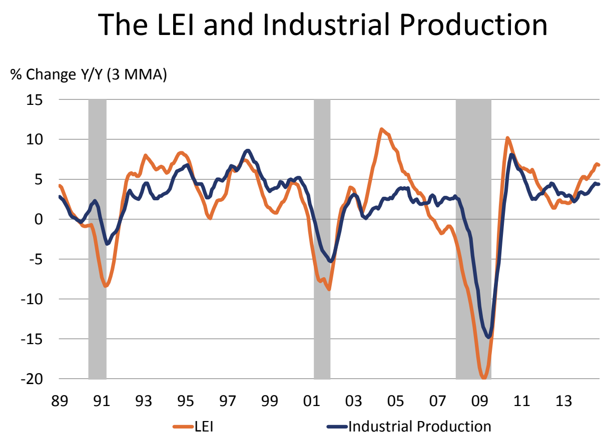
Source: US Census Bureau

The Census Bureau reported that **new home sales** rose just 0.2% in September to a 467,000 unit annual pace. This follows the revised pace of 466,000 units in August. New home sales in September were up in the Midwest and in the South. Sales were down in the West and flat in the Northeast. On a year-over-year basis, sales were up 17.0% nationally and strengthened in every region. The number of new homes for sale at the end of the month rose to 207,000. Compared to current sales, that represents a 5.3-month supply, the same level as in August. The median sales price, at $259,000, was down 4.0% Y/Y.

Both reports are important to the business of chemistry. Existing home sales, for example, generate sales of chemistry through purchases of paints & coatings, new furniture, carpet, resilient flooring, window treatments, appliances, and fixtures. In architectural coatings, about 20% of sales are tied to new home sales, with 80% tied to existing home sales.

The Bureau of Labor Statistics (BLS) reported that headline **consumer prices** were up 0.1% in September. This followed a 0.2% decline in August, which was the first decline in more than a year. The slight gain in the CPI in September occurred even as energy prices dropped 0.7%. Indeed, energy prices were down for the third month in a row but, prices for food and other goods were higher. Over the last 12 months, the CPI has increased 1.7%. Overall, the report indicates that broad inflationary pressures remain dormant.

The Conference Board reported that its index of **Leading Economic Indicators** rose by 0.8% in September, following flat growth in August, and a 1.1% gain in July. September's gain was the seventh increase since the beginning of the year. Over the past six months, the LEI has risen by 3.5% (7.1% annual rate) which was ahead of the 2.7% gain during the previous six months. Compared to last year, the LEI was up 6.3% Y/Y, a decelerating pace of improvement. Among the ten components of the LEI, the financial components, along with initial claims for unemployment insurance and ISM new orders, made the largest positive contributions this month. The coincident index rose by 1.4%, marginally faster than average pace during the past six months. The lagging index also increased, though at a slower rate. The report suggests continued moderate growth through the end of the year.



Source: Conference Board, Federal Reserve

NEXT WEEK
Economic reports released next week include Texas Manufacturing Outlook, durable goods, consumer confidence, Q3 GDP, personal income, and ACC's specialties market report.

UPCOMING EVENTS OF INTEREST
"A.T. Kearney's Chemicals M&A Executive Report"
Oliver Zeranski, Principal
6 November 2014
The Penn Club of NY
New York, NY
www.cmeacs.org

Economics of Strategy and Managerial Decision Making
National Association for Business Economics (NABE)
5-7 November 2014
John Hopkins University
Washington, DC
www.nabe.com

Time-Series Analysis and Forecasting
National Association for Business Economics (NABE)
17-20 November 2014
BLS
Washington, DC
www.nabe.com

2nd Annual Energy Construction Summit
McGraw Hill Construction
18 November 2014
JW Marriott
Houston, TX
http://construction.com/events/2014/energy/

NAP 2014 – North American Petrochemical Conference & Exhibition
3-4 December 2014
Double Tree Greenway Plaza
Houston, TX
http://events.fc-gi.com/petrochemicalsusa/
ACC Members receive $150 discount with code: CAZ150

Business Applications of Statistics and Data Analytics
National Association for Business Economics (NABE)
8-10 December 2014
John Hopkins University, Washington Campus
Washington, DC
www.nabe.com

2nd ICIS US Butadiene & Derivatives Conference
ICIS
10 December 2014
Sofitel New York
New York, NY
http://www.icisconference.com/USbutadiene14

"Communication and Presentation Skills for Business Economists and Analysts"
National Association for Business Economics (NABE)
27-28 January 2015
Federal Reserve Bank of Dallas, Houston Branch
1801 Allen Parkway
Houston, TX
www.nabe.com

The 3rd ICIS Pan American Phenol-Acetone Conference
ICIS
28-29 January 2015
Houston, TX
www.icisconference.com/panamphenol

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 and select Software.

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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).