



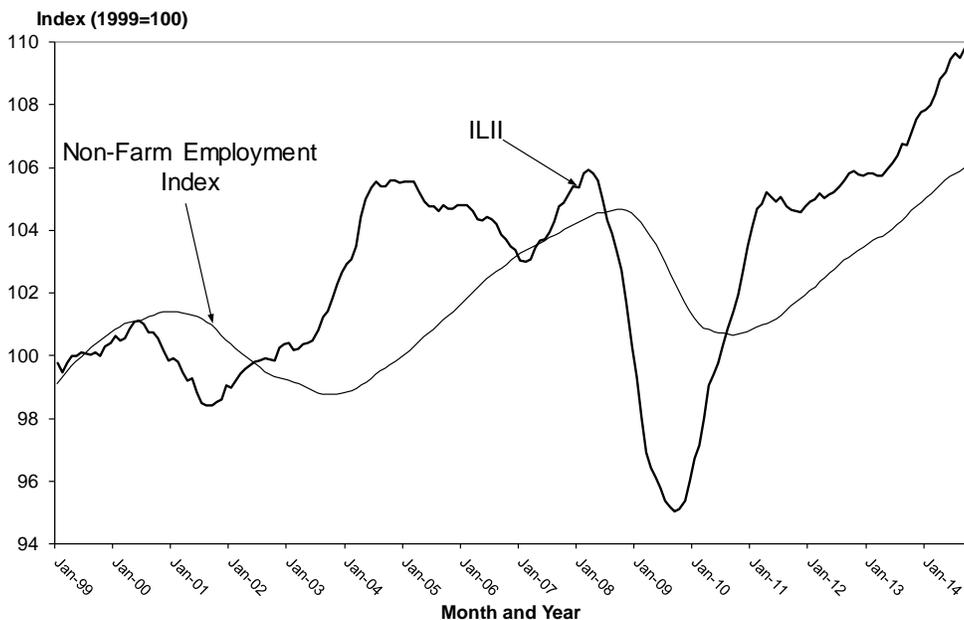
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The Iowa Leading Indicators Index (ILII) remained unchanged at 109.3 (100=1999) in November 2014 from a revised 109.3 in October. The revision reflects the incorporation of farm cash receipts for 2013 which were unavailable this past summer and revised grain breakeven costs for the 2014 crop. The Iowa non-farm employment coincident index recorded a 0.09 percent rise in November, which extends the streak of employment gains to 50 consecutive months.

The flat ILII value in November followed a 0.4 percent drop in October. During the six-month span through November, the ILII increased 0.3 percent (an annualized rate of 0.5 percent). The six-month diffusion index was 62.5 with three of the eight components (building permits, new orders index and yield spread) experiencing an increase of less than 0.05 percent over the last half a year.

In November, four of eight Iowa Leading Indicators Index components contributed positively. The positive contributors were the Iowa stock market index, the agricultural futures profits index, diesel fuel consumption, and the national yield spread. Average weekly manufacturing hours, average weekly unemployment claims (inverted), the new orders index, and residential building permits were the four components that contributed to the index negatively.

**Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999–November 2014**



**Table 1. Iowa Leading Indicators Index: Six Month Overview**

Monthly Values	2014					
	June	July	Aug	Sept	Oct	Nov
ILII	109.5	109.7	109.5	109.8	109.3	109.3
Percentage Change <sup>a</sup>	0.4%	0.2%	-0.1%	0.3%	-0.4%	0.0%
Diffusion Index <sup>b</sup>	87.5	56.3	37.5	68.8	25.0	43.8
Six-Month Values	Dec to June	Jan to July	Feb to Aug	Mar to Sept	April to Oct	May to Nov
ILII						
Percentage Change	1.6%	1.7%	1.4%	1.3%	0.5%	0.2%
Annualized Percentage Change	3.2%	3.3%	2.8%	2.7%	1.0%	0.4%
Diffusion Index	75.0	75.0	75.0	75.0	62.5	62.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 29, 2014.

a. Percentage changes in the ILII do not always equal changes in the level of the ILII due to rounding.

b. A diffusion index measures the proportion of components that are rising based on the actual changes (not the standardized contributions to the ILII). Components experiencing increases greater than 0.05 percent are assigned a value of 1.0, components that experience changes less than an absolute value of 0.05 percent are assigned a value of 0.5, and components experiencing decreases greater than 0.05 percent are assigned a value of 0.0.

**Table 2. Iowa Leading Indicators Index Components: Six Month Overview**

Component Series Monthly Values <sup>a</sup>		2014					
		June	July	Aug	Sept	Oct	Nov
AFPI <sup>b</sup>	↑ <sup>c</sup>						
Corn Profits (cents per bushel)		73.4	67.4	62.2	55.3	51.0	50.1
Soybean Profits (cents per bushel)		306.0	307.4	304.1	287.4	275.2	273.4
Hog Profits (cents per pound)		37.0	40.0	41.4	42.6	43.3	43.6
Cattle Profits (cents per pound)		2.0	5.2	8.0	10.5	13.0	15.1
Iowa Stock Market Index (10=1984-86)	↑	105.55	104.54	103.53	105.35	102.91	108.32
Yield Spread (10-year less 3-month)	↑	2.56	2.51	2.39	2.51	2.28	2.31
Residential Building Permits	↓	939	924	901	952	901	880
Average Weekly Unemployment Claims <sup>d</sup>	↓	3,121	3,103	3,104	3,106	3,097	3,130
Average Weekly Manufacturing Hours	↓	41.87	41.94	42.02	42.03	41.93	41.90
New Orders Index (percent)	↓	68.2	68.0	66.4	64.9	63.9	62.9
Diesel Fuel Consumption (mil gallons)	↑	58.67	58.86	58.86	59.02	58.96	59.00

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 29, 2014.

a. For all component series except for the yield spread and the Iowa stock market index, the values represent 12-month backward moving averages.

b. The agricultural futures profits index is computed as the sum of the standardized symmetric percent changes in the four series, each weighted by the commodity's annual share of Iowa cash farm income (updated September 3, 2014).

c. Arrows indicate the direction of the series' contribution to the ILII for the latest month.

d. Changes in average weekly initial unemployment insurance claims are inverted when added to the ILII, thus a negative change in the series contributes positively to the index.

## ILII Components

- **Iowa stock market index:** Capitalization-weighted index of 33 Iowa-based or Iowa-concentrated publicly-traded companies. During November 2014, 28 of the 33 companies gained value, including 9 of the 11 financial-sector companies. These gains in November caused the stock market index to increase to a record 108.32, contributing 0.09 to the ILII value.
- **Agricultural futures profits index:** Composite measure of corn, soybean, hog, and cattle expected profits, measured as the futures price less estimated breakeven costs, weighted by the respective share of Iowa annual cash receipts. Changes are calculated based on a 12-month moving average. In December, Iowa State University released revised grain breakeven costs for the 2014 crop that were below previous estimates, thus raising the estimated profits for corn and soybeans. During November this component contributed 0.05 to the index with strong gains for hogs and cattle. Compared to last year, corn prices are down 11.8 percent and soybean prices fell 25.0 percent; in contrast prices for hogs rose 4.2 percent and cattle prices jumped 27.6 percent.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. Diesel fuel consumption was 0.8 percent higher in November than one year ago, increasing the 12-month moving average to 59.00 million gallons and contributing 0.01 to the ILII value.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury bills. During November, the yield spread increased to 2.31 percent as the long-term rate increased 3 basis points while the short-term rate was unchanged from October. For the month, the yield spread contributed 0.01 to the ILII.
- **Average weekly manufacturing hours:** Weekly average of hours worked in the manufacturing sector in Iowa. Changes are calculated based on a 12-month moving average. With a decrease of the 12-month moving average to 41.90 in November from a revised 41.93 in October, this component contributed -0.02 to the ILII value. November 2014 hours were 41.8, which is 0.4 hour below the November 2013 value, yet equal to the monthly historical average (1996-2013).
- **Average weekly unemployment claims:** Weekly average of initial claims for unemployment insurance in Iowa. Changes are calculated based on a 12-month moving average and are inverted when added to the ILII. This component contributed -0.04 to the ILII value. The 12-month moving average of claims increased to 3,130 from 3,097 in October, with unemployment claims 20.2 percent above November 2013 claims, and 18.3 percent above the average historical claims for November (1987-2013).
- **New orders index:** Diffusion index measuring the share of purchasing managers in Iowa reporting increases in orders received for manufacturing output. Changes are calculated based on a 12-month moving average. The monthly value of the index decreased to 45.2 in November from 46.0 in October and 57.1 one year ago. The resulting drop in the new orders index 12-month moving average to 62.9 from 63.9 contributed -0.06 to the ILII.
- **Residential building permits:** Number of total permits issued in Iowa for the construction of residential housing units. Changes are calculated based on a 12-month moving average. For November, this component contributed -0.08 to the ILII with the 12-month moving average decreasing from 901 in October to 880 this month. November 2014 permits were 24.4 percent lower than November 2013 and 19.4 percent lower than the historical average for November (1998-2013).

**Table 3. ILII Components and Standardization Factors for FY 2015**

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.046
Iowa Stock Market Index	0.018
Yield Spread	0.332
Residential Building Permits	0.035
Average Weekly Unemployment Claims	0.034
Average Weekly Manufacturing Hours	0.285
New Orders Index	0.064
Diesel Fuel Consumption	0.186

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 3, 2014  
The standardization factors are the inverse of the standard deviation of the month-to-month changes in each component over the January 1999 to June 2014 period. These factors equalize the volatility of the contribution from each component and are normalized to one. The month-to-month changes are based on 12-month backward moving averages for all components except the yield spread and the Iowa stock market index. The yield spread and new orders index changes are simple arithmetic changes; month-to-month changes for the rest of the components are computed as symmetric percentage changes. The factors are updated annually during August.

## Comments

The Iowa Leading Indicators Index (ILII) is designed to forecast the future direction of economic activity in the state of Iowa. The techniques used to build the ILII follow those used by The Conference Board to construct the national Leading Economics Index (LEI) prior to the 2001 revisions. A one-month movement in such an index does not produce a clear signal, rather it is necessary to consider the direction of the index over several consecutive months. A contraction signal in the ILII is considered reliable when two conditions are met: 1. The index declines by at least two percent over a six month period (using an annualized rate); and, 2. A majority of the individual components decline over those six months (the six-month diffusion index less than 50.0).

The Iowa non-farm employment coincident index measures the change in non-seasonally adjusted, total non-farm employment in the state of Iowa. Changes are based on a 12-month moving average of employment and are computed as symmetric percentage changes. The index is a representation of overall economic activity in Iowa.

The employment index and the ILII are constructed to have a value of 100 in the year 1999.

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