

The Iowa Leading Indicators Index (ILII) increased to 109.4 (100=1999) in December 2014 from 109.3 in November. The Iowa non-farm employment coincident index recorded a 0.09 percent rise in December, which extends the streak of employment gains to 51 consecutive months.

During the six-month span through December, the ILII decreased 0.1 percent (an annualized rate of -0.2 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 December, six of eight Iowa Leading Indicators Index components contributed positively. The positive contributors were average weekly unemployment claims (inverted), residential building permits, diesel fuel consumption, average weekly manufacturing hours, the Iowa stock market index, and the agricultural futures profits index. The national yield spread and the new orders index were the two components that contributed to the index negatively.

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

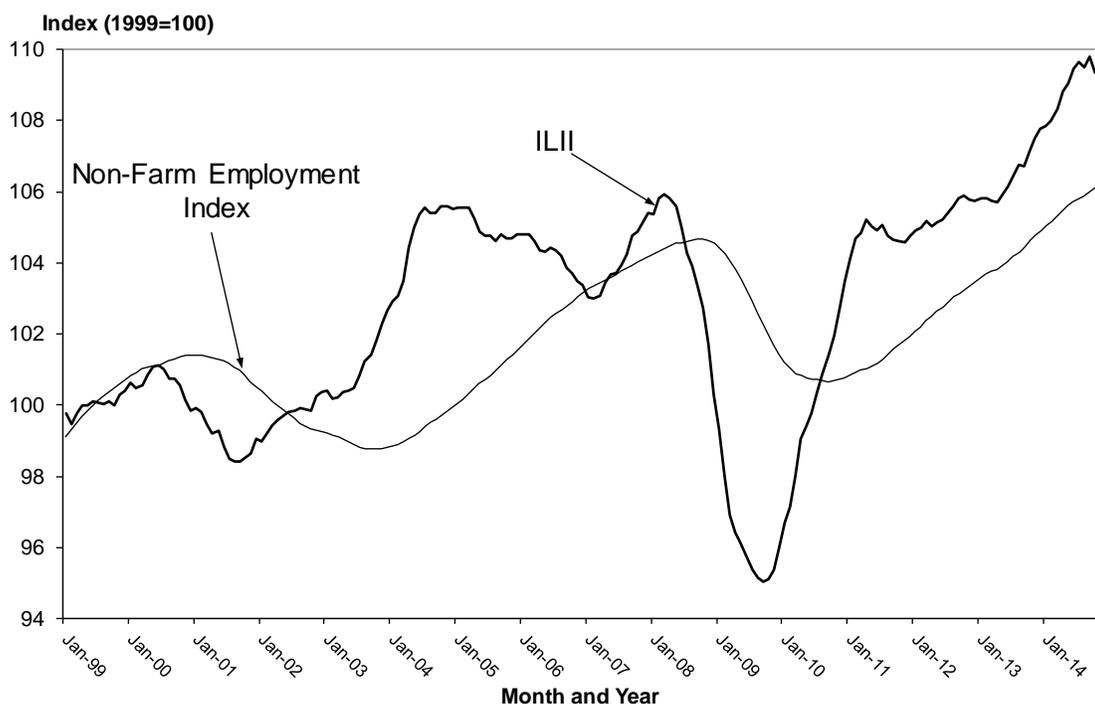


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2014					
	July	Aug	Sept	Oct	Nov	Dec
ILII	109.6	109.5	109.8	109.3	109.3	109.4
Percentage Change ^a	0.2%	-0.1%	0.3%	-0.4%	0.0%	0.1%
Diffusion Index ^b	56.3	37.5	68.8	25.0	43.8	75.0
Six-Month Values	Jan to July	Feb to Aug	Mar to Sept	April to Oct	May to Nov	June to Dec
ILII						
Percentage Change	1.7%	1.4%	1.3%	0.5%	0.2%	-0.1%
Annualized Percentage Change	3.3%	2.8%	2.7%	1.0%	0.4%	-0.2%
Diffusion Index	75.0	75.0	75.0	62.5	62.5	62.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 28, 2015.

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 ^a		2014					
		July	Aug	Sept	Oct	Nov	Dec
AFPI ^b	↑ ^c						
Corn Profits (cents per bushel)		67.4	62.2	55.3	51.0	50.1	50.9
Soybean Profits (cents per bushel)		307.4	304.1	287.4	275.2	273.4	268.3
Hog Profits (cents per pound)		40.0	41.4	42.6	43.3	43.6	43.4
Cattle Profits (cents per pound)		5.2	8.0	10.5	13.0	15.1	16.0
Iowa Stock Market Index (10=1984-86)	↑	104.38	103.65	105.34	103.04	108.41	109.73
Yield Spread (10-year less 3-month)	↓	2.51	2.39	2.51	2.28	2.31	2.18
Residential Building Permits	↑	924	901	952	901	880	894
Average Weekly Unemployment Claims ^d	↑	3,103	3,104	3,106	3,097	3,130	3,075
Average Weekly Manufacturing Hours	↑	41.94	42.02	42.03	41.93	41.89	41.93
New Orders Index (percent)	↓	68.0	66.4	64.9	63.9	62.9	61.7
Diesel Fuel Consumption (mil gallons)	↑	58.86	58.86	59.02	58.96	59.00	59.08

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 28, 2015.

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

- **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 0.06 to the ILII value. The 12-month moving average of claims decreased to 3,075 from 3,130 in November, with unemployment claims 9.3 percent below December 2013 claims, and 1.8 percent below the average historical claims for December (1987-2013).
- **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 December, this component contributed 0.05 to the ILII with the 12-month moving average increasing from 880 in November to 894 this month. December 2014 permits were 45.1 percent higher than December 2013, yet 21.1 percent lower than the historical average for December (1998-2013).
- **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 1.4 percent higher in December than one year ago, increasing the 12-month moving average to 59.08 million gallons and contributing 0.02 to the ILII value.
- **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 41.93 in December from a revised 41.89 in November, this component contributed 0.02 to the ILII value. December 2014 hours were 42.4, which is 0.4 hours above the December 2013 value and 0.8 hours above the monthly historical average (1996-2013).
- **Iowa stock market index:** Capitalization-weighted index of 33 Iowa-based or Iowa-concentrated publicly-traded companies. During December 2014, 20 of the 33 companies gained value, including 8 of the 11 financial-sector companies. These gains in December caused the stock market index to increase to a record 109.73, contributing 0.02 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. During December this component contributed 0.01 to the index with strong gains for hogs and cattle. Compared to last year, corn prices are down 6.6 percent and soybean prices fell 18.5 percent; in contrast prices for hogs rose 0.5 percent and cattle prices jumped 23.3 percent.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury bills. During December, the yield spread decreased to 2.18 percent as the long-term rate decreased 12 basis points while the short-term rate increased 1 basis point from November. For the month, the yield spread contributed -0.04 to the ILII.
- **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 increased to 51.6 in December from 45.2 in November, yet was below the 66.1 in December 2013 which lowered the 12-month moving average to 61.7 from 62.9. The new orders index contributed -0.08 to the ILII for the month.

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.

Contact: Questions can be addressed to Victoria L. Daniels of the Iowa Department of Revenue at (515) 281-8450 or Victoria.Daniels@iowa.gov.