

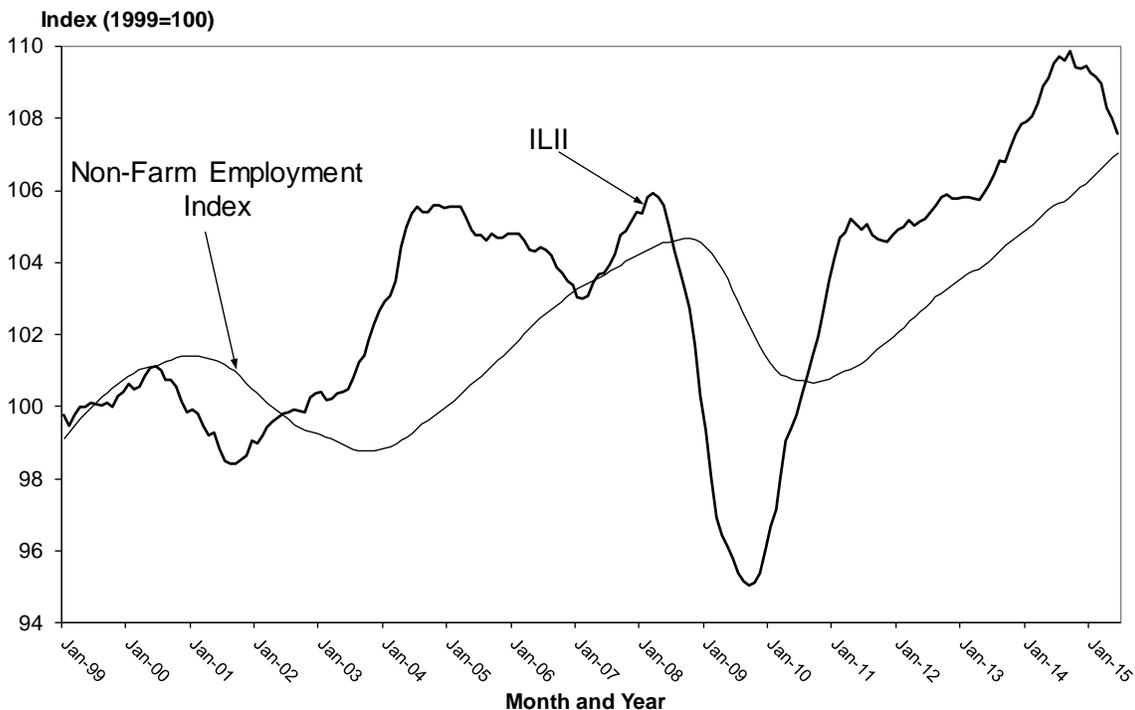


The Iowa Leading Indicators Index (ILII) fell to 107.6 (100=1999) in June 2015 from 108.0 in May. The Iowa non-farm employment coincident index recorded a 0.13 percent rise in June, which extends the streak of employment gains to 57 consecutive months.

During the six-month span through June, the ILII decreased 1.7 percent (an annualized rate of -3.4 percent). The six-month diffusion index decreased to 31.3 with five of the eight components (agricultural futures profits index, diesel fuel consumption, Iowa stock market index, new orders index, and residential building permits) experiencing a decrease of greater than 0.05 percent over the last half a year. In addition, growth in average manufacturing hours over the last six months dropped to less than 0.05 percent, further reducing the diffusion index.

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

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-June 2015



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

Monthly Values	2015					
	Jan	Feb	Mar	Apr	May	June
ILII	109.3	109.2	109.0	108.3	108.0	107.6
Percentage Change <sup>a</sup>	-0.2%	-0.1%	-0.2%	-0.6%	-0.3%	-0.4%
Diffusion Index <sup>b</sup>	25.0	56.3	43.8	25.0	25.0	37.5
Six-Month Values	July to Jan	Aug to Feb	Sept to Mar	Oct to Apr	Nov to May	Dec to June
ILII						
Percentage Change	-0.4%	-0.4%	-0.8%	-1.0%	-1.3%	-1.7%
Annualized Percentage Change	-0.9%	-0.8%	-1.6%	-2.1%	-2.5%	-3.4%
Diffusion Index	62.5	56.3	37.5	50.0	37.5	31.3

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced July 31, 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 <sup>a</sup>	2015					
	Jan	Feb	Mar	Apr	May	June
AFPI <sup>b</sup>						
Corn Profits (cents per bushel)	↓ <sup>c</sup> 47.0	45.2	40.3	32.7	25.1	19.9
Soybean Profits (cents per bushel)	265.3	250.9	229.1	199.7	168.3	143.4
Hog Profits (cents per pound)	42.0	39.5	34.8	30.3	28.0	25.1
Cattle Profits (cents per pound)	15.0	13.7	11.6	10.2	8.3	6.0
Iowa Stock Market Index (10=1984-86)	↑ 108.58	112.03	111.05	108.79	105.66	105.83
Yield Spread (10-year less 3-month)	↑ 1.85	1.96	2.01	1.92	2.18	2.34
Residential Building Permits	↑ 889	902	906	849	876	881
Average Weekly Unemployment Claims <sup>d</sup>	↓ 3,093	3,088	3,029	3,014	3,029	3,043
Average Weekly Manufacturing Hours	↓ 42.04	42.02	41.98	42.04	42.01	41.98
New Orders Index (percent)	↓ 61.1	59.6	58.9	57.6	55.6	53.6
Diesel Fuel Consumption (mil gallons)	↓ 59.48	59.47	59.70	59.47	59.31	59.02

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced July 31, 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 March 9, 2015).

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

- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury bills. During June, the yield spread expanded to 2.34 percent as the long-term rate rose 16 basis points while the short-term rate remained unchanged. For the month, the yield spread contributed 0.05 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 June, this component contributed 0.02 to the ILII with the 12-month moving average increasing from 876 in May to 881. June 2015 permits were 4.6 percent above June 2014, yet 1.9 percent below the historical average for June (1998-2013).
- **Iowa stock market index:** Capitalization-weighted index of 33 Iowa-based or Iowa-concentrated publicly-traded companies. During June 2015, 21 of the 33 companies gained value, including 9 of the 11 financial-sector companies. With a majority of the stocks recording small gains, the index rose slightly to 105.83 and contributed positively to the ILII value, although the contribution rounds to 0.00.
- **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 -0.02 to the ILII value. The 12-month moving average of claims increased to 3,043 with unemployment claims for the month 6.7 percent above June 2014 claims, yet 12.2 percent below average historical claims for June (1987-2013).
- **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. For June 2015, this component contributed -0.02 to the ILII value with its decrease to 41.98 from 42.01. June 2015 hours were 42.1, below the 42.5 hours in June 2014, yet 0.6 hours above the historical monthly average of 41.5 (1996-2013).
- **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 decreased 5.9 percent between June 2014 and 2015, causing the 12-month moving average to fall to 59.02 million gallons from 59.31 in May, and contributing -0.09 to the ILII value.
- **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 53.9 in June from 51.0 in May yet is down significantly from 77.4 one year ago. The 12-month moving average of the new orders index dropped to 53.6, contributing -0.13 to the ILII.
- **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 June this component contributed -0.20 to the index with expected profit decreases for all four commodities. Compared to last year, new crop corn prices are down 14.5 percent and soybean prices are 23.0 percent lower. Note that revisions to 2014 crop breakevens resulted in revised corn profits in past months. June prices for hogs are down 35.1 percent from last year. Although cattle prices in June were 5.6 percent above last year, profits were squeezed by increases in breakeven costs.

**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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