



NOTICE: The Iowa Leading Indicators Index (ILII) underwent an annual update between the release of the June and July 2018 reports, slightly revising the level of the ILII for most months.

A revised historical series for the ILII and its components are also available on the Department's website. Please select the link entitled *Historical ILII Series*.

To read more about the changes to the ILII, please refer to the following report *Iowa Leading Indicators Index: Eleventh Annual Assessment and Update* available on the Department's website September 5, 2018.

The Iowa Leading Indicators Index (ILII) remained unchanged at 108.3 in July 2018 from a revised 108.3 (100=1999) in June. The ILII has experienced four consecutive months of no change. The Iowa non-farm employment coincident index recorded a 0.13 percent rise in July.

During the six-month span through July, the ILII decreased 0.4 percent (an annualized rate of -0.7 percent). The six-month diffusion index remained at 50.0 in July. Four of the eight indicators (average manufacturing hours, average weekly unemployment claims (inverted), diesel fuel consumption, and residential building permits) experienced an increase of greater than 0.05 percent over the last half-year where residential building permits replaced the new orders index among this group.

Four of the eight components were positive contributors to the ILII in July. These include, in the order from largest contributor to smallest, residential building permits, diesel fuel consumption, average weekly unemployment claims (inverted), and the Iowa stock market index. The agricultural futures profits index, the new orders index, the national yield spread, and average manufacturing hours were the four components that contributed negatively to the index.

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-July 2018

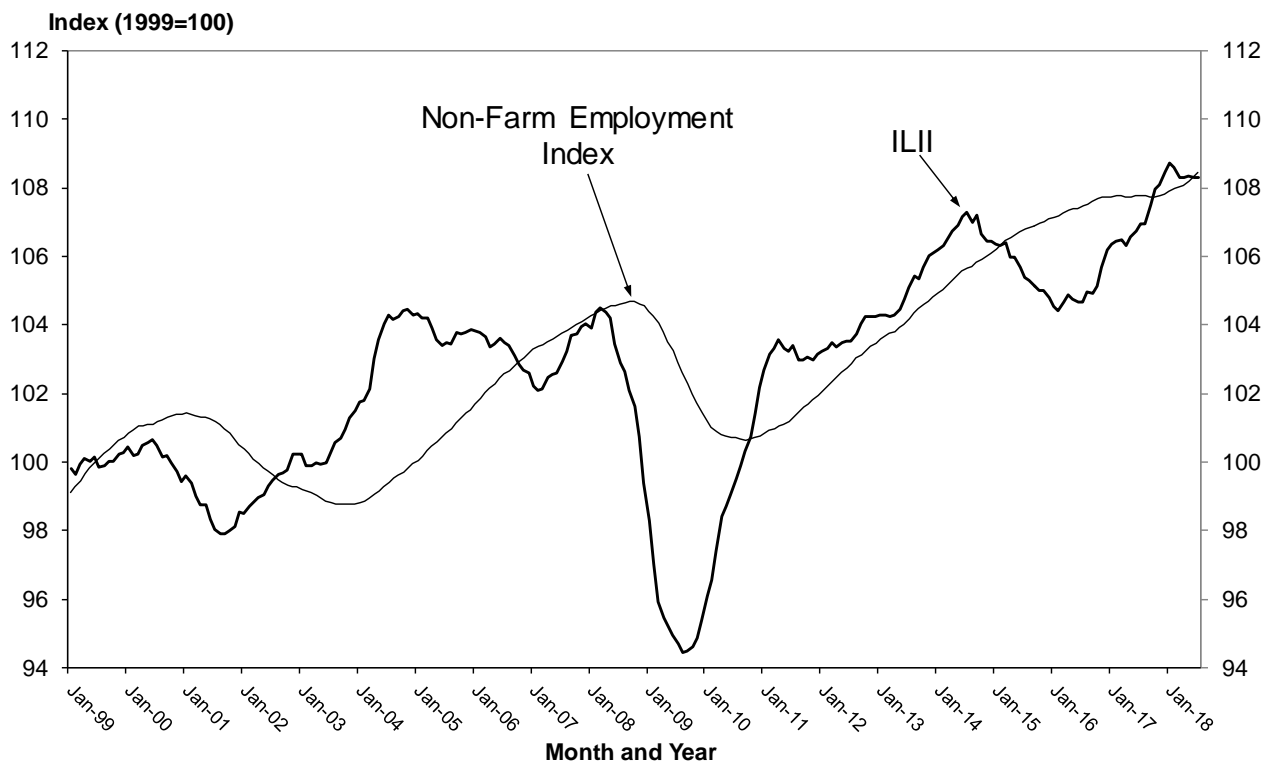


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2018					
	Feb	Mar	Apr	May	Jun	Jul
ILII	108.6	108.3	108.3	108.3	108.3	108.3
Percentage Change ^a	-0.1%	-0.3%	0.0%	0.0%	0.0%	0.0%
Diffusion Index ^b	43.8	31.3	56.3	62.5	50.0	50.0
Six-Month Values	Aug to Feb	Sep to Mar	Oct to Apr	Nov to May	Dec to Jun	Jan to Jul
ILII						
Percentage Change	1.5%	0.7%	0.3%	0.2%	-0.1%	-0.4%
Annualized Percentage Change	3.0%	1.5%	0.6%	0.4%	-0.3%	-0.7%
Diffusion Index	87.5	68.8	50.0	56.3	50.0	50.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 30, 2018.

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	2018					
	Feb	Mar	Apr	May	Jun	Jul
AFPI ^b						
Corn Profits (cents per bushel)	88.7	91.7	95.3	99.6	96.0	90.5
Soybean Profits (cents per bushel)	190.5	191.3	196.0	200.0	192.8	172.7
Hog Profits (cents per pound)	17.9	16.3	14.8	13.3	15.7	13.8
Cattle Profits (cents per pound)	8.2	8.1	7.3	6.3	7.1	7.2
Iowa Stock Market Index (10=1984-86)	125.17	119.67	113.78	116.12	117.89	118.45
Yield Spread (10-year less 3-month)	1.27	1.11	1.08	1.08	0.97	0.90
Residential Building Permits	1,074	1,045	1,064	1,075	1,074	1,112
Average Weekly Unemployment Claims ^d	2,610	2,608	2,571	2,559	2,594	2,582
Average Weekly Manufacturing Hours	42.01	42.01	42.08	42.07	42.05	42.02
New Orders Index (percent)	61.9	62.2	62.5	62.9	62.5	62.0
Diesel Fuel Consumption (mil gallons)	60.56	60.42	60.21	60.05	60.18	60.38

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 30, 2018.

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 August 30, 2018).

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

- **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 July, this component contributed 0.11 to the ILII with the 12-month moving average increasing to 1,112 from 1,074 in June. July 2018 permits were 3.5 percent above 2017 and 32.3 percent above the historical average for July (1998-2017).
- **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 increased 4.1 percent between July 2017 and 2018. The 12-month moving average increased to 60.38 million gallons from 60.18 in June, contributing 0.06 to the ILII value.
- **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 with the 12-month moving average of claims decreasing from 2,594 to 2,582. Unemployment claims for the month were 6.0 percent below July 2017 claims and 32.4 percent below average historical claims for July (1987-2017).
- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. During July 2018, 16 of the 34 companies gained value, including 6 of the 12 financial-sector companies. Despite less than half of the stocks experiencing gains, the index increased to 118.45 in July from a revised 117.89 in June, contributing 0.01 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. For July, this component contributed -0.02 to the ILII with the 12-month moving average decreasing to 42.02 from a revised 42.05 in June. July 2018 average hours were 41.4, below the 42.0 hours in July 2017, yet nearly a quarter hour above the historical monthly average of 41.2 (1996-2017).
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury bills. During July, the yield spread decreased to 0.90 percent as the long-term rate decreased 2 basis points and the short-term rate increased 5 basis points. For the month, the yield spread contributed -0.02 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 was 53.6 compared to 60.0 seen one year ago. The index remained above 50.0 for the twentieth month, suggesting continued growth in manufacturing. The 12-month moving average of the new orders index decreased to 62.0 from 62.5 in June, contributing -0.03 to the ILII.
- **Agricultural futures profits index:** Composite measure of corn and soybean expected profits, measured as the 12-month moving average of the futures price less estimated breakeven costs, and cattle and hog expected profits, measured as the average of the crush margin for the next 12 months, weighted by the respective share of Iowa annual cash receipts averaged over the prior ten calendar years. During July, this component contributed -0.10 to the index with a decrease in expected profits experienced by the two crop commodities and hogs but an increase in expected profits for cattle. Compared to last year, new crop corn prices were 7.1 percent lower and soybean prices were 14.0 percent lower. July crush margins for hogs were down 12.4 percent from June while crush margins for cattle were up 1.0 percent.

Table 3. ILII Components and Standardization Factors for FY 2019

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.034
Iowa Stock Market Index	0.017
Yield Spread	0.341
Residential Building Permits	0.032
Average Weekly Unemployment Claims	0.036
Average Weekly Manufacturing Hours	0.299
New Orders Index	0.064
Diesel Fuel Consumption	0.177

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 30, 2018
 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 2018 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 agricultural futures profits index, the Iowa stock market index, and yield spread. 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 Amy Harris of the Iowa Department of Revenue at (515) 281-0196 or Amy.Harris@iowa.gov.