

# IOWA Department of REVENUE

## Iowa Leading Indicators Index August 2011 Report

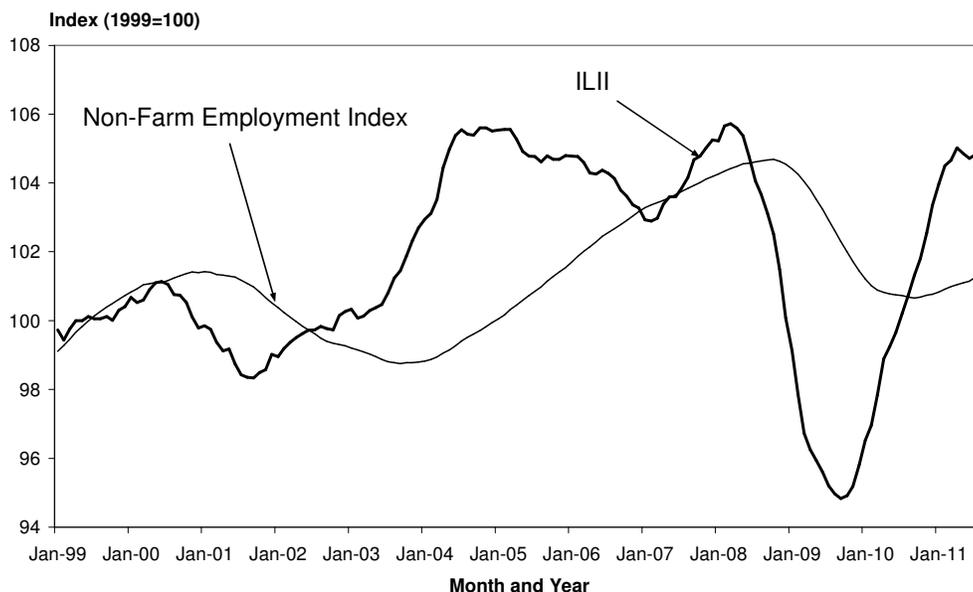
Tax Research and Program Analysis Section  
Released October 3, 2011

The Iowa Leading Indicators Index (ILII) dropped to 104.5 (100=1999) in August 2011 from 104.8 in July. The Iowa non-farm employment coincident index recorded a 0.11 percent rise in August, matching the increase in July and extending the streak of employment gains to eleven consecutive months.

The ILII's value decreased 0.3 percent in August, following the 0.1 percent gain in July, and two months of declines in May and June. During the six-month span through August, the ILII rose less than 0.1 (an annualized rate of 0.1 percent). The six-month diffusion index was 50.0 with four of the eight components (average weekly manufacturing hours, the Iowa stock market index, the national yield spread, and the new orders index) experiencing a decline of more than 0.05 percent over the last half a year.

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

**Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-August 2011**



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

Monthly Values	2011					
	March	April	May	June	July	August
ILII	104.7	105.0	104.8	104.7	104.8	104.5
Percentage Change <sup>a</sup>	0.1%	0.3%	-0.2%	-0.1%	0.1%	-0.3%
Diffusion Index <sup>b</sup>	50.0	75.0	37.5	37.5	56.3	43.8
Six-Month Values	Sep to March	Oct to April	Nov to May	Dec to June	Jan to July	Feb to August
ILII						
Percentage Change	3.3%	3.2%	2.2%	1.3%	0.8%	0.0%
Annualized Percentage Change	6.6%	6.3%	4.5%	2.6%	1.7%	0.1%
Diffusion Index	87.5	87.5	87.5	62.5	37.5	50.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 27, 2011.

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>		2011					
		March	April	May	June	July	August
AFPJ <sup>b</sup>	↑ <sup>c</sup>						
Corn Profits (cents per bushel)		183.5	219.7	252.5	275.4	295.6	318.4
Soybean Profits (cents per bushel)		408.2	449.4	491.7	521.9	549.2	571.9
Hog Profits (cents per pound)		23.3	23.2	22.4	22.1	21.9	21.7
Cattle Profits (cents per pound)		6.1	5.9	5.0	4.2	3.2	1.8
Iowa Stock Market Index (10=1984-86)	↓	71.01	72.60	69.68	66.89	69.48	61.97
Yield Spread (10-year less 3-month)	↓	3.31	3.40	3.13	2.96	2.96	2.28
Building Permits	↑	605	624	624	622	613	647
Average Weekly Unemployment Claims <sup>d</sup>	↑	4,328	4,254	4,170	4,080	3,996	3,974
Average Weekly Manufacturing Hours	--	41.1	40.9	40.8	40.7	40.5	40.5
New Orders Index (percent)	↓	74.1	74.0	72.9	70.6	68.9	67.0
Diesel Fuel Consumption (mil gallons)	↓	54.92	54.99	54.74	54.94	55.27	55.13

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 27, 2011.

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, 2011).

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

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

# ILII Components

- **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 August, this component contributed 0.20 to the ILII with the 12-month moving average jumping to 647. August 2011 permits were 76.2 percent higher than the number of permits issued in August 2010, but they were still 20.4 percent below the historical average for August (1998-2008).
- **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 August, this component contributed 0.10 to the ILII value as the 12-month moving average of expected profits for corn and soybeans improved. Compared to last year; corn prices are up 71 percent and soybean prices are up 34 percent. Although cattle and hog prices are both up 20 percent over last year, those increases were not large enough to offset the increases in production costs.
- **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 fell to 3,974 with unemployment claims for the month 8.7 percent below August 2010 claims. Initial claims for August 2011 were 22.9 percent above average August claims (1987-2008) extending the two and a half years of historically high claims.
- **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 August 2011, the 12-month moving average remained unchanged at 40.5, contributing 0.00 to the ILII. August 2011 hours were 40.9, the same as reported in August 2010.
- **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 fell 3.0 percent between August 2010 and 2011, causing the 12-month moving average to decrease 0.3 percent to 55.13 million gallons, and contributing -0.05 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. In August, the index dropped to 50.4 from 60.8 in July, well below the 73.8 value from a year ago. The 12-month moving average of the new orders index dropped to 67.0, contributing -0.12 to the ILII.
- **Iowa stock market index:** Capitalization-weighted index of 33 Iowa-based or Iowa-concentrated publicly-traded companies. During August 2011, just 2 of the 33 companies gained value, including only 1 of the 12 financial-sector companies. The stock market index fell to 61.97, contributing -0.21 to the ILII value.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During August, the yield spread fell to 2.28 percent as the long-term rate fell 70 basis points and the short-term rate dropped only 2 basis points. For the month, the yield spread contributed -0.22 to the ILII.

### Table 3. ILII Components and Standardization Factors for FY 2012

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Profits Index	0.054
Iowa Stock Market Index	0.017
Yield Spread	0.326
Building Permits	0.037
Average Weekly Unemployment Claims	0.034
Average Weekly Manufacturing Hours	0.284
New Orders Index	0.062
Diesel Fuel Consumption	0.186

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 30, 2011  
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 2011 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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