

# IOWA Department of REVENUE

## Iowa Leading Indicators Index May 2011 Report

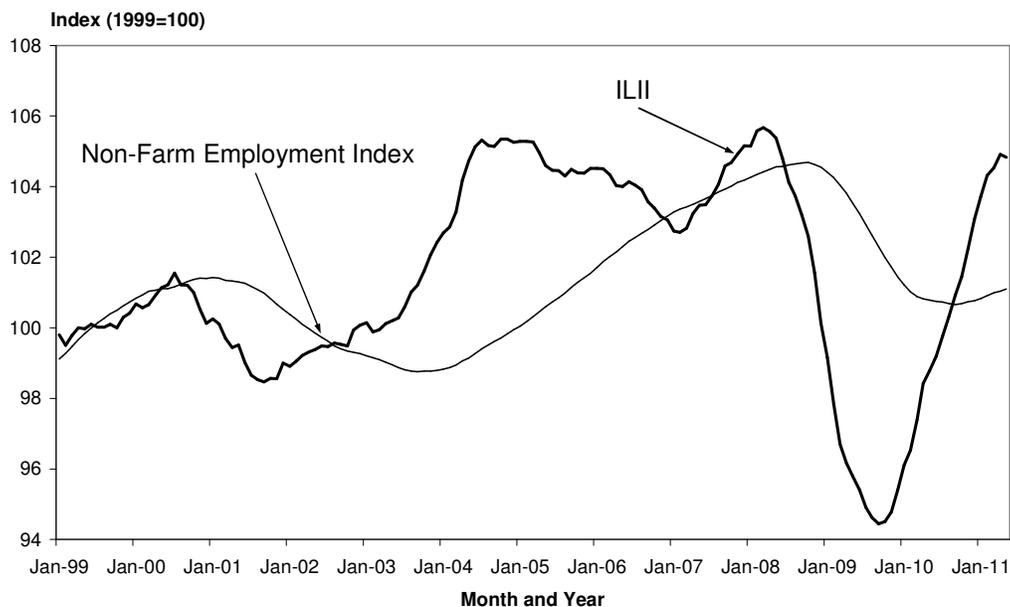
Tax Research and Program Analysis Section  
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The Iowa Leading Indicators Index (ILII) dipped to 104.8 (100=1999) in May 2011 from a revised 104.9 in April. The Iowa non-farm employment coincident index experienced its eleventh consecutive monthly increase with a 0.06 percent rise in May after a revised 0.05 percent increase in April.

The ILII's value decreased 0.1 percent in May, the first drop in the index since September 2009. Despite the one-month dip in the index, the long-term trend is still positive. During the six-month span through May, the ILII rose 2.5 percent (an annualized rate of 5.1 percent). The six-month diffusion index (value of 87.5) reflects an increase of 0.05 percent or greater over the last half year in seven of the eight components, with average manufacturing hours experiencing a decline more than 0.05 percent.

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

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



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

Monthly Values	2010	2011				
	December	January	February	March	April	May
ILII	103.1	103.7	104.3	104.5	104.9	104.8
Percentage Change <sup>a</sup>	0.8%	0.6%	0.6%	0.2%	0.4%	-0.1%
Diffusion Index <sup>b</sup>	100.0	75.0	75.0	50.0	62.5	37.5
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Six-Month Values	Jun to December	Jul to January	Aug to February	Sep to March	Oct to April	Nov to May
ILII						
Percentage Change	3.9%	4.0%	4.0%	3.6%	3.4%	2.5%
Annualized Percentage Change	7.8%	7.9%	8.0%	7.2%	6.8%	5.1%
Diffusion Index	87.5	87.5	87.5	87.5	87.5	87.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 28, 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>		2010	2011				
		December	January	February	March	April	May
AFPI <sup>b</sup>	↑ <sup>c</sup>						
Corn Profits (cents per bushel)		100.2	123.8	153.8	183.2	219.6	252.5
Soybean Profits (cents per bushel)		279.1	322.6	364.4	407.4	449.0	491.7
Hog Profits (cents per pound)		23.1	23.1	23.4	23.3	23.2	22.4
Cattle Profits (cents per pound)		5.1	5.7	5.9	6.1	5.9	5.0
Iowa Stock Market Index (10=1984-86)	↓	73.67	77.92	80.54	78.47	77.75	74.40
Yield Spread (10-year less 3-month)	↓	3.15	3.24	3.45	3.31	3.40	3.13
Building Permits	↑	626	624	613	605	624	624
Average Weekly Unemployment Claims <sup>d</sup>	↑	4,743	4,567	4,453	4,328	4,254	4,170
Average Weekly Manufacturing Hours	↓	41.3	41.3	41.2	41.1	40.9	40.8
New Orders Index (percent)	↓	70.1	72.2	73.6	74.1	74.0	72.9
Diesel Fuel Consumption (mil gallons)	↓	54.44	54.57	54.87	54.92	54.99	54.74

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 28, 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 31, 2010).

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

- **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 annual Iowa cash farm income. Changes are calculated based on a 12-month moving average. During May, this component contributed 0.23 to the ILII value as the 12-month moving average of expected profits for corn and soybeans improved. Although the average daily futures prices decreased for all four commodities in May compared to April, compared to last year; corn prices are nearly double, soybean prices are up 40 percent, cattle prices are up 14 percent, and hog prices are up 7 percent.
- **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 0.07 to the ILII value. The 12-month moving average of claims fell to 4,170 with unemployment claims for the month 23.4 percent below May 2010 claims. However, initial claims for May 2011 were still 46.7 percent above average May claims (1987-2008).
- **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 May, this component contributed 0.005 to the ILII with the 12-month moving average remaining flat at 624 after a strong increase in April. May 2011 permits were 1.5 percent higher than the number of permits issued in May 2010, although they were still 48.1 percent below the historical average for May (1998-2008).
- **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 May, the index dropped to 68.3 from 79.4 in April, and below the 81.1 reading from a year ago. However, the monthly index remains in expansion territory, defined as values above 50. The 12-month moving average of the new orders index dropped to 72.9, contributing -0.07 to the ILII.
- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. During May 2011, 10 of the 34 companies gained value, including just 3 of the 12 financial-sector companies. The stock market index fell to 74.40, contributing -0.07 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 May 2011, the 12-month moving average fell to 40.8, contributing -0.08 to the ILII. May 2011 hours were 39.7, down from 41.0 hours reported in May 2010. Average manufacturing hours remained over one hour below the historical average (1998-2008) for the sixth consecutive month. April 2011 hours were revised downward from the preliminary 39.9 to the final 39.1, causing the revision in the ILII from 105.0 to 104.9 for April.
- **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 5.4 percent between May 2010 and 2011, causing the 12-month moving average to drop 0.5 percent to 54.74 million gallons, and contributing -0.09 to the ILII value.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During May, the yield spread decreased to 3.13 percent as the long-term rate dropped 29 basis points while the short-term rate slipped two points. For the month, the yield spread contributed -0.09 to the ILII.

**Table 3. ILII Components and Standardization Factors for FY 2011**

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 31, 2010. 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 2010 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 likely 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. The Conference Board considers a contraction signal in the LEI 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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