

# IOWA Department of REVENUE

## Iowa Leading Indicators Index November 2009 Report

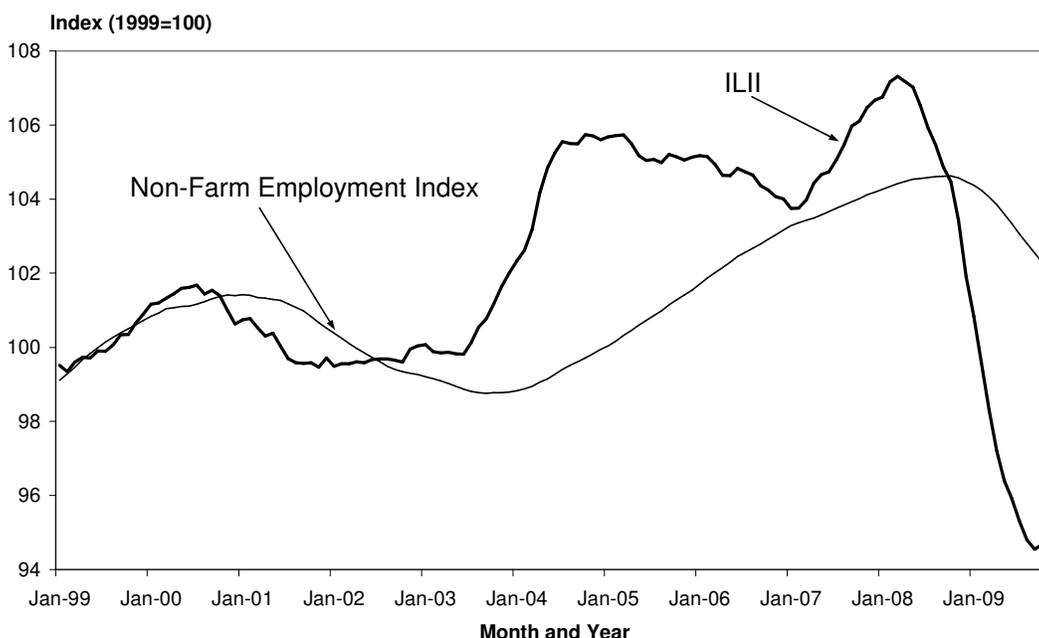
Tax Research and Program Analysis Section  
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The Iowa Leading Indicators Index (ILII) rose to 95.1 (100=1999) in November 2009 from a revised 94.7 in October. The Iowa non-farm employment coincident index fell by 0.20 percent for the month, the thirteenth consecutive monthly decrease.

The ILII's value increased 0.4 percent in November, the second monthly increase after eighteen months of declines. During the six-month span through November, the ILII dropped 1.4 percent (an annualized rate of -2.7 percent). The six-month diffusion index (value of 50.0) reflects an increase of 0.5 percent or greater over the last half year in the new orders index, yield spread, new residential building permits, and average weekly manufacturing hours, while the other four components experienced a 0.5 percent or greater decrease over that time.

In November, six of the eight Iowa Leading Indicators Index components increased. The positive contributors were the new orders index, average weekly manufacturing hours, the Iowa stock market index, unemployment insurance claims (inverted), new residential building permits, and the yield spread. The agricultural futures price index contribution rounds to zero. Diesel fuel consumption was the lone negative contributor.

**Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-November 2009**



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

Monthly Values	2009					
	June	July	August	September	October	November
ILII	95.9	95.3	94.8	94.6	94.7	95.1
Percentage Change <sup>a</sup>	-0.5%	-0.6%	-0.5%	-0.3%	0.1%	0.4%
Diffusion Index <sup>b</sup>	37.5	25.0	25.0	31.3	43.8	81.3
Six-Month Values	Dec to June	Jan to July	Feb to August	Mar to September	Apr to October	May to November
ILII						
Percentage Change	-5.9%	-5.5%	-4.8%	-3.8%	-2.6%	-1.4%
Annualized Percentage Change	-11.7%	-11.0%	-9.6%	-7.6%	-5.2%	-2.7%
Diffusion Index	12.5	12.5	12.5	25.0	37.5	50.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 4, 2010.

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>		2009					
		June	July	August	September	October	November
AFPI <sup>b</sup>	↑ <sup>c</sup>						
Corn Profits (cents per bushel)		141.3	109.2	84.9	61.6	53.4	51.6
Soybean Profits (cents per bushel)		323.7	268.3	236.2	207.2	202.2	202.4
Hog Profits (cents per pound)		10.7	9.4	6.8	5.5	5.5	5.7
Cattle Profits (cents per pound)		-9.4	-9.4	-9.9	-9.8	-9.1	-8.6
Iowa Stock Market Index (10=1984-86)	↑	48.75	48.13	47.77	47.39	48.02	48.92
Yield Spread (10-year less 3-month)	↑	3.54	3.38	3.42	3.28	3.32	3.35
Building Permits	↑	545	557	551	565	564	568
Average Weekly Unemployment Claims <sup>d</sup>	↑	7,114	7,440	7,670	7,816	8,010	7,863
Average Weekly Manufacturing Hours	↑	38.4	38.3	38.3	38.3	38.4	38.6
New Orders Index (percent)	↑	34.6	36.0	36.8	39.3	42.1	44.6
Diesel Fuel Consumption (mil gallons)	↓	52.69	52.40	52.06	51.71	51.51	51.23

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 4, 2010.

a. For all component series except for the yield spread (the only national series) the values represent 12-month backward moving averages.

b. The agricultural futures price 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 21, 2009).

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

- **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 November 2009, the index slipped to 58.6 from 60.5 in October, but remained well above the November 2008 value of 28.8. The year-over-year strength raised the component's 12-month moving average which contributed 0.16 to the ILII.
- **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 November 2009, this component contributed 0.15 to the ILII value with November hours at 40.5, well above the 38.1 reported in November 2008, but a slight drop from the revised 40.6 average hours reported in October 2009.
- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. Changes are calculated based on a 12-month moving average. During November, 15 of the 34 companies gained value, but only one of the 12 financial-sector companies showed a gain. Although not as strong as October, compared to the weakness in the stock market one year ago, the gains in November 2009 kept the index as a positive contributor, contributing 0.11 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. With unemployment claims 21.3 percent below November 2008 claims, this component contributed 0.06 to the ILII value, its first positive contribution since November 2007. However, initial claims for November 2009 were still 72.6 percent above average November claims for 1988 through 2007.
- **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 November 2009, this component contributed 0.03 to the ILII value. November 2009 permits were 9.9 percent above November 2008 permits, pushing the 12-month moving average up by 0.8 percent.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During November, the yield spread increased as the long-term rate gained one basis point while the short-term rate dropped two basis points. This component contributed 0.01 to the ILII.
- **Agricultural futures price 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. Breakeven costs for crop year 2009 were revised, raising measured profitability for both corn and soybeans in November and the previous five months. During November, this component contributed 0.00 to the ILII value as the 12-month moving average of expected profits for soybeans, hogs, and cattle improved while expected profits for corn continued to shrink.
- **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 dropped 5.8 percent between November 2008 and 2009, causing the 12-month moving average to drop 0.5 percent and contributing -0.09 to the ILII value for November 2009.

**Table 3. ILII Components and Standardization Factors for FY 2010**

Iowa Leading Indicator Index Components	Standardization Factor
Agricultural Futures Price Index	0.052
Iowa Stock Market Index	0.059
Yield Spread	0.289
Building Permits	0.034
Average Weekly Unemployment Claims	0.033
Average Weekly Manufacturing Hours	0.298
New Orders Index	0.064
Diesel Fuel Consumption	0.171

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 21, 2009. 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 2009 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, which is the only national series. 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 the summer.

## 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). 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-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 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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