

IOWA Department of REVENUE

Iowa Leading Indicators Index November 2010 Report

Tax Research and Program Analysis Section
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The Iowa Leading Indicators Index (ILII) rose to 102.4 (100=1999) in November 2010 from 101.6 in October. The Iowa non-farm employment coincident index increased 0.04 percent during November, the fifth consecutive monthly increase.

The ILII's value increased 0.8 percent in November, the 14th consecutive monthly increase and the largest since April 2010. During the six-month span through November, the ILII rose 3.6 percent (an annualized rate of 7.2 percent). The six-month diffusion index (value of 75.0) reflects an increase of 0.05 percent or greater over the last half year in six of the eight components, with the yield spread and new residential building permits experiencing a drop exceeding 0.05 percent over that time.

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

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-November 2010



Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2010					
	June	July	August	September	October	November
ILII	99.2	99.8	100.4	101.0	101.6	102.4
Percentage Change ^a	0.4%	0.6%	0.6%	0.6%	0.5%	0.8%
Diffusion Index ^b	62.5	75.0	75.0	81.3	75.0	87.5
Six-Month Values	Dec to June	Jan to July	Feb to August	Mar to September	Apr to October	May to November
ILII						
Percentage Change	4.0%	3.9%	4.0%	3.7%	3.2%	3.6%
Annualized Percentage Change	8.0%	7.7%	8.0%	7.4%	6.4%	7.2%
Diffusion Index	87.5	75.0	87.5	75.0	62.5	75.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 30, 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 ^a		2010					
		June	July	August	September	October	November
AFPI ^b	↑ ^c						
Corn Profits (cents per bushel)		13.6	22.9	35.3	53.9	73.3	91.8
Soybean Profits (cents per bushel)		153.3	166.3	178.3	200.0	227.1	257.8
Hog Profits (cents per pound)		15.2	17.1	19.7	21.8	23.0	23.3
Cattle Profits (cents per pound)		0.8	1.3	2.4	3.1	3.7	4.2
Iowa Stock Market Index (10=1984-86)	↑	62.00	62.22	62.52	63.64	65.21	68.51
Yield Spread (10-year less 3-month)	↑	3.08	2.85	2.54	2.50	2.41	2.62
Building Permits	↑	672	664	659	642	610	622
Average Weekly Unemployment Claims ^d	↑	6,124	5,813	5,530	5,322	5,031	4,915
Average Weekly Manufacturing Hours	↑	40.4	40.7	40.8	40.9	41.0	41.2
New Orders Index (percent)	↓	64.2	66.4	68.8	69.5	69.8	69.4
Diesel Fuel Consumption (mil gallons)	↑	52.18	52.31	52.58	53.17	53.68	54.27

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced December 30, 2010.

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

- **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 rose 12.9 percent between November 2009 and 2010, causing the 12-month moving average to rise 1.1 percent to 54.27 million gallons, and contributing 0.20 to the ILII value.
- **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 November, this component contributed 0.19 to the ILII value as the 12-month moving average of expected profits for all four commodities improved, with strong increases in the futures prices of corn, soybeans, and cattle.
- **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 2010, this component contributed 0.11 to the ILII value with the 12-month moving average rising to 41.2 from 41.0 in October. November 2010 hours were 42.2, equal to the historical average for November (1996-2007), and 1.9 hours above the 40.3 average reported in November 2009.
- **Iowa stock market index:** Capitalization-weighted index of 34 Iowa-based or Iowa-concentrated publicly-traded companies. During November 2010, 23 of the 34 companies gained value, including 10 of the 12 financial-sector companies. The stock market index, rising to 68.51, contributed 0.08 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. The 12-month moving average of claims fell to 4,915 with unemployment claims in November 2010 21.6 percent below November 2009 claims. This component contributed 0.08 to the ILII value. However, initial claims for November 2010 were still 28.0 percent above average November 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 November, this component contributed 0.07 to the ILII with the 12-month moving average rising to 622. November 2010 permits were 24.2 percent higher than the number of permits issued in November 2009 but remained 30.8 percent below the historical average for November (1998-2008).
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During November, the yield spread rose to 2.72 as the long-term rate increased 22 basis points while the short-term rate increased 1 basis point. For the month, the yield spread contributed 0.07 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. In November, the index dropped to 52.9 from 64.9 in October, and below the 58.6 reading from a year ago. The 12-month moving average of the new orders index fell to 69.4, contributing -0.03 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.

Contact: Questions can be addressed to Amy Rehder Harris of the Iowa Department of Revenue at (515) 281-0196 or amy.harris@iowa.gov.