

IOWA Department of REVENUE

Iowa Leading Indicators Index December 2009 Report

Tax Research and Program Analysis Section
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The Iowa Leading Indicators Index (ILII) rose to 95.8 (100=1999) in December 2009 from 95.1 in November. The Iowa non-farm employment coincident index fell by 0.23 percent for the month, the fourteenth consecutive monthly decrease.

The ILII's value increased 0.8 percent in December after rising 0.4 percent in November and 0.1 percent in October. During the six-month span through December, the ILII dropped 0.1 percent (an annualized rate of -0.2 percent). The six-month diffusion index (value of 56.3) reflects an increase of 0.5 percent or greater over the last half year in the new orders index, new residential building permits, average weekly manufacturing hours, and the Iowa stock market index. The yield spread increase was less than 0.5 percent, while the other three components experienced a 0.5 percent or greater decrease over that time.

In December, all eight Iowa Leading Indicators Index components contributed positively for the first time since April 2007. The components, by order of contribution, were average weekly manufacturing hours, the new orders index, the Iowa stock market index, new residential building permits, unemployment insurance claims (inverted), the yield spread, diesel fuel consumption, and the agricultural futures price index.

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

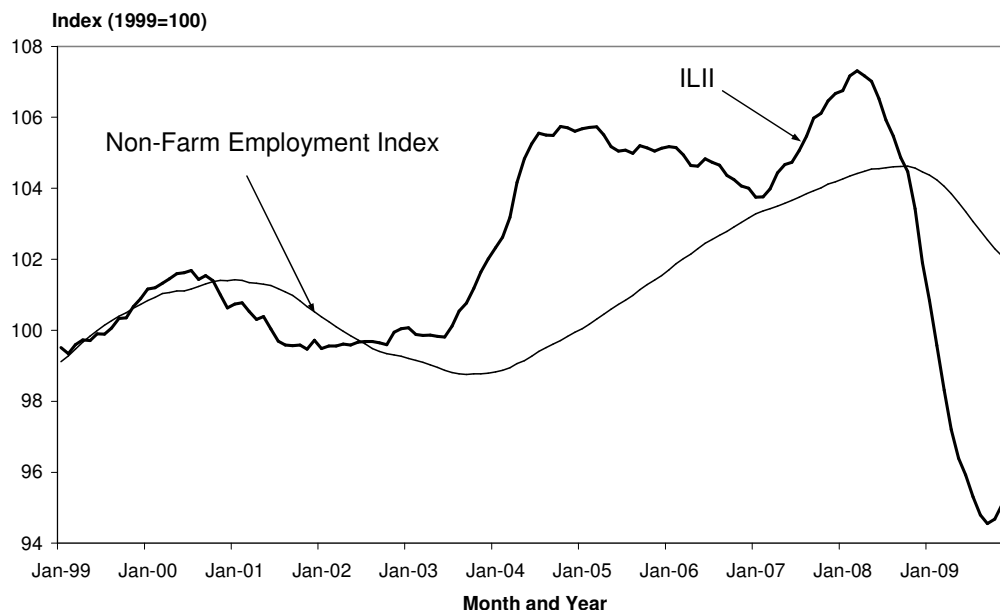


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2009					
	July	August	September	October	November	December
ILII	95.3	94.8	94.6	94.7	95.1	95.8
Percentage Change ^a	-0.6%	-0.5%	-0.3%	0.1%	0.4%	0.8%
Diffusion Index ^b	25.0	25.0	31.3	43.8	81.3	100.0
Six-Month Values	Jan to July	Feb to August	Mar to September	Apr to October	May to November	June to December
ILII						
Percentage Change	-5.5%	-4.8%	-3.8%	-2.6%	-1.3%	-0.1%
Annualized Percentage Change	-11.0%	-9.6%	-7.6%	-5.2%	-2.7%	-0.2%
Diffusion Index	12.5	12.5	25.0	37.5	50.0	56.3

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 28, 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		2009					
		July	August	September	October	November	December
AFPI ^b	↑ ^c						
Corn Profits (cents per bushel)		109.2	84.9	61.6	53.4	51.6	49.2
Soybean Profits (cents per bushel)		268.3	236.2	207.2	202.2	202.4	206.9
Hog Profits (cents per pound)		9.4	6.8	5.5	5.5	5.6	6.4
Cattle Profits (cents per pound)		-9.4	-9.9	-9.8	-9.1	-8.6	-7.8
Iowa Stock Market Index (10=1984-86)	↑	48.13	47.77	47.39	48.02	48.92	49.88
Yield Spread (10-year less 3-month)	↑	3.38	3.42	3.28	3.32	3.35	3.54
Building Permits	↑	557	551	565	564	568	586
Average Weekly Unemployment Claims ^d	↑	7,440	7,670	7,816	8,010	7,863	7,725
Average Weekly Manufacturing Hours	↑	38.3	38.3	38.3	38.4	38.6	38.9
New Orders Index (percent)	↑	36.0	36.8	39.3	42.1	44.6	47.5
Diesel Fuel Consumption (mil gallons)	↑	52.40	52.06	51.71	51.51	51.23	51.37

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced January 28, 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

- **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 December 2009, this component contributed 0.19 to the ILII value with December hours at 40.2, well above the 37.3 reported in December 2008, but a drop from the revised 40.7 average hours reported in November 2009.
- **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 December 2009, the index dropped to 54.3 from 58.6 in November, but remained well above the December 2008 value of 19.6. The year-over-year strength raised the component's 12-month moving average which contributed 0.18 to the ILII.
- **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 December, 23 of the 34 companies gained value, including 6 of the 12 financial-sector companies. The strong gains in December 2009 contributed 0.11 to the ILII value.
- **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 December 2009, this component contributed 0.11 to the ILII. December 2009 permits were 83.9 percent above December 2008 permits, pushing the 12-month moving average up by 3.1 percent. Despite this relative strength, December 2009 permits are still 47 percent below average December permits reported for 1998 through 2006.
- **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 14.3 percent below December 2008 claims, this component contributed 0.06 to the ILII value. However, initial claims for December 2009 were still 57.4 percent above average December claims for 1987 through 2007.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During December, the yield spread increased as the long-term rate gained 19 basis points while the short-term rate was unchanged at a low 0.05 percent. This component contributed 0.05 to the ILII.
- **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 3.3 percent between December 2008 and 2009, causing the 12-month moving average to rise 0.3 percent and contributing 0.05 to the ILII value for December 2009. This was the first increase in the diesel consumption component since May 2008.
- **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. During December, this component contributed 0.03 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.

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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