

IOWA Department of REVENUE

Iowa Leading Indicators Index February 2010 Report

Tax Research and Program Analysis Section
Released April 1, 2010

The Iowa Leading Indicators Index (ILII) rose to 97.2 (100=1999) in February 2010 from 96.5 in January. The Iowa non-farm employment coincident index fell by 0.17 percent for the month, the sixteenth consecutive monthly decrease.

The ILII's value increased 0.7 percent in February, just short of the 0.8 percent increases in January and December, extending the streak of positive changes in the ILII to five months. During the six-month span through February, the ILII rose 2.6 percent (an annualized rate of 5.1 percent). The six-month diffusion index (value of 75.0) 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, the Iowa stock market index, unemployment insurance claims, and the yield spread. The other two components experienced a 0.5 percent or greater decrease over that time.

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

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

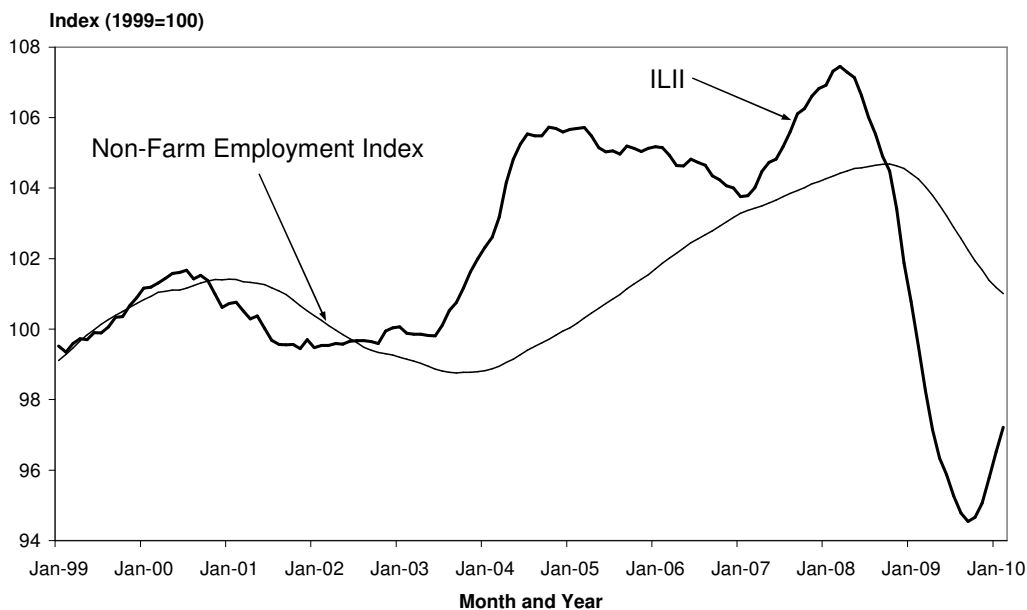


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2009				2010	
	September	October	November	December	January	February
ILII	94.5	94.7	95.1	95.8	96.5	97.2
Percentage Change ^a	-0.2%	0.1%	0.4%	0.8%	0.8%	0.7%
Diffusion Index ^b	31.3	43.8	81.3	100.0	81.3	75.0
Six-Month Values	Mar to September	Apr to October	May to November	June to December	July to January	Aug to February
ILII						
Percentage Change	-3.8%	-2.6%	-1.3%	-0.1%	1.3%	2.6%
Annualized Percentage Change	-7.5%	-5.1%	-2.7%	-0.2%	2.6%	5.1%
Diffusion Index	25.0	37.5	50.0	56.3	62.5	75.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced March 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	2009				2010	
	September	October	November	December	January	February
AFPI ^b						
Corn Profits (cents per bushel)	61.6	53.4	49.8	47.7	42.2	37.5
Soybean Profits (cents per bushel)	207.2	202.2	202.4	206.9	196.6	189.3
Hog Profits (cents per pound)	4.8	4.6	5.2	6.3	7.1	8.3
Cattle Profits (cents per pound)	-9.8	-9.1	-8.6	-7.8	-6.5	-5.2
Iowa Stock Market Index (10=1984-86)	47.39	48.02	48.92	49.88	51.42	53.41
Yield Spread (10-year less 3-month)	3.28	3.32	3.35	3.54	3.67	3.58
Building Permits	565	564	568	586	591	605
Average Weekly Unemployment Claims ^d	7,816	8,010	7,863	7,725	7,564	7,298
Average Weekly Manufacturing Hours	38.3	38.4	38.6	38.8	39.1	39.4
New Orders Index (percent)	39.3	42.1	44.6	47.5	50.9	53.0
Diesel Fuel Consumption (mil gallons)	51.71	51.51	51.23	51.37	51.30	51.10

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

- **lowa 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 February 2010, just 8 of the 34 companies gained value, including only 4 of the 12 financial-sector companies. In February 2009, only 5 companies showed a gain and 3 of the financial companies in the index lost more than 25 percent of their market value. As a result, despite the low number of stocks with monthly gains in 2010, the 12-month moving average of the index showed a strong gain, contributing 0.22 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 February 2010, this component contributed 0.22 to the ILII value with the 12-month moving average rising to 39.4. February 2010 hours were 40.1, well above the 36.6 reported in February 2009, but still one hour below the historical average for February (1996-2008).
- **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. The 12-month moving average of the new orders index rose to 53.0 with the February 2010 value of 65.3 exceeding the February 2009 value of 39.6. The index has not exceeded 65 since March 2008. The year-over-year strength in the index contributed 0.14 to the ILII.
- **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 7,298 with unemployment claims in February 2010 39.4 percent below February 2009 claims. This component contributed 0.12 to the ILII value. However, initial claims for February 2010 were still 80 percent above average February 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 February, this component contributed 0.08 to the ILII with the 12-month moving average rising to 605. Although February 2010 permits were 91 percent above February 2009 permits, February 2010 permits were still 50 percent below the historical average for February (1998-2008).
- **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 February, this component contributed 0.02 to the ILII value as the 12-month moving average of expected profits for hogs and cattle improved while expected profits for soybeans and corn fell.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During February, the yield spread decreased to 3.58 as the long-term rate dropped 4 basis points while the short-term rate gained 5 basis points. This component contributed -0.03 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 fell 4.8 percent between February 2009 and 2010, causing the 12-month moving average to fall 0.4 percent to 51.1 million gallons, and contributing -0.07 to the ILII value. Snowstorms during the month likely caused some of the decline in consumption.

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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