

# IOWA Department of REVENUE

## Iowa Leading Indicators Index June 2008 Report

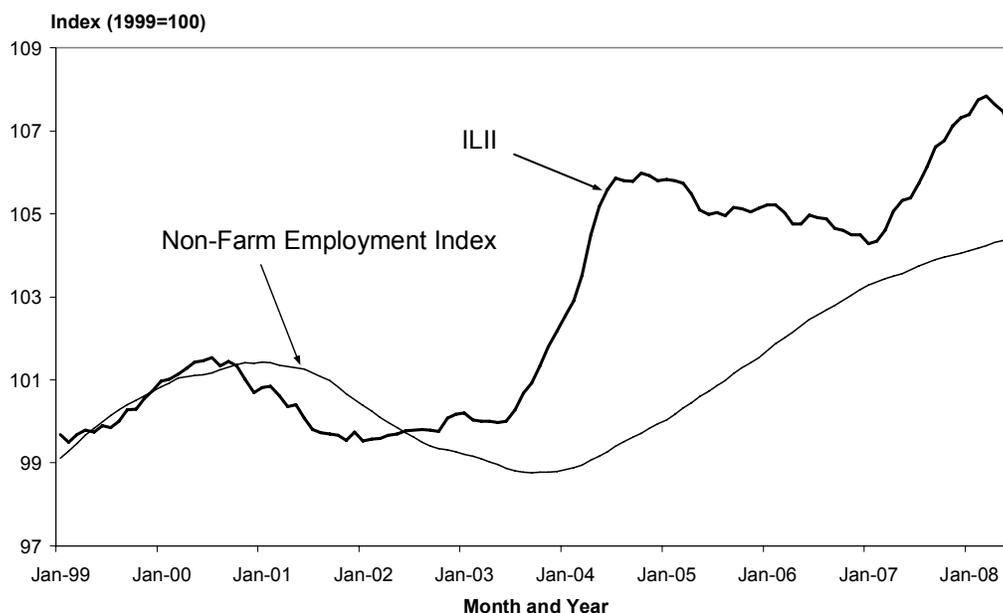
Tax Research and Program Analysis Section

The Iowa Leading Indicators Index (ILII) fell to 107.0 (100=1999) in June 2008. The Iowa non-farm employment coincident index was flat in June, ending a 54-month streak of increases.

The ILII's value in June decreased 0.5 percent after a revised 0.2 percent drop in May. The index has decreased three months in a row, also dropping 0.2 percent in April after fourteen months of steady increases. During the six-month span through June, the ILII dropped 0.3 percent (a -0.7 percent annual rate). The six-month diffusion index (value of 43.8) reflects four of eight components experiencing a 0.5 percent or greater increase over the last half year, no change for average manufacturing hours, and a 0.5 percent or greater decrease for building permits, the new orders index, and unemployment claims (inverted).

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

**Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-June 2008**



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

Monthly Values	2008					
	January	February	March	April	May	June
ILII	107.4	107.7	107.8	107.6	107.5	107.0
Percentage Change <sup>a</sup>	0.1%	0.3%	0.1%	-0.2%	-0.2%	-0.5%
Diffusion Index <sup>b</sup>	62.5	56.3	56.3	37.5	25.0	25.0
Six-Month Values	July to January	Aug to February	Sept to March	Oct to April	Nov to May	Dec to June
ILII						
Percentage Change	1.6%	1.5%	1.1%	0.8%	0.3%	-0.3%
Diffusion Index	87.5	87.5	75.0	75.0	62.5	43.8

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced July 30, 2008.

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>		2008					
		January	February	March	April	May	June
AFPI <sup>b</sup>	↑ <sup>c</sup>						
Corn (cents per bushel)		393.3	402.4	414.7	434.1	453.2	481.4
Hog Profits (cents per pound)		12.3	11.6	10.7	10.3	10.4	10.3
Soybeans (cents per bushel)		926.8	979.1	1028.9	1077.0	1123.6	1176.2
Cattle Profits (cents per pound)		-0.6	-1.0	-2.0	-3.0	-3.4	-3.6
Iowa Stock Market Index (10=1984-86)	↓	64.00	64.02	64.00	64.13	64.04	63.67
Yield Spread (10-year less 3-month)	↑	0.92	1.57	2.23	2.37	2.12	2.21
Building Permits	↓	896	890	844	813	785	747
Average Weekly Unemployment Claims <sup>d</sup>	↓	3,316	3,320	3,346	3,439	3,531	3,791
Average Weekly Manufacturing Hours	↓	41.4	41.4	41.5	41.4	41.4	41.3
New Orders Index (percent)	↓	60.9	60.7	60.3	59.5	58.7	56.0
Diesel Fuel Consumption (mil gallons)	↓	56.91	57.24	57.38	57.25	57.35	57.17

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced July 30, 2008.

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 annual share of the commodity to Iowa cash farm income.

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 price index:** Composite measure of cattle, hogs, corn and soybeans futures prices weighted by the respective share of annual Iowa cash farm income. Changes are calculated based on a 12-month moving average of the futures price series, where cattle and hogs series also incorporate estimates of break-even costs. During June 2008 this component contributed 0.15 to the ILII value as corn and soybean prices continued their rise while hog and cattle profits continued their fall.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During June, the yield spread increased as the long-term rate rose 22 basis points while the short-term rate rose only 13 basis points. This component contributed 0.02 to the ILII value.
- **Iowa stock market index:** Capitalization-weighted index of 37 Iowa-based or Iowa-concentrated publicly-traded companies. Changes are calculated based on a 12-month moving average. During June 2008 this component fell, contributing -0.03 to the ILII value. Only nine of the 37 companies and three of the 15 financial-sector companies gained value during the month.
- **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. During June 2008 this component contributed -0.04 to the ILII value as June hours fell 0.7 percent relative to the previous month, pushing the 12-month moving average down by 0.1 percent. Manufacturing hours were revised downward by 1.9 percent in May, increasing the index's drop for the month to 0.2 percent.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. During June 2008 this component's contribution to the ILII value was -0.05 as diesel fuel consumption decreased 3.6 percent relative to the prior year.
- **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. During June 2008 this component contributed -0.14 to the ILII value. June permits dropped 13.1 percent below May's value and 38.7 percent below the number reported in June 2007. This drop pushed down the 12-month moving average by 4.9 percent. June 2008 permits were 47.0 percent below the historical average for June, based on reports from 1998 through 2007.
- **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 monthly new orders index value dropped sharply in June to 35.7 from May's value of 55.3. With the drop attributed to negative impacts on manufacturers from the widespread flooding and the inclement weather during June, this component contributed -0.15 to the June 2008 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. During June 2008 this component contributed -0.23 to the ILII value. June 2008 unemployment claims were 100.6 percent above June 2007 due to flood-induced and manufacturing lay-offs across the State.

**Table 3. ILII Components and Standardization Factors for FY 2008**

Iowa Leading Indicator Components	Standardization Factor
Agricultural Futures Price Index	0.124
Iowa Stock Market Index	0.058
Yield Spread	0.247
Building Permits	0.029
Unemployment Claims	0.034
Average Weekly Hours	0.289
New Orders Index	0.055
Diesel Fuel Consumption	0.164

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 28, 2007. 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 2007 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 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 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 indicators index. A movement in the ILII for only one month 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 national leading indicators index reliable when two conditions are met: 1. the index declines by at least two percent over a six month period (using an annual rate); and, 2. a majority of the individual components also decline over those six months (six-month diffusion index less than 50.0).

The Iowa Non-Farm Employment Coincident Index measures the change in non-farm employment of all workers 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 designed to represent the current state of economic activity in Iowa.

The Employment Index and the ILII are constructed to have a value of 100 in the year 1999.