

IOWA Department of REVENUE

Iowa Leading Indicators Index April 2008 Report

Tax Research and Program Analysis Section

The Iowa Leading Indicators Index (ILII) decreased 0.2 percent in April 2008. The Iowa non-farm employment coincident index experienced a 0.07 percent increase in April, the 53rd consecutive increase, although the rate of growth has been less than 0.1 percent per month since February 2007.

The ILII's value in April fell to 107.6 (100=1999) ending a fourteen month streak of increases. The index increased 0.1 percent in March, 0.3 percent in February, and 0.1 percent in January. During the six-month span through April, the ILII increased 0.8 percent (a 1.6 percent annual rate). The six-month diffusion index (value of 75.0) reflects six of eight components experiencing a 0.5 percent or greater increase and building permits and unemployment claims (inverted) experiencing a 0.5 percent or greater decrease over the last half year.

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

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

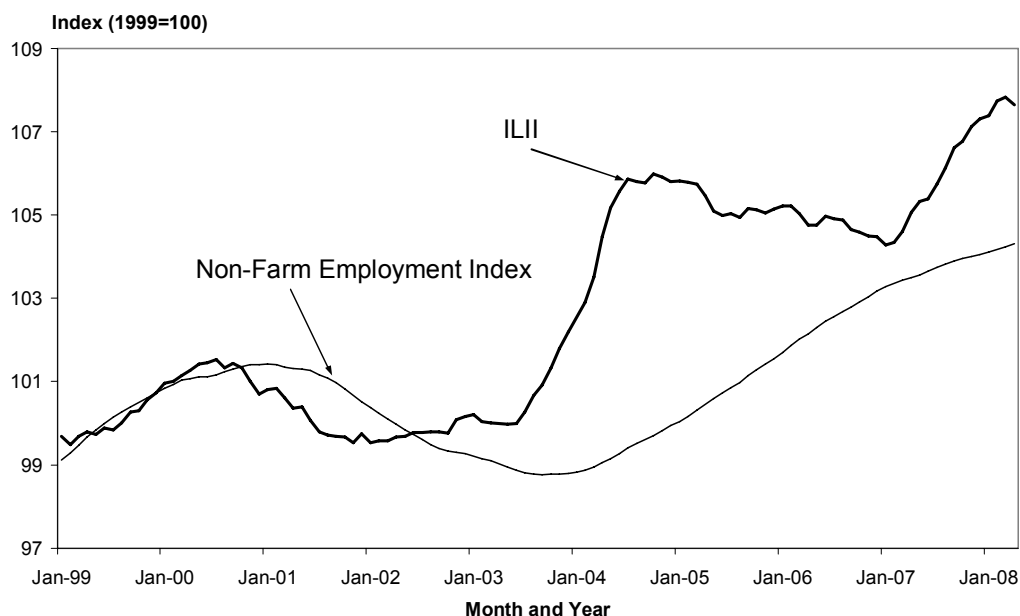


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2007		2008			
	November	December	January	February	March	April
ILII	107.1	107.3	107.4	107.7	107.8	107.6
Percentage Change ^a	0.3%	0.2%	0.1%	0.3%	0.1%	-0.2%
Diffusion Index ^b	87.5	68.8	62.5	56.3	56.3	37.5

Six-Month Values	May to November	June to December	July to January	Aug to February	Sept to March	Oct to April
ILII						
Percentage Change	1.7%	1.8%	1.6%	1.5%	1.1%	0.8%
Diffusion Index	87.5	87.5	87.5	87.5	75.0	75.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced May 28, 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 ^a	2007		2008			
	November	December	January	February	March	April
AFPI ^b						
Corn (cents per bushel)						
Hog Profits (cents per pound)						
Soybeans (cents per bushel)						
Cattle Profits (cents per pound)						
Iowa Stock Market Index (10=1984-86)						
Yield Spread (10-year less 3-month)						
Building Permits						
Average Weekly Unemployment Claims ^d						
Average Weekly Manufacturing Hours						
New Orders Index (percent)						
Diesel Fuel Consumption (mil gallons)						

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced May 28, 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 April 2008 this component contributed 0.09 to the ILII value as corn and soybean prices continued their rise and hog and cattle profits continued their fall.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During April, the yield spread increased as the long-term rate rose 17 basis points compared to a three basis point rise in the short-term rate. This component contributed 0.03 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 April 2008 this component returned to a positive contributor, adding 0.01 to the ILII value as 20 of the 37 companies and eight of the 15 financial-sector companies gained value during the month.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. During April 2008 this component's contribution to the ILII value was -0.04 as diesel fuel consumption for the month decreased 2.8 percent relative to the prior year.
- **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 April 2008 this component contributed -0.04 to the ILII value as April hours fell 1.7 percent relative to the previous month, pushing the 12-month moving average down by 0.14 percent. A -1.2 percent revision in the March number caused the downward revision in the March 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. The monthly new orders index value for April of 63.6 fell below March's and was well below the strong April 2007 level of 73.7, thus it contributed -0.05 to the April 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 April 2008 this component contributed -0.09 to the ILII value. April 2008 unemployment claims were 46.8 percent above April 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. During April 2008 this component contributed -0.11 to the ILII value. Although April permits exceeded March's value, the level was 30.7 percent below the number reported in April 2007 which pushed down the 12-month moving average by 3.7 percent. April 2008 permits were 40.9 percent below the historical average for April, based on reports from 1998 through 2007.

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.