

Iowa Leading Indicators Index

May 2007

Iowa Department of Revenue
Tax Research and Program Analysis Section

The Iowa Leading Indicators Index (ILII) rose 0.4 percent in May 2007. The Iowa non-farm employment coincident index increased by 0.1 percent in May, the 42nd consecutive month.

The ILII's value in May rose to 106.8 (100=1999). This was the fourth consecutive increase in the index, in April it rose 0.5 percent, in March 0.4 percent, and in February 0.2 percent. During the six-month span through May, the ILII increased 1.5 percent (a 2.9 percent annual rate). The six-month diffusion index (value of 62.5) reflects five of eight components experiencing a 0.5 percent or greater increase and three components experiencing a 0.5 percent or greater decrease over the last half year.

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

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: Jan. 1999-May 2007

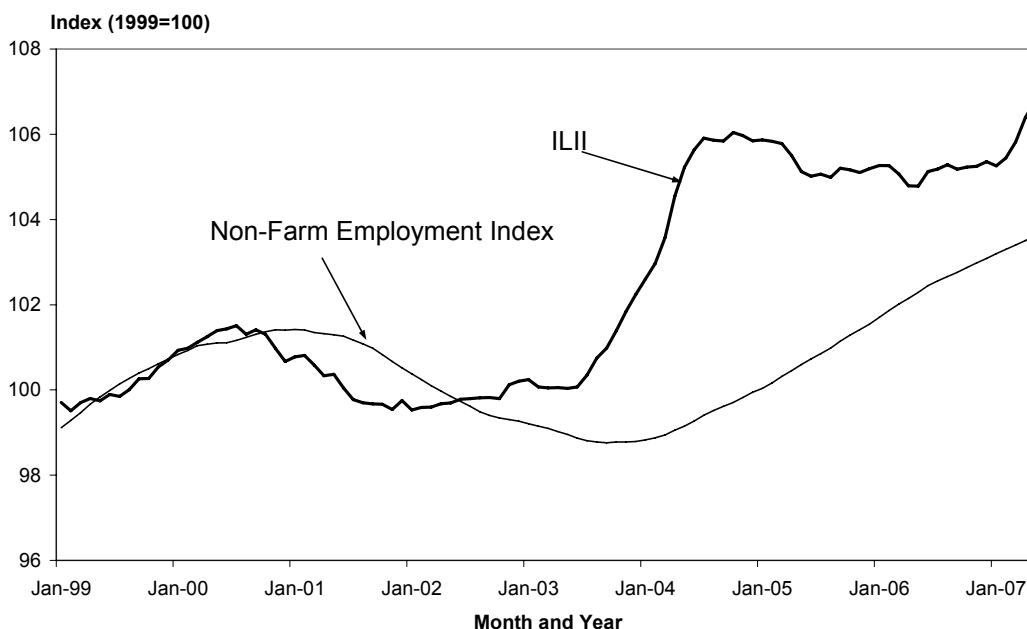


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2006	2007		March	April	May
	December	January	February			
ILII	105.4	105.3	105.4	105.8	106.4	106.8
Percentage Change ^a	0.1%	-0.1%	0.2%	0.4%	0.5%	0.4%
Diffusion Index ^b	68.8	43.8	50.0	81.3	93.8	81.3

Six-Month Values	2006	2007		Sept to March	Oct to April	Nov to May
	June to December	July to January	Aug to February			
ILII						
Percentage Change	0.2%	0.1%	0.2%	0.6%	1.1%	1.5%
Diffusion Index	50.0	50.0	50.0	50.0	56.3	62.5

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 29, 2007.

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		2006	2007		April	May
		December	January	February		
AFPI ^b	↑ ^c					
Hog Profits (cents per pound)		13.1	13.3	14.0	14.6	15.9
Corn (cents per bushel)		272.4	287.1	302.9	317.8	328.2
Soybeans (cents per bushel)		608.0	618.3	633.2	648.2	662.4
Cattle Profits (cents per pound)		0.2	-0.6	-1.5	-1.1	-0.5
Iowa Stock Market Index (10=1984-86)	↑	55.23	56.13	57.09	57.83	58.56
Yield Spread (10-year less 3-month)	↑	-0.41	-0.35	-0.44	-0.52	-0.32
Building Permits	↓	1,070	1,044	1,009	1,009	1,015
Average Weekly Unemployment Claims ^d	↑	3,298	3,415	3,458	3,449	3,416
Average Weekly Manufacturing Hours	↑	41.9	41.9	42.0	42.1	42.4
New Orders Index (percent)	↑	56.0	55.3	54.8	55.1	55.8
Diesel Fuel Consumption (mil gallons)	↑	55.70	55.38	55.68	55.68	55.71

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced June 29, 2007.

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 production value. 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 May 2007 this component contributed 0.13 percent to the ILII value with continued strong markets for corn and soybean prices and improvements in profits for hogs 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. During May 2007 this component contributed 0.10 percent to the ILII value.
- Iowa stock market index: Capitalization-weighted index of 29 Iowa-based or Iowa-concentrated publicly-traded companies. Changes are calculated based on a 12-month moving average. During May 2007 this component contributed 0.07 percent to the ILII value as 18 of the 29 companies and 6 of the 11 financial-sector companies gained value during the month.
- Yield spread: Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During May, the yield spread remained inverted for the tenth month, although the negative gap between long- and short-term rates narrowed as the long-term rate rose while the short-term rate fell. This component contributed 0.05 percent to the ILII value.
- Diesel fuel consumption: Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. During May 2007 this component contributed 0.03 percent to the ILII value as average consumption of diesel fuel increased.
- 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 May 2007 this component contributed 0.01 percent to the ILII value as the number of initial claims fell for a third month after a six month rise.
- 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. During May 2007 this component contributed 0.00 percent to the ILII value. The monthly new orders index value for May dipped from the April value to a level similar to that reported during May 2005 and 2006. Despite the monthly drop, the 12-month moving average increased slightly from the level seen in April.
- 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 May 2007 this component contributed -0.04 percent to the ILII value as May numbers came in well below those reported for the month of May during the previous six years.

Table 3. ILII Components and Standardization Factors

Iowa Leading Indicator Components	Standardization Factor
Agricultural Futures Price Index	0.130
Iowa Stock Market Index	0.056
Yield Spread	0.236
Building Permits	0.030
Unemployment Claims	0.032
Average Weekly Hours	0.302
New Orders Index	0.053
Diesel Fuel Consumption	0.161

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced July 24, 2006. 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 2006 period. These factors equalize the volatility of the contribution from each component and are normalized to 1. 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.