

IOWA Department of REVENUE

Iowa Leading Indicators Index August 2008 Report

Tax Research and Program Analysis Section

The Iowa Leading Indicators Index (ILII) fell to 106.5 (100=1999) in August 2008 from a 107.0 value in July 2008. The Iowa non-farm employment coincident index again inched up 0.03 percent for the month.

The ILII's value in August decreased 0.4 percent, less than the 0.6 drop in July and 0.5 percent drop in June. The index has decreased for the last five months, dropping 0.1 in May and 0.2 percent in April. During the six-month span through August, the ILII dropped 1.6 percent (a -3.2 percent annual rate). The six-month diffusion index (value of 25.0) reflects two of eight components experiencing a 0.5 percent or greater increase over the last half year, the agricultural futures price index and the yield spread, and the remaining six components experiencing a 0.5 percent or greater decrease.

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

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

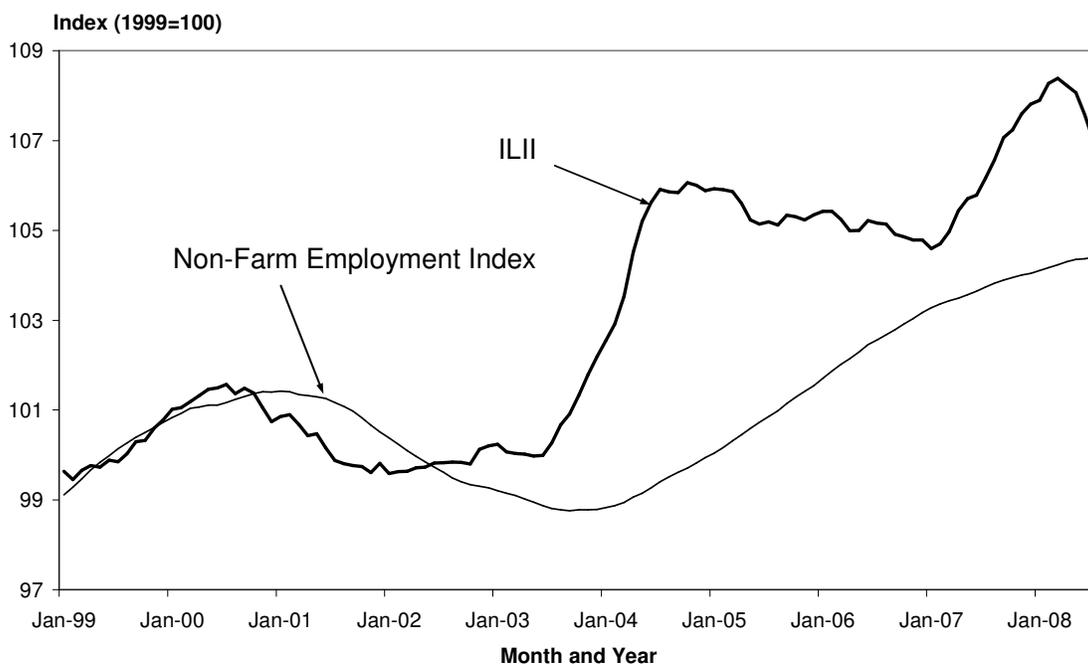


Table 1. Iowa Leading Indicators Index: Six Month Overview

Monthly Values	2008					
	March	April	May	June	July	August
ILII	108.4	108.2	108.1	107.6	107.0	106.5
Percentage Change ^a	0.1%	-0.2%	-0.1%	-0.5%	-0.6%	-0.4%
Diffusion Index ^b	56.3	37.5	25.0	25.0	25.0	12.5
Six-Month Values	Sept to March	Oct to April	Nov to May	Dec to June	Jan to July	Feb to August
ILII						
Percentage Change	1.2%	0.9%	0.4%	-0.2%	-0.9%	-1.6%
Annualized Percentage Change	2.5%	1.8%	0.9%	-0.4%	-1.7%	-3.2%
Diffusion Index	75.0	75.0	62.5	43.8	25.0	25.0

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 29, 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		2008					
		March	April	May	June	July	August
AFPI ^b	↑ ^c						
Corn (cents per bushel)		414.7	434.1	453.2	481.4	508.3	526.7
Hog Profits (cents per pound)		10.7	10.3	10.4	10.3	10.6	11.1
Soybeans (cents per bushel)		1028.9	1077.0	1123.6	1176.2	1227.1	1262.6
Cattle Profits (cents per pound)		-2.0	-3.0	-3.4	-3.6	-3.6	-3.7
Iowa Stock Market Index (10=1984-86)	↓	63.81	63.94	63.85	63.49	62.80	62.49
Yield Spread (10-year less 3-month)	↓	2.23	2.37	2.12	2.21	2.35	2.14
Building Permits	↓	844	813	785	747	702	686
Average Weekly Unemployment Claims ^d	↓	3,346	3,439	3,531	3,791	3,921	4,051
Average Weekly Manufacturing Hours	↓	41.5	41.4	41.4	41.3	41.1	40.9
New Orders Index (percent)	↓	60.3	59.5	58.7	56.0	53.4	51.0
Diesel Fuel Consumption (mil gallons)	↓	57.38	57.25	57.35	57.17	56.88	56.80

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 29, 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 commodity's annual share of Iowa cash farm income (updated August 15, 2008).

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 August 2008 this component contributed 0.12 to the ILII value as corn and soybean futures prices continued their rise and expected hog profits increased while cattle profits dropped slightly.
- **Diesel fuel consumption:** Number of taxable gallons of diesel fuel sold in Iowa. Changes are calculated based on a 12-month moving average. During August 2008 this component's contribution to the ILII value was -0.02 as diesel fuel consumption for the month decreased 1.5 percent relative to the prior year.
- **Iowa stock market index:** Capitalization-weighted index of 36 Iowa-based or Iowa-concentrated publicly-traded companies. Changes are calculated based on a 12-month moving average. In August 2008, 27 of the 36 companies and 12 of the 14 financial-sector companies gained value. Despite the large number of individual stock gains, the total August 2008 value of the index did not match its August 2007 value so that the component contributed -0.03 to the ILII value.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During August, the yield spread decreased as the long-term rate fell 12 basis points while the short-term rate rose nine basis points. This component contributed -0.05 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. During August 2008 this component contributed -0.06 to the ILII value. August permits rose 5.4 percent above July's value but were 22.5 percent below the number reported in August 2007, pushing the 12-month moving average down by 2.3 percent. August 2008 permits were 45.3 percent below the historical average for August, based on reports from 1998 through 2007.
- **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 August 2008 this component contributed -0.11 to the ILII value with unemployment claims 72.3 percent above August 2007 claims because of lay-offs in the service and manufacturing industries. However, much of this increase reflects firms repeatedly laying-off the same workers after short periods on the job, thus allowing for repeat initial unemployment claims.
- **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 August 2008 this component contributed -0.12 to the ILII value as August hours were 4.5 percent below the August 2007 report, pushing the 12-month moving average down by 0.4 percent.
- **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 fell in August to 34.2 from July's 38.2, far below the August 2007 value of 63.2. With the low number attributed to weakness in durable-goods manufacturing, this component contributed -0.13 to the August 2008 ILII value.

Table 3. ILII Components and Standardization Factors for FY 2009

Iowa Leading Indicator Components	Standardization Factor
Agricultural Futures Price Index	0.117
Iowa Stock Market Index	0.060
Yield Spread	0.239
Building Permits	0.028
Unemployment Claims	0.032
Average Weekly Hours	0.300
New Orders Index	0.055
Diesel Fuel Consumption	0.168

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced August 15, 2008. 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 2008 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.