

IOWA Department of REVENUE

Iowa Leading Indicators Index August 2009 Report

Tax Research and Program Analysis Section

The Iowa Leading Indicators Index (ILII) fell to 94.7 (100=1999) in August 2009 from 95.2 in July. The Iowa non-farm employment coincident index fell by -0.27 percent for the month, the tenth consecutive monthly decrease.

The ILII's value decreased 0.5 percent in August after decreasing 0.6 percent in July, the seventeenth consecutive monthly decline in the index. During the six-month span through August, the ILII dropped 4.8 percent (a -9.6 percent annual rate). The six-month diffusion index (value of 12.5) reflects an increase of 0.5 percent or greater in the yield spread over the last half year, while the other seven components experienced a 0.5 percent or greater decrease.

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

Figure 1. Iowa Leading Indicators Index and Iowa Non-Farm Employment Coincident Index: January 1999-August 2009

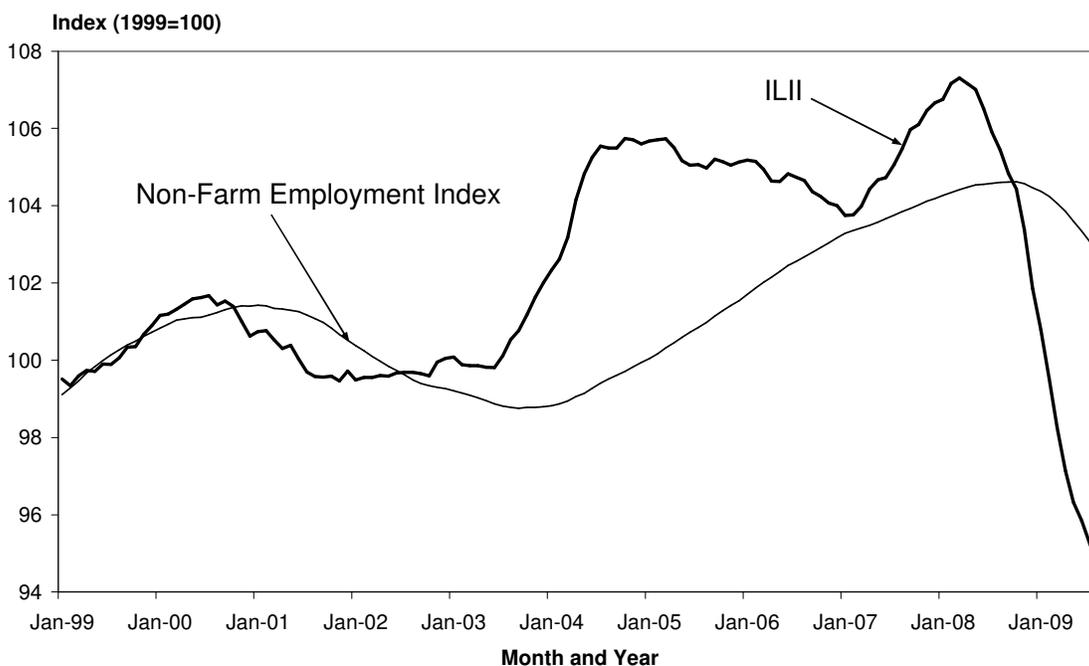


Table 1. Iowa Leading Indicators Index: Six Month Overview

| Monthly Values | 2009 | | | | | |
|--------------------------------|---------------|--------------|------------|-------------|-------------|---------------|
| | March | April | May | June | July | August |
| ILII | 98.2 | 97.1 | 96.3 | 95.9 | 95.2 | 94.7 |
| Percentage Change ^a | -1.3% | -1.1% | -0.8% | -0.5% | -0.6% | -0.5% |
| Diffusion Index ^b | 6.3 | 12.5 | 12.5 | 37.5 | 25.0 | 25.0 |
| Six-Month Values | Sept to March | Oct to April | Nov to May | Dec to June | Jan to July | Feb to August |
| ILII | | | | | | |
| Percentage Change | -6.3% | -7.0% | -6.8% | -5.9% | -5.5% | -4.8% |
| Annualized Percentage Change | -12.6% | -14.0% | -13.7% | -11.8% | -11.0% | -9.6% |
| Diffusion Index | 12.5 | 0.0 | 0.0 | 12.5 | 12.5 | 12.5 |

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 29, 2009.

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 | | | | | |
|---|----------------|-------|-------|-------|-------|-------|--------|
| | | March | April | May | June | July | August |
| AFPI ^b | ↓ ^c | | | | | | |
| Corn Profits (cents per bushel) | | 212.0 | 190.2 | 170.7 | 140.5 | 107.6 | 82.4 |
| Soybean Profits (cents per bushel) | | 397.4 | 356.9 | 322.2 | 275.8 | 220.0 | 187.5 |
| Hog Profits (cents per pound) | | 13.3 | 13.1 | 11.8 | 10.7 | 9.4 | 6.8 |
| Cattle Profits (cents per pound) | | -9.5 | -9.2 | -9.2 | -9.4 | -9.5 | -9.9 |
| Iowa Stock Market Index (10=1984-86) | ↓ | 53.07 | 51.06 | 49.84 | 48.75 | 48.13 | 47.77 |
| Yield Spread (10-year less 3-month) | ↑ | 2.60 | 2.77 | 3.11 | 3.54 | 3.38 | 3.42 |
| Building Permits | ↓ | 582 | 558 | 539 | 545 | 557 | 551 |
| Average Weekly Unemployment Claims ^d | ↓ | 6,273 | 6,648 | 6,964 | 7,114 | 7,440 | 7,670 |
| Average Weekly Manufacturing Hours | -- | 39.0 | 38.7 | 38.5 | 38.4 | 38.3 | 38.3 |
| New Orders Index (percent) | ↑ | 35.2 | 33.3 | 32.9 | 34.6 | 36.0 | 36.8 |
| Diesel Fuel Consumption (mil gallons) | ↓ | 53.94 | 53.65 | 53.24 | 52.69 | 52.40 | 52.06 |

Source: Tax Research and Program Analysis Section, Iowa Department of Revenue, produced September 29, 2009.

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

- **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. In August 2009 the index dropped to 44.5 from 55.0 in July, a move below 50 and back into contraction territory for manufacturers. Professor Ernest Goss, who compiles the index, blamed the drop on the downturn in farm income which is causing a “significant and negative impact on firms across the state, especially for agriculture equipment manufacturers.” Despite its monthly drop, the new orders index remained above the August 2008 value, 34.2, thus its 12-month moving average increased and contributed 0.05 to the ILII.
- **Yield spread:** Difference between the yield on 10-year Treasury bonds and 3-month Treasury notes. During August, the yield spread increased as the long-term rate rose three basis points while the short-term rate slipped one basis point. This component contributed 0.01 to the ILII.
- **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 2009 this component did not contribute to the ILII value as August hours were unchanged from August 2008 at 39.9.
- **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 2009 this component contributed -0.04 to the ILII value. August 2009 permits were 10.6 percent lower than August 2008 permits, pushing the 12-month moving average down by 1.1 percent.
- **Iowa 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 August, 31 of the 34 companies gained value including all 12 financial-sector companies. Despite the numerous gains, the stock market index remained below its level in August 2008, contributing -0.04 to the 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 August 2009 this component contributed -0.10 to the ILII value with unemployment claims 74.1 percent above August 2008 claims. Although still above last year’s levels, claim numbers have been falling steadily since reaching a high in December 2008.
- **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 2009 this component’s contribution to the ILII value was -0.11 as diesel fuel consumption for the month decreased 7.1 percent relative to the prior year.
- **Agricultural futures price index:** Composite measure of corn, soybean, hog, and cattle expected profits 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 less estimated breakeven costs. During August, this component contributed -0.31 to the ILII value as the 12-month moving average of expected profits for corn, soybeans, hogs, and cattle all dropped.

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 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 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 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.