# **News Release**

Embargoed for release: 8:30 am Eastern Time 7:30 am Central Time September 22, 2014

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# What is the National Activity Index?

The index is a weighted average of 85 indicators of national economic activity drawn from four broad categories of data:
1) production and income; 2) employment, unemployment, and hours; 3) personal consumption and housing; and 4) sales, orders, and inventories.

A zero value for the index indicates that the national economy is expanding at its historical trend rate of growth; negative values indicate below-average growth; and positive values indicate above-average growth.

## Why are there three index values?

Each month, we provide a monthly index, its three-month moving average, and a diffusion index. Month-to-month movements can be volatile, so the monthly index's three-month moving average, the CFNAI-MA3, provides a more consistent picture of national economic growth. The CFNAI Diffusion Index captures the degree to which a change in the monthly index is spread out among its 85 indicators, averaged over a three-month period.

# What do the numbers mean?

When the CFNAI-MA3 value moves below -0.70 following a period of economic expansion, there is an increasing likelihood that a recession has begun. Conversely, when the CFNAI-MA3 value moves above -0.70 following a period of economic contraction, there is an increasing likelihood that a recession has ended.

When the CFNAI-MA3 value moves above +0.70 more than two years into an economic expansion, there is an increasing likelihood that a period of sustained increasing inflation has begun.

The next CFNAI will be released: October 23, 2014 8:30 am Eastern Time 7:30 am Central Time

FEDERAL RESERVE BANK OF CHICAGO

# Chicago Fed National Activity Index

# Index shows economic growth decelerated in August

Led by declines in production-related indicators, the Chicago Fed National Activity Index (CFNAI) decreased to -0.21 in August from +0.26 in July. Two of the four broad categories of indicators that make up the index decreased from July, and two of the four categories made negative contributions to the index in August.

The index's three-month moving average, CFNAI-MA3, decreased to +0.07 in August from +0.20 in July, marking its sixth consecutive reading above zero. August's CFNAI-MA3 suggests that growth in national economic activity was somewhat above its historical trend. The economic growth reflected in this level of the CFNAI-MA3 suggests limited inflationary pressure from economic activity over the coming year.

The CFNAI Diffusion Index, which is also a three-month moving average, decreased to +0.14 in August from +0.23 in July. Forty-five of the 85 individual indicators made positive contributions to the CFNAI in August, while 40 made negative contributions. Forty-two indicators improved from July to August, while 43 indicators deteriorated. Of the indicators that improved, 12 made negative contributions.

# Chicago Fed National Activity Index, Three-Month Moving Average (CFNAI-MA3) 1.0 -1.0 -2.0 -3.0 -4.0 -5.0

CFNAI, CFNAI-MA3, and CFNAI Diffusion for the latest six months and year-ago month

2007

2009

2011

2013

2015

2005

2001

2003

	Aug '14	Jul '14	Jun '14	May '14	Apr '14	Mar '14	Aug '13
CFNAI							
Current	-0.21	+0.26	+0.17	+0.18	+0.15	+0.53	+0.22
Previous	N/A	+0.39	+0.21	+0.14	+0.12	+0.55	+0.22
CFNAI-MA3							
Current	+0.07	+0.20	+0.16	+0.28	+0.41	+0.08	-0.11
Previous	N/A	+0.25	+0.16	+0.27	+0.41	+0.08	-0.11
CFNAI Diffusion							
Current	+0.14	+0.23	+0.24	+0.31	+0.35	+0.14	0.00
Previous	N/A	+0.31	+0.21	+0.31	+0.34	+0.16	-0.01

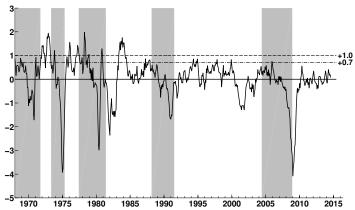
Current and Previous values reflect index values as of the September 22, 2014, release and August 25, 2014, release, respectively. N/A indicates not applicable.

Production-related indicators made a contribution of -0.17 to the CFNAI in August, down from +0.24 in July. Manufacturing production decreased 0.4 percent in August after rising 0.7 percent in July, and manufacturing capacity utilization declined to 77.2 percent in August from 77.6 percent in the previous month.

Employment-related indicators made a neutral contribution to the CFNAI in August, down from +0.10 in July. The unemployment rate decreased to 6.1 percent in August from 6.2 percent in July, while nonfarm payrolls increased by 142,000 in August after rising by 212,000 in the previous month.

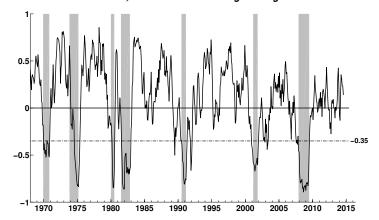
The contribution of the sales, orders, and inventories category to the CFNAI edged up to +0.08 in August from +0.04 in July. The Institute for Supply Management's Manufacturing Purchasing Managers' New Orders Index rose to 66.7 in August from 63.4 in July, reaching its highest level since April 2004.

# CFNAI-MA3 and Inflation Cycles



Notes: Shading represents periods of substantial inflation increases. A CFNAI-MA3 value above +0.70 more than two years into an economic expansion indicates an increasing likelihood that a period of sustained increasing inflation has begun. A CFNAI-MA3 value above +1.00 more than two years into an economic expansion indicates a substantial likelihood that a period of sustained increasing inflation has begun.

## CFNAI Diffusion Index. Three-Month Moving Average

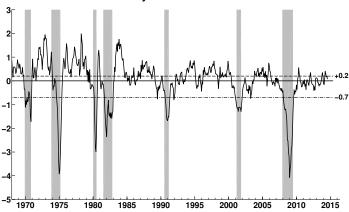


Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. The CFNAI Diffusion Index represents the sum of the absolute values of the weights for the underlying indicators whose contribution to the CFNAI is positive in a given month less the sum of the absolute values of the weights for those indicators whose contribution is negative or neutral in a given month. Periods of economic expansion have historically been associated with values of the three-month moving average of the CFNAI Diffusion Index above -0.35.

The contribution of the consumption and housing category to the CFNAI ticked up to -0.12 in August from -0.13 in July. Consumption indicators, on balance, improved, pushing the category's contribution higher. However, housing starts declined to 956,000 annualized units in August from 1,117,000 in July, and housing permits decreased to 998,000 annualized units in August from 1,057,000 in the previous month.

The CFNAI was constructed using data available as of September 18, 2014. At that time, August data for 51 of the 85 indicators had been published. For all missing data, estimates were used in constructing the index. The July monthly index was revised to +0.26 from an initial estimate of +0.39. Revisions to the monthly index can be attributed to two main factors: revisions in previously published data and differences between the estimates of previously unavailable data and subsequently published data. The revision to the July monthly index was due primarily to the latter.

# CFNAI-MA3 and Business Cycles



Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. A CFNAI-MA3 value below –0.70 following a period of economic expansion indicates an increasing likelihood that a recession has begun. A CFNAI-MA3 value above –0.70 following a period of economic contraction indicates an increasing likelihood that a recession has ended. A CFNAI-MA3 value above +0.20 following a period of economic contraction indicates a significant likelihood that a recession has ended.

### CFNAI, Monthly Index

