

## News Release

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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:

November 26, 2012

8:30 am Eastern Time

7:30 am Central Time

FEDERAL RESERVE BANK  
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# Chicago Fed National Activity Index

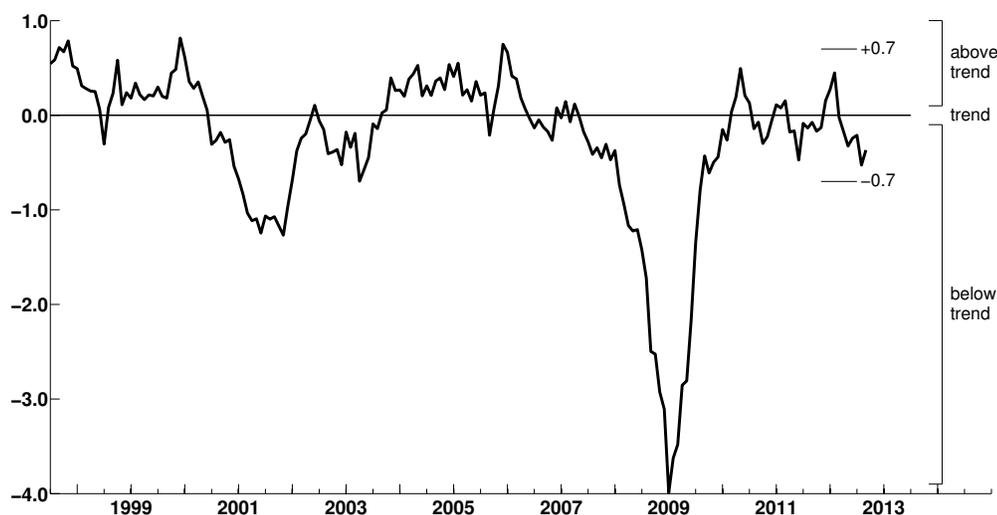
## Index shows economic activity improved in September

Led by improvements in production-related indicators, the Chicago Fed National Activity Index (CFNAI) increased to 0.00 in September from  $-1.17$  in August. All four broad categories of indicators that make up the index increased from August, and each one except the consumption and housing category made a positive contribution to the index in September.

The index's three-month moving average, CFNAI-MA3, increased from  $-0.53$  in August to  $-0.37$  in September—its seventh consecutive reading below zero. September's CFNAI-MA3 suggests that growth in national economic activity was below its historical trend. The economic growth reflected in this level of the CFNAI-MA3 suggests subdued inflationary pressure from economic activity over the coming year.

The CFNAI Diffusion Index also moved up in September, increasing to  $-0.18$  from  $-0.27$  in August. Thirty-nine of the 85 individual indicators made positive contributions to the CFNAI in September, while 46 made negative contributions. Sixty-one indicators improved from August to September, while 23 indicators deteriorated and one was unchanged. Of the indicators that improved, 29 made negative contributions.

### Chicago Fed National Activity Index, Three-Month Moving Average (CFNAI-MA3)



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

	Sep '12	Aug '12	Jul '12	Jun '12	May '12	Apr '12	Sep '11
<b>CFNAI</b>							
Current	0.00	-1.17	+0.07	-0.48	-0.22	-0.03	-0.17
Previous	N/A	-0.87	-0.12	-0.43	-0.24	-0.03	-0.17
<b>CFNAI-MA3</b>							
Current	-0.37	-0.53	-0.21	-0.24	-0.33	-0.17	-0.08
Previous	N/A	-0.47	-0.26	-0.23	-0.33	-0.17	-0.08
<b>CFNAI Diffusion</b>							
Current	-0.18	-0.27	-0.07	-0.08	-0.11	+0.07	+0.10
Previous	N/A	-0.23	-0.08	-0.09	-0.12	+0.06	+0.10

Current and Previous values reflect index values as of the October 25, 2012, release and September 24, 2012, release, respectively. N/A indicates not applicable.

Production-related indicators contributed +0.03 to the CFNAI in September, up significantly from -0.72 in August. Total industrial production rose 0.4 percent in September after decreasing 1.4 percent in August.

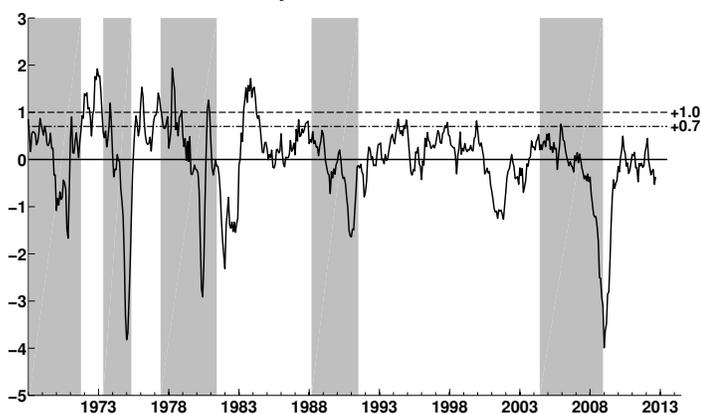
Employment-related indicators contributed +0.12 to the CFNAI in September, up from -0.06 in August. The unemployment rate dropped to 7.8 percent in September from 8.1 percent in August; and non-farm payrolls increased 114,000 in September, compared with 142,000 in August. The contribution from the sales, orders, and inventories category to the CFNAI also increased in September, moving up to +0.04 from -0.14 in August.

The contribution from the consumption and housing category to the CFNAI increased to -0.19 in September from -0.24 in August.

Housing starts increased substantially, jumping from 758,000 annualized units in August to 872,000 in September—their highest level since July 2008. Housing permits increased as well, rising from 801,000 annualized units in August to 894,000 in September.

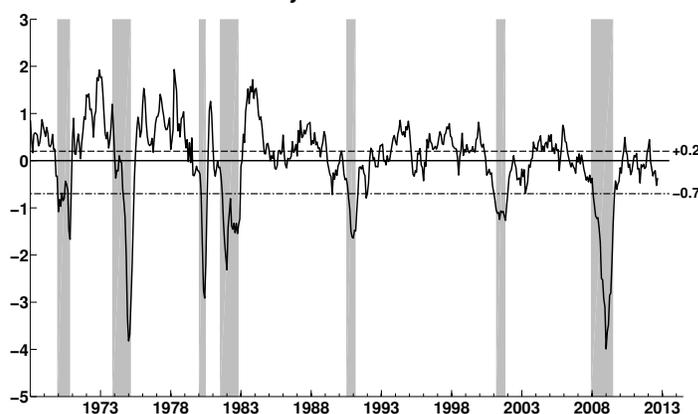
The CFNAI was constructed using data available as of October 18, 2012. At that time, September data for 51 of the 85 indicators had been published. For all missing data, estimates were used in constructing the index. The August monthly index was revised to -1.17 from an initial estimate of -0.87. Revisions 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 August monthly index was due mostly to the latter.

### CFNAI-MA3 and Inflation Cycles



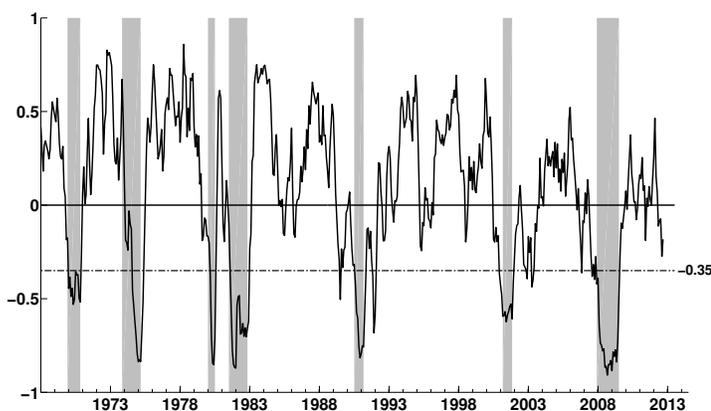
Notes: Shading represents periods of substantial inflation increases. A CFNAI-MA3 value above +0.70 more than two years into an economic expansion indicates an increasing likelihood that a period of sustained increasing inflation has begun. A CFNAI-MA3 value above +1.00 more than two years into an economic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

### CFNAI-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 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.

### CFNAI, Monthly Index

