

## News Release

Embargoed for release:  
8:30 am Eastern Time  
7:30 am Central Time  
February 25, 2019

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### What is the National Activity Index?

The index is a weighted average of 85 indicators of growth in 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.

### Why are there three index values?

Each month, we provide a monthly index (the CFNAI), 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 instead 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?

A zero value for the monthly index has been associated with the national economy expanding at its historical trend (average) rate of growth; negative values with below-average growth (in standard deviation units); and positive values with above-average growth.

Periods of economic expansion have historically been associated with values of the CFNAI-MA3 above  $-0.70$  and the CFNAI Diffusion Index above  $-0.35$ . Conversely, periods of economic contraction have historically been associated with values of the CFNAI-MA3 below  $-0.70$  and the CFNAI Diffusion Index below  $-0.35$ .

An increasing likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above  $+0.70$  more than two years into an economic expansion. Similarly, a substantial likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above  $+1.00$  more than two years into an economic expansion.

The next CFNAI will be released:  
March 25, 2019  
8:30 am Eastern Time  
7:30 am Central Time

FEDERAL RESERVE BANK  
OF CHICAGO

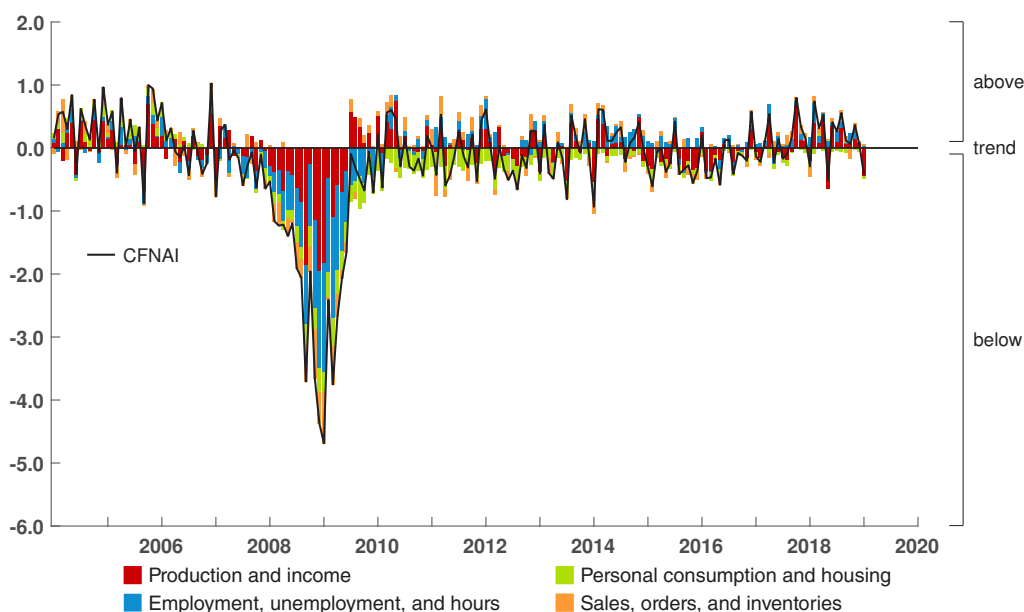
# Chicago Fed National Activity Index

## Index points to slower economic growth in January

Led by declines in production-related indicators, the Chicago Fed National Activity Index (CFNAI) fell to  $-0.43$  in January from  $+0.05$  in December. One of the four broad categories of indicators that make up the index decreased from December, and two of the four categories made negative contributions to the index in January. The index's three-month moving average, CFNAI-MA3, decreased to a neutral reading in January from  $+0.16$  in December.

The CFNAI Diffusion Index, which is also a three-month moving average, decreased slightly to  $+0.09$  in January from  $+0.18$  in December. Thirty-five of the 85 individual indicators made positive contributions to the CFNAI in January, while 50 made negative contributions. Thirty-eight indicators improved from December to January, while 46 indicators deteriorated and one was unchanged. Of the indicators that improved, 11 made negative contributions.

### Chicago Fed National Activity Index, by Categories



### CFNAI, CFNAI-MA3, and CFNAI Diffusion for the Latest Six Months and Year-Ago Month

	Jan '19	Dec '18	Nov '18	Oct '18	Sep '18	Aug '18	Jan '18
<b>CFNAI</b>							
Current	-0.43	+0.05	+0.36	+0.07	+0.12	+0.56	-0.29
Previous	N/A	+0.27	+0.21	+0.01	+0.13	+0.57	-0.29
<b>CFNAI-MA3</b>							
Current	0.00	+0.16	+0.18	+0.25	+0.31	+0.41	+0.06
Previous	N/A	+0.16	+0.12	+0.24	+0.31	+0.39	+0.08
<b>CFNAI Diffusion</b>							
Current	+0.09	+0.18	+0.23	+0.22	+0.20	+0.25	+0.08
Previous	N/A	+0.14	+0.11	+0.25	+0.23	+0.27	+0.11

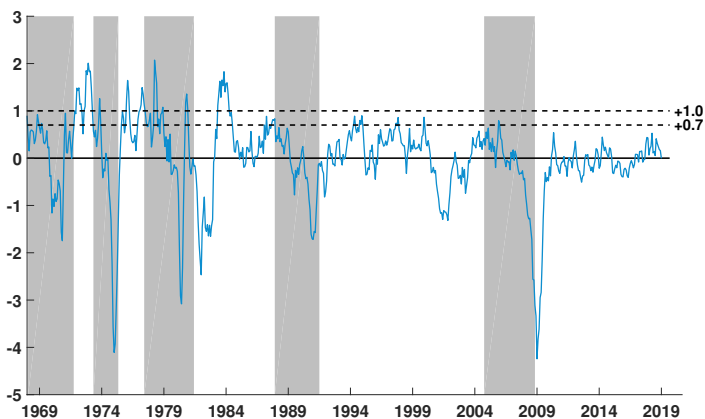
Current and Previous values reflect index values as of the February 25, 2019, release and January 28, 2019, release, respectively. N/A indicates not applicable.

The contribution from production-related indicators to the CFNAI decreased to  $-0.45$  in January from  $+0.08$  in December. Industrial production fell by 0.6 percent in January after edging up 0.1 percent in December. The sales, orders, and inventories category made a contribution of  $+0.02$  to the CFNAI in January, up slightly from a neutral contribution in December. The Institute for Supply Management's Manufacturing New Orders Index increased to 58.2 in January from 51.3 in December.

Employment-related indicators contributed  $+0.05$  to the CFNAI in January, up slightly from  $+0.02$  in December. Total nonfarm payrolls rose by 304,000 in January after increasing by 222,000 in the previous month. However, the unemployment rate increased to 4.0 percent in January from 3.9 percent in December. The contribution of the personal consumption and housing category to the CFNAI edged up to  $-0.04$  in January from  $-0.06$  in December.

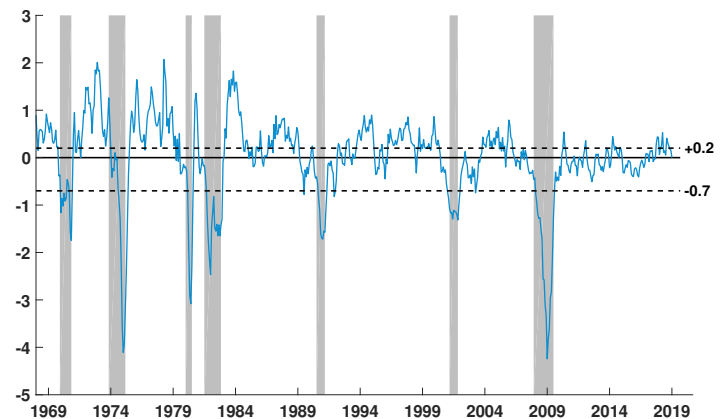
The CFNAI was constructed using data available as of February 21, 2019. At that time, January data for 45 of the 85 indicators had been published (fewer than usual because of the partial federal government shutdown). For all missing data, estimates were used in constructing the index. The December monthly index value was revised to  $+0.05$  from an initial estimate of  $+0.27$ , and the November monthly index value was revised to  $+0.36$  from last month's estimate of  $+0.21$ . 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. Revisions to the December and November monthly index values were primarily due to the former. (It is likely that monthly index values back to November will be further revised as data releases delayed by the shutdown become available.)

### CFNAI-MA3 and Inflation Cycles



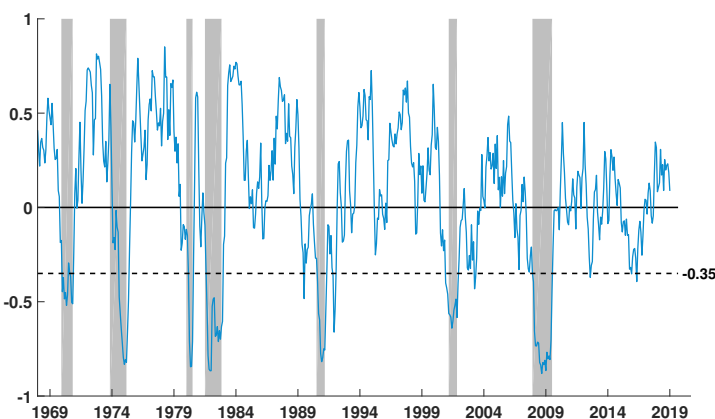
Notes: Shading represents periods of sustained increasing inflation. An increasing likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above  $+0.70$  more than two years into an economic expansion. Similarly, a substantial likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above  $+1.00$  more than two years into an economic expansion.

### CFNAI-MA3 and Business Cycles



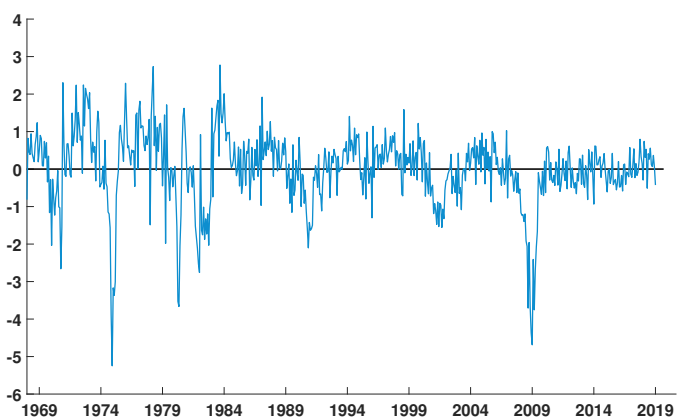
Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. Following a period of economic expansion, an increasing likelihood of a recession has historically been associated with a CFNAI-MA3 value below  $-0.70$ . Conversely, following a period of economic contraction, an increasing likelihood of an expansion has historically been associated with a CFNAI-MA3 value above  $+0.20$ .

### CFNAI Diffusion Index



Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. The CFNAI Diffusion Index represents the three-month moving average of 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 CFNAI Diffusion Index above  $-0.35$ .

### CFNAI, Monthly Index



**CFNAI release dates, historical data, and background information are available at [chicagofed.org/cfna](http://chicagofed.org/cfna).**