

News Release

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8:30 am Eastern Time
7:30 am Central Time
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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:
September 25, 2017
8:30 am Eastern Time
7:30 am Central Time

FEDERAL RESERVE BANK
OF CHICAGO

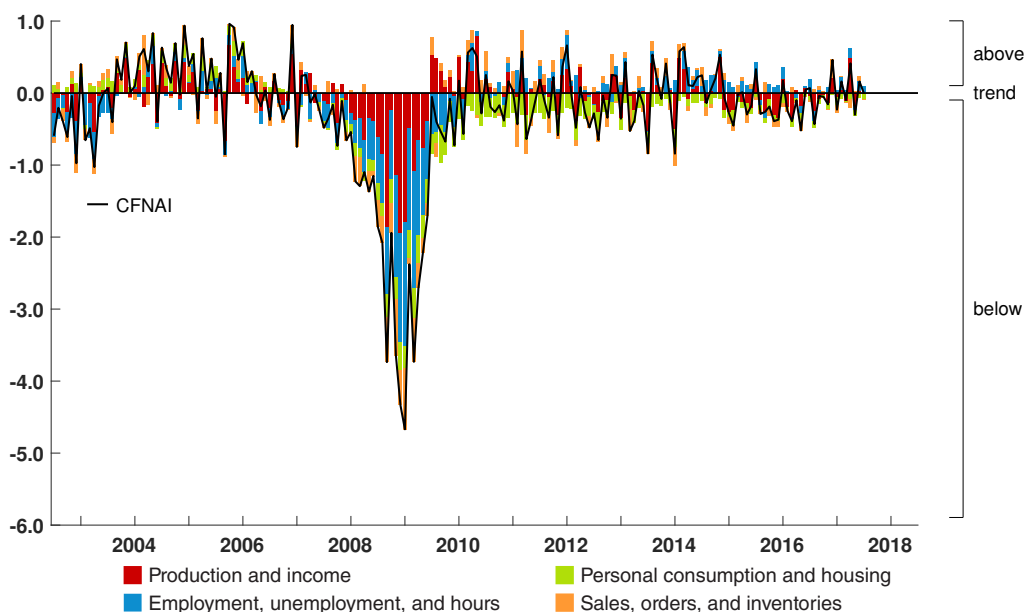
Chicago Fed National Activity Index

Index points to growth near historical trend in July

The Chicago Fed National Activity Index (CFNAI) moved down to -0.01 in July from $+0.16$ in June. Three of the four broad categories of indicators that make up the index decreased from June, and three of the four categories made negative contributions to the index in July. The index's three-month moving average, CFNAI-MA3, moved down to -0.05 in July from $+0.09$ in June.

The CFNAI Diffusion Index, which is also a three-month moving average, decreased to -0.06 in July from $+0.01$ in June. Forty-two of the 85 individual indicators made positive contributions to the CFNAI in July, while 43 made negative contributions. Forty indicators improved from June to July, while 45 indicators deteriorated. Of the indicators that improved, 14 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

	Jul '17	Jun '17	May '17	Apr '17	Mar '17	Feb '17	Jul '16
CFNAI							
Current	-0.01	+0.16	-0.30	+0.41	-0.10	+0.16	+0.07
Previous	N/A	+0.13	-0.30	+0.36	-0.18	+0.19	+0.08
CFNAI-MA3							
Current	-0.05	+0.09	0.00	+0.16	-0.06	+0.13	-0.13
Previous	N/A	+0.06	-0.04	+0.12	-0.08	+0.14	-0.14
CFNAI Diffusion							
Current	-0.06	+0.01	-0.03	+0.10	0.00	+0.10	-0.15
Previous	N/A	+0.01	-0.08	+0.06	-0.04	+0.10	-0.16

Current and Previous values reflect index values as of the August 21, 2017, release and July 27, 2017, release, respectively. N/A indicates not applicable.

The contribution from production-related indicators to the CFNAI decreased to -0.02 in July from $+0.03$ in June. Manufacturing industrial production decreased 0.1 percent in July after increasing 0.2 percent in June; however, total industrial production increased 0.2 percent in July after moving up 0.4 percent in June. The sales, orders, and inventories category made a contribution of -0.01 to the CFNAI in July, down from $+0.06$ in June.

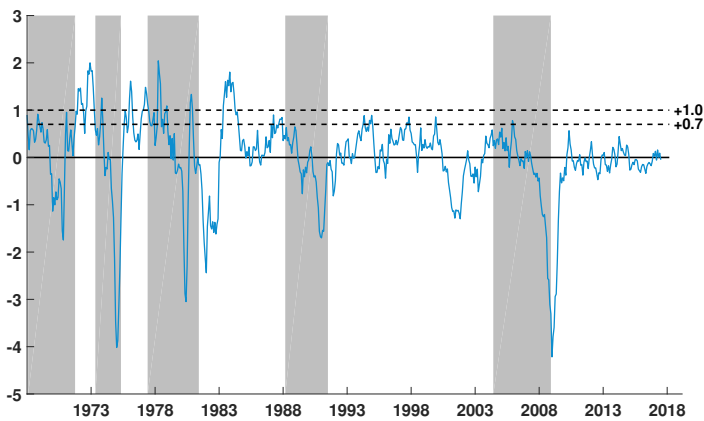
Employment-related indicators contributed $+0.09$ to the CFNAI in July, down from $+0.13$ in June. Nonfarm payroll employment increased by 209,000 in July after rising by 231,000 in June; that said, the civilian unemployment rate ticked down to 4.3 percent in July from 4.4 percent in June.

The contribution of the personal consumption and housing category to the CFNAI edged up to -0.06 in July from -0.07 in June. Consumption indicators improved, on balance, pushing up the

category's overall contribution. However, housing starts decreased to 1,155,000 annualized units in July from 1,213,000 in June, and housing permits decreased to 1,223,000 annualized units in July from 1,275,000 in the previous month.

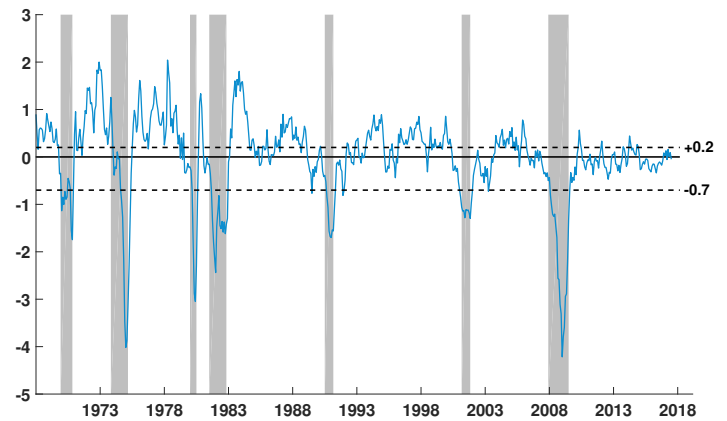
The CFNAI was constructed using data available as of August 17, 2017. At that time, July data for 51 of the 85 indicators had been published. For all missing data, estimates were used in constructing the index. The June monthly index value was revised to $+0.16$ from an initial estimate of $+0.13$, and the May monthly index value was unchanged from last month's estimate of -0.30 . 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 June monthly index value was primarily due to the latter.

CFNAI-MA3 and Inflation Cycles



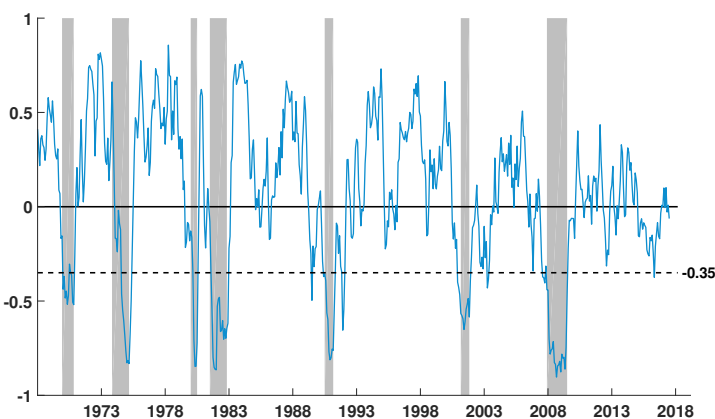
Notes: Shading represents periods of sustained increasing inflation. An increasing likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above $+0.70$ more than two years into an economic expansion. Similarly, a substantial likelihood of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



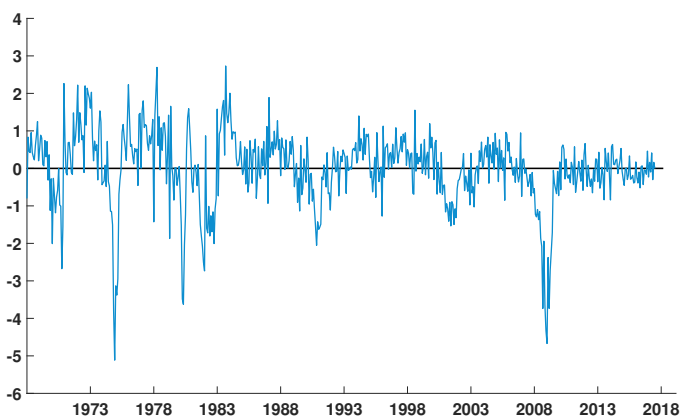
Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. Following a period of economic expansion, an increasing likelihood of a recession has historically been associated with a CFNAI-MA3 value below -0.70 . Conversely, following a period of economic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