

News Release

Embargoed for release:
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:
February 22, 2021
8:30 am Eastern Time
7:30 am Central Time

FEDERAL RESERVE BANK
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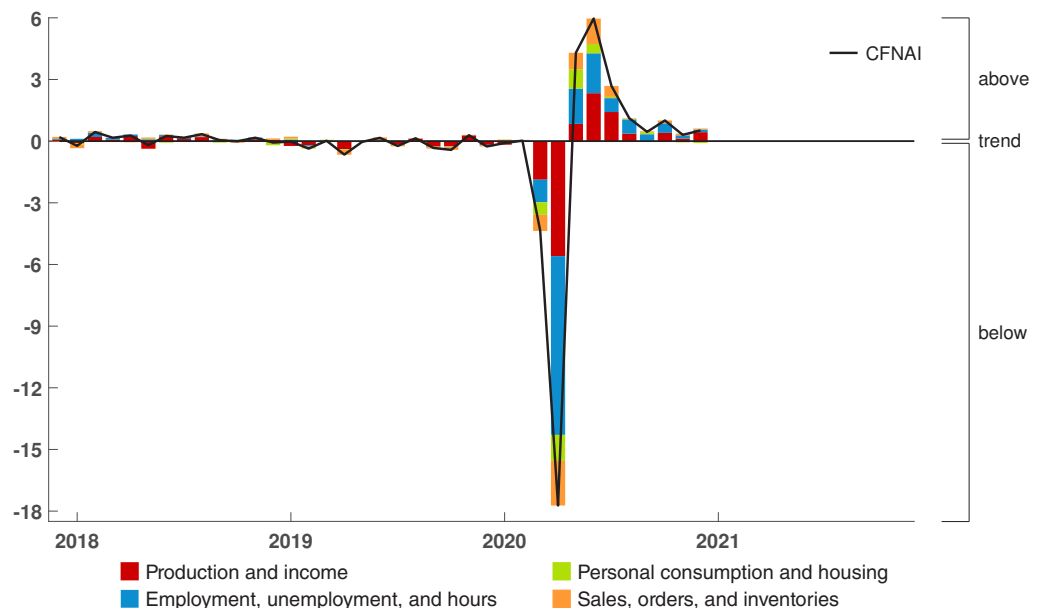
Chicago Fed National Activity Index

Index points to an uptick in economic growth in December

Led by improvements in production-related indicators, the Chicago Fed National Activity Index (CFNAI) increased to $+0.52$ in December from $+0.31$ in November. Three of the four broad categories of indicators used to construct the index made positive contributions in December, but three categories decreased from November. The index's three-month moving average, CFNAI-MA3, ticked up to $+0.61$ in December from $+0.59$ in November.

The CFNAI Diffusion Index, which is also a three-month moving average, ticked down to $+0.54$ in December from $+0.55$ in November. Fifty-three of the 85 individual indicators made positive contributions to the CFNAI in December, while 32 made negative contributions. Forty-five indicators improved from November to December, while 40 indicators deteriorated. Of the indicators that improved, seven 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

	Dec '20	Nov '20	Oct '20	Sep '20	Aug '20	Jul '20	Dec '19
CFNAI							
Current	+0.52	+0.31	+1.01	+0.45	+1.11	+2.69	-0.26
Previous	N/A	+0.27	+1.01	+0.40	+1.14	+2.65	-0.26
CFNAI-MA3							
Current	+0.61	+0.59	+0.86	+1.42	+3.25	+4.32	-0.13
Previous	N/A	+0.56	+0.85	+1.40	+3.25	+4.30	-0.13
CFNAI Diffusion							
Current	+0.54	+0.55	+0.60	+0.60	+0.75	+0.75	-0.10
Previous	N/A	+0.53	+0.62	+0.59	+0.75	+0.75	-0.09

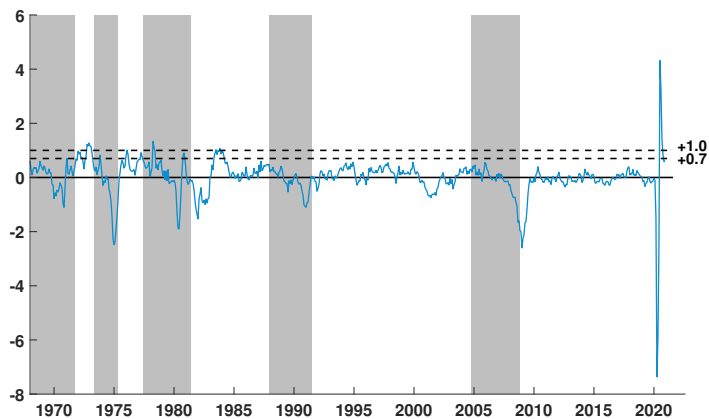
Current and Previous values reflect index values as of the January 25, 2021, release and December 21, 2020, release, respectively. N/A indicates not applicable.

Production-related indicators contributed +0.44 to the CFNAI in December, up from +0.13 in November. Industrial production rose 1.6 percent in December after increasing 0.5 percent in November. The contribution of the sales, orders, and inventories category to the CFNAI moved down to +0.05 in December from +0.09 in November.

Employment-related indicators contributed +0.13 to the CFNAI in December, down slightly from +0.15 in November. Nonfarm private payrolls declined by 95,000 in December, after rising by 417,000 in the previous month. Notably, while payrolls in private service-providing industries fell by 188,000 in December, payrolls in goods-producing industries increased by 93,000. The contribution of the personal consumption and housing category to the CFNAI decreased to -0.09 in December from -0.06 in November. On balance, consumption indicators weakened, pushing down the category's overall contribution in December.

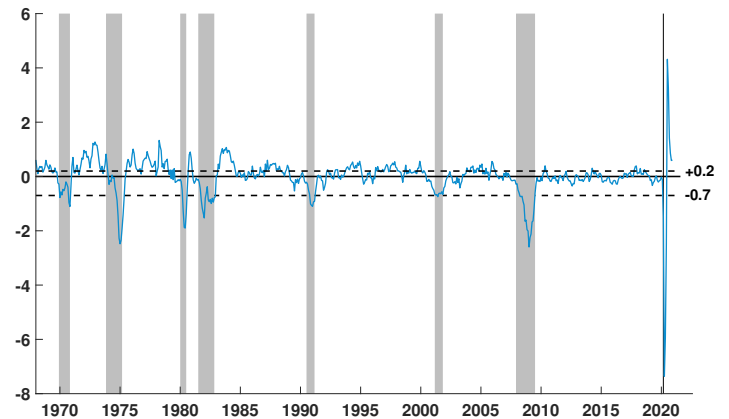
The CFNAI was constructed using data available as of January 21, 2021. At that time, December data for 50 of the 85 indicators had been published. For all missing data, estimates were used in constructing the index. The November monthly index value was revised to +0.31 from an initial estimate of +0.27, and the October monthly index value was unrevised at +1.01. 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 November monthly index value was primarily due to the former.

CFNAI-MA3 and Inflation Cycles



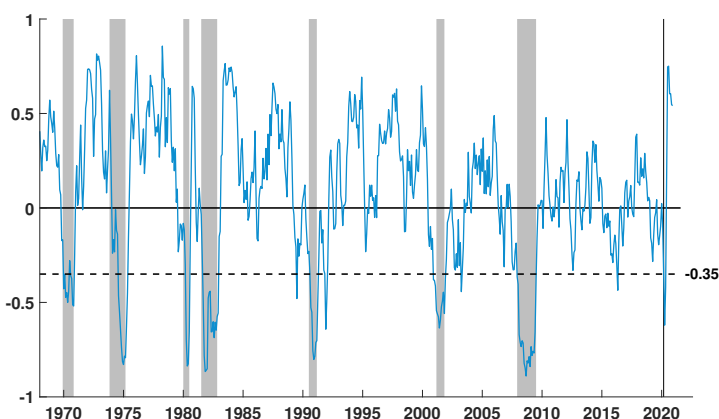
Notes: Shading represents periods of sustained increasing inflation. An increasing likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above +0.70 more than two years into an economic expansion. Similarly, a substantial likelihood of 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; the vertical line indicates the most recent business cycle peak. 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 -0.70 and a significant 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 vertical line indicates the most recent business cycle peak. 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

