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:
October 28, 2019
8:30 am Eastern Time
7:30 am Central Time
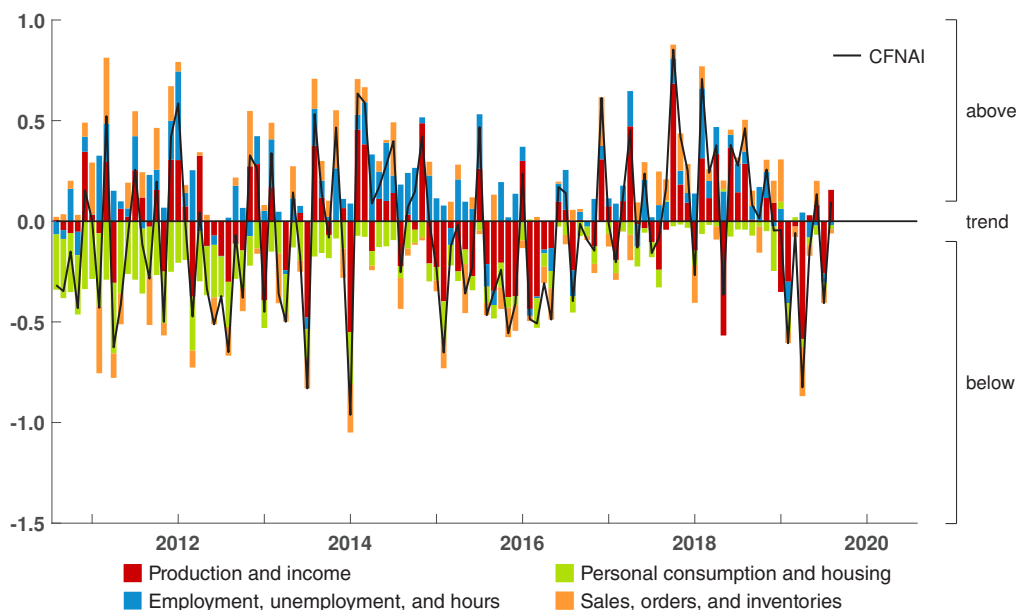
FEDERAL RESERVE BANK OF CHICAGO

Chicago Fed National Activity Index

Index points to a pickup in economic growth in August

Led by improvements in production-related indicators, the Chicago Fed National Activity Index (CFNAI) rose to +0.10 in August from –0.41 in July. All four broad categories of indicators that make up the index increased from July, but three of the four categories made negative contributions to the index in August. The index's three-month moving average, CFNAI-MA3, edged up to –0.06 in August from –0.14 in July.

The CFNAI Diffusion Index, which is also a three-month moving average, increased to –0.12 in August from –0.20 in July. Forty-four of the 85 individual indicators made positive contributions to the CFNAI in August, while 41 made negative contributions. Fifty-two indicators improved from July to August, while 30 indicators deteriorated and three were unchanged. Of the indicators that improved, 14 made negative contributions.

Chicago Fed National Activity Index, by Categories

Legend:
- Production and income (red)
- Employment, unemployment, and hours (blue)
- Personal consumption and housing (green)
- Sales, orders, and inventories (orange)

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

|	Aug '19	Jul '19	Jun '19	May '19	Apr '19	Mar '19	Aug '18
CFNAI							
Current	+0.10	–0.41	+0.13	–0.14	–0.83	–0.06	+0.46
Previous	N/A	–0.36	+0.03	–0.10	–0.83	–0.07	+0.47
CFNAI-MA3							
Current	–0.06	–0.14	–0.28	–0.34	–0.50	–0.24	+0.37
Previous	N/A	–0.14	–0.30	–0.33	–0.50	–0.24	+0.38
CFNAI Diffusion							
Current	–0.12	–0.20	–0.11	–0.18	–0.29	–0.19	+0.27
Previous	N/A	–0.19	–0.15	–0.18	–0.28	–0.19	+0.26

Current and Previous values reflect index values as of the September 23, 2019, release and August 26, 2019, release, respectively. N/A indicates not applicable.

Production-related indicators contributed +0.16 to the CFNAI in August, up from –0.26 in July. Total industrial production rose 0.6 percent in August after decreasing 0.2 percent in July; however, the Institute for Supply Management's Manufacturing Composite Index decreased to 49.1 in August from 51.2 in July. The contribution of the sales, orders, and inventories category to the CFNAI moved up to –0.02 in August from –0.07 in July.

Employment-related indicators contributed –0.02 to the CFNAI in August, up slightly from –0.05 in July. The unemployment rate held steady at 3.7 percent in August, and total nonfarm payrolls increased by 130,000 in August after rising by 159,000 in the previous month. The contribution of the personal consumption and housing category to the CFNAI ticked up to –0.02 in August from –0.03 in July. Housing starts increased to 1,364,000 annualized units in August from 1,215,000 in July.

The CFNAI was constructed using data available as of September 19, 2019. 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 value was revised to –0.41 from an initial estimate of –0.36, and the June monthly index value was revised to +0.13 from last month's estimate of +0.03. 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 revisions to both the July and June monthly index values were primarily due to the latter.

CFNAI-MA3 and Inflation Cycles
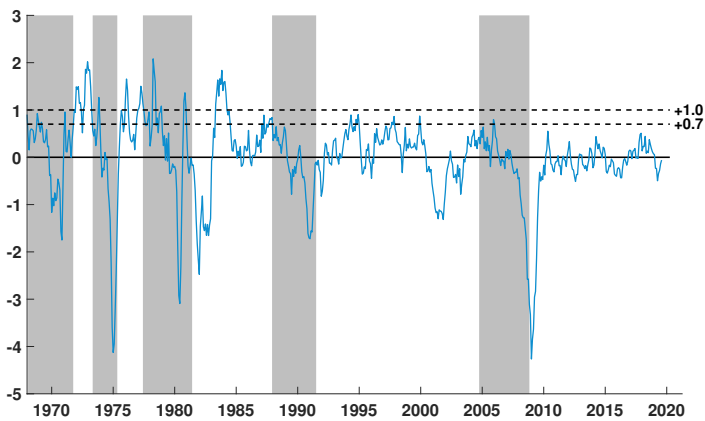
Notes: Shading represents periods of sustained increasing inflation. An increasing likelihood of a period of sustained increasing inflation has historically been associated with values of the CFNAI-MA3 above +0.70 more than two years into an economic expansion. Similarly, a substantial likelihood of 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
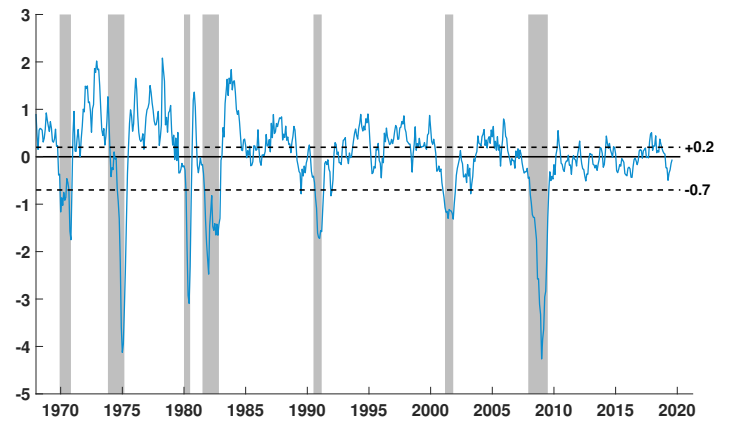
Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. Following a period of economic expansion, an increasing likelihood of a recession has historically been associated with a CFNAI-MA3 value below –0.70. Conversely, following a period of economic contraction, an increasing likelihood of an expansion has historically been associated with a CFNAI-MA3 value above –0.70 and a significant likelihood of an expansion has historically been associated with a CFNAI-MA3 value above +0.20.

CFNAI Diffusion Index
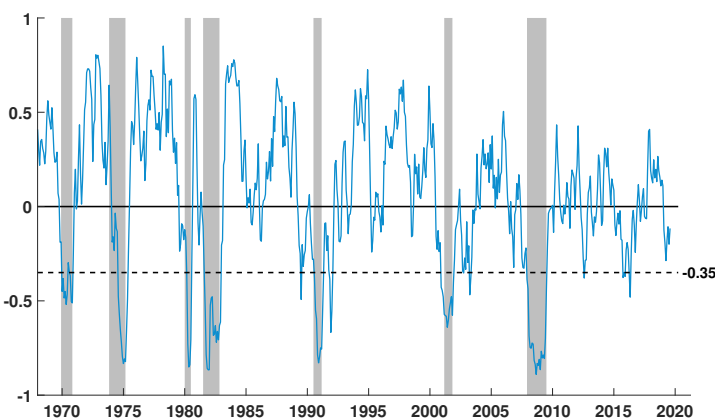
Notes: Shading indicates official periods of recession as identified by the National Bureau of Economic Research. The CFNAI Diffusion Index represents the three-month moving average of the sum of the absolute values of the weights for the underlying indicators whose contribution to the CFNAI is positive 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/cfnai.