Chicago Fed Survey of Economic Conditions (CFSEC) Frequently Asked Questions

What is the Survey of Economic Conditions?

Contacts located in the Seventh Federal Reserve District are asked to rate various aspects of economic conditions along a seven-point scale ranging from "large increase" to "large decrease." A series of diffusion indexes summarizing the distribution of responses is then calculated.

How are the indexes constructed?

Respondents' answers on the seven-point scale are assigned a numeric value ranging from +3 to –3. Each diffusion index is calculated as the difference between the number of respondents with answers above their respective average responses and the number of respondents with answers below their respective average responses, divided by the total number of respondents. The index is then multiplied by 100 so that it ranges from +100 to −100 and will be +100 if every respondent provides an above-average answer and –100 if every respondent provides a below-average answer. Respondents with no prior history of responses are excluded from the calculation.

What do the index numbers mean?

Respondents' respective average answers to a question can be interpreted as representing their historical trends or long-run averages. Thus, zero index values indicate, on balance, average growth (or a neutral outlook) for activity, hiring, capital spending, or cost pressures. Positive index values indicate above-average growth (or an optimistic outlook) on balance, and negative values indicate below-average growth (or a pessimistic outlook) on balance.

What do the bar chart numbers mean?

The bar charts report the percentage of respondents choosing an answer in the latest survey. The percentages are *not* adjusted to be relative to respondents' respective average answers.

How has the CFSEC changed over time?

In late 2019, two methodological changes were made to the CFSEC questionnaire. First, the current capital spending question was revised, so the publication of the current capital spending index was suspended. It is expected that the current capital spending index will return once a sufficient amount of data from the new question become available. Second, the cost pressures questions were changed to focus on labor and nonlabor costs instead of wage and nonwage costs. The results based on the revised cost pressures questions were first reported in the November 27, 2019, release. The cost pressures indexes were not suspended, although the historical data could be revised later to reflect this methodological change.

In the second quarter of 2020, the CFSEC moved from a semiquarterly to a monthly schedule. To accommodate the higher frequency of surveying, the survey was streamlined, with a reduction in the number of hiring and capital expenditure categories covered. The schedule change also required the calculation of monthly index values from the historical semiquarterly index values. The monthly values were derived through linear interpolation. The results based on these updates were first reported in the May 12, 2020, release.

Prior to April 2022, the Chicago Fed Survey of Economic Conditions was named the Chicago Fed Survey of Business Conditions (CFSBC). The name of the survey was changed to better represent its aim and base of respondents. The goal of the survey is to assess the state of the economy in the Seventh Federal Reserve

District. Moreover, since the beginning of the survey, it has been filled out by both business and nonbusiness contacts.

When the survey frequency changed from semiquarterly to monthly in the second quarter of 2020, the monthly survey was fielded at the end of the month. In December 2022, the timing of when the survey is fielded within a month changed from the end of the month to the middle; the survey continued to ask about how economic conditions have changed over the past 30 days. The timing change in December 2022 was made to better align the timing with that of surveys by other regional Federal Reserve Banks. Historical index values are revised with each release. The timing change required an adjustment to how historical index values are calculated so that they represent conditions in the middle of a month rather than at the end. Index values for months when the survey was not fielded in the middle of the month are derived through linear interpolation, with a special adjustment made to account for the rapid changes in economic activity that occurred at the onset of the Covid-19 pandemic in the spring of 2020. For further details on how historical index values are calculated each release, see the answer to the next FAQ.

How are historical CFSEC index values calculated to account for differences in survey timing prior to December 2022?

The CFSEC is fielded in the middle of the month and asks respondents about how economic conditions have changed over the past 30 days. So, the published index values should be interpreted as measuring the change in conditions from the middle of the prior month to the middle of the reference month.

Before December 2022, the timing of the survey was different. From January 2013 through March 2020, the survey was fielded eight times per year—in the middle of a quarter and at the end—and asked how conditions had changed over the past 45 days. From April 2020 through November 2022, the survey was fielded monthly at the end of the month and asked how conditions had changed over the past 30 days. Historical index values are revised with each release. To create a consistent time series, monthly index values derived from surveys fielded prior to December 2022 must be calculated so that they reflect changes from the middle of one month to the next.

To calculate mid-month index values for months prior to December 2022, the indexes are first estimated on a daily basis. Index values derived from a given survey are assigned to the last day of that survey's reference period. For example, the reading from the survey for the first half of the first quarter of 2013 is assigned to February 15, 2013, and the reading from the survey for January 2021 is assigned to January 31, 2021. Index values for the days between survey readings are then derived using linear interpolation. The published monthly index value is the interpolated value for the 15th day of a given month.

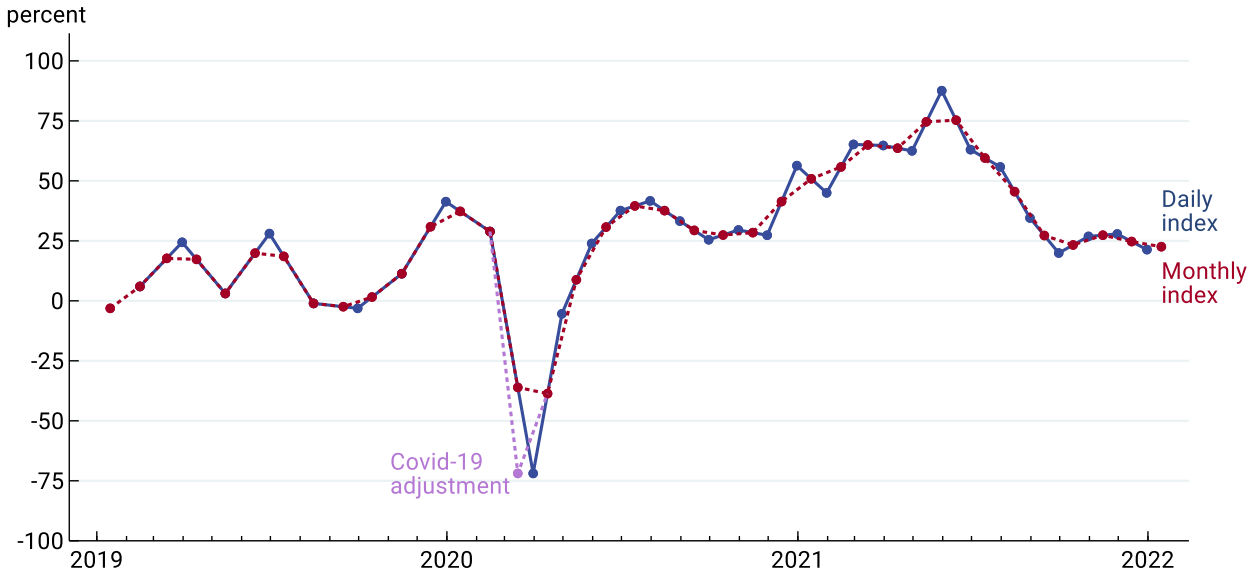
Figure 1 shows how the monthly index values were calculated for the CFSEC Outlook Index—which is an index of the survey respondents' 12-month U.S. economic outlook on activity—for 2019 through 2021 for the January 2023 release. The blue dots represent survey readings, the blue line is the index calculated on a daily basis, and the red dots are the daily index values on the 15th day of the month. When the 15th day of the month is a midpoint between survey readings, it is an average of the two readings it falls between and has a smoothing effect on the index's path. In general, the red dots summarize the path of the blue line well, but this is not the case for the spring of 2020, when the Covid-19 pandemic started. The Outlook Index spikes down in figure 1 for just one survey, which was fielded at the end of March 2020 and asked about how conditions had changed from the middle of February. Because the downturn in expectations was so brief, the red dots for March 15 and April 15, 2020, smooth through the downturn. While all the other spikes in the blue path that the red path smooths through could reasonably be interpreted as noise, the downward spike in the index at the beginning of the Covid-19 pandemic could reasonably be interpreted as signal rather than noise. Thus, to provide what is likely a more accurate path of monthly index values during the early pandemic

period, the value for the Outlook Index for March 2020 is set to the daily index value for March 31, 2020, rather than for March 15. Figure 1 shows the adjustment: The purple dot is the reported value for March 2020, and it is equal to the blue dot to its right (the value for March 31) rather than the red dot above it (the value for March 15). The other forward-looking indexes (Planned Hiring and Planned Capital Spending Indexes) are adjusted in the same way.

As with the forward-looking indexes, the current activity indexes (that is, the overall Activity, Manufacturing Activity, Nonmanufacturing Activity, Hiring, Labor Cost Pressures, and Nonlabor Cost Pressures Indexes) are also adjusted for the Covid-19 pandemic. However, the current activity indexes were lowest at their readings on April 30, 2020, rather than their readings on March 31, 2020. Thus, the current activity indexes are adjusted by assigning the April 2020 monthly index values to the daily index values from April 30 rather than April 15 while leaving the March 2020 monthly index values unadjusted. Figure 2 shows the adjustment for the overall Activity Index—which is an index of product demand at survey respondents' organizations—in purple. The adjustment for the Activity Index is noticeably smaller than the one for the Outlook Index. All current activity indexes are adjusted regardless of adjustment size to maintain continuity in how they are calculated.

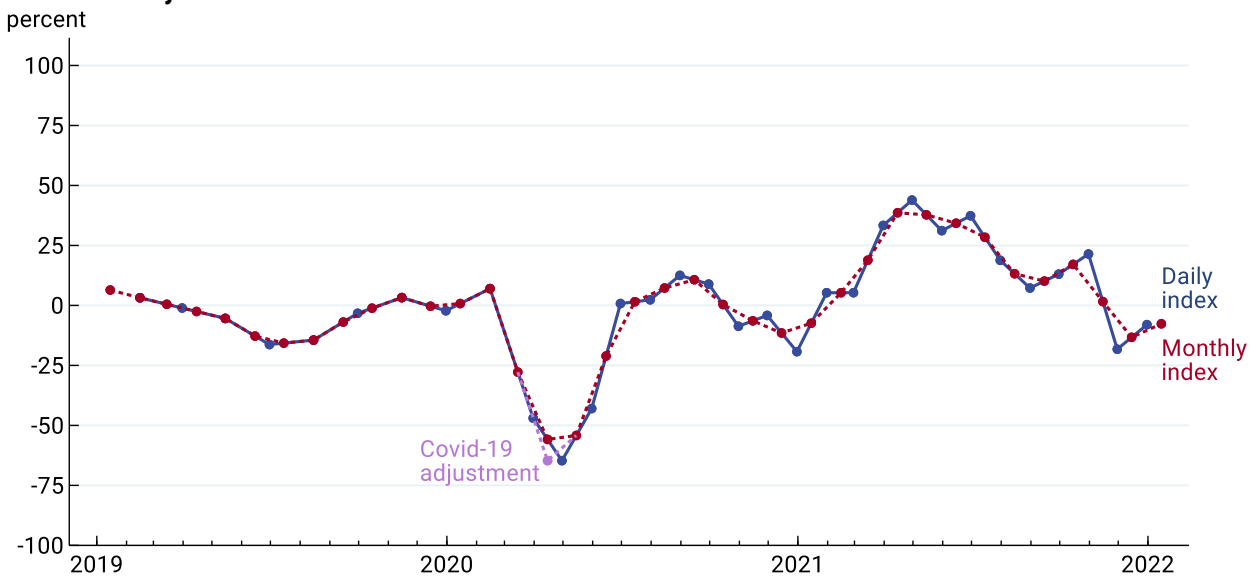
For interested CFSEC data users, index values by last date of a survey's reference period are included in the CFSEC Indexes data file (in the Data by Reference Date sheet) available at https://chicagofed.org/cfsec.

Figure 1. Derivation of monthly index values from surveys conducted prior to December 2022 for the CFSEC Outlook Index



Notes: The CFSEC Outlook Index is an index of the survey respondents' 12-month U.S. economic outlook on activity. See the text for a description of how the daily index, monthly index, and Covid-19 adjustment are calculated. All calculations use data available as of January 2023.
Source: Federal Reserve Bank of Chicago.

Figure 2. Derivation of monthly index values from surveys conducted prior to December 2022 for the CFSEC Activity Index



Note: The CFSEC Activity Index is an index of product demand at survey respondents' organizations. See the text for a description of how the daily index, monthly index, and Covid-19 adjustment are calculated. All calculations use data available as of January 2023.
Source: Federal Reserve Bank of Chicago.