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Discrepancies in dating recessions

Illuminating the shaded areas on the graph

Posted on August 26, 2021

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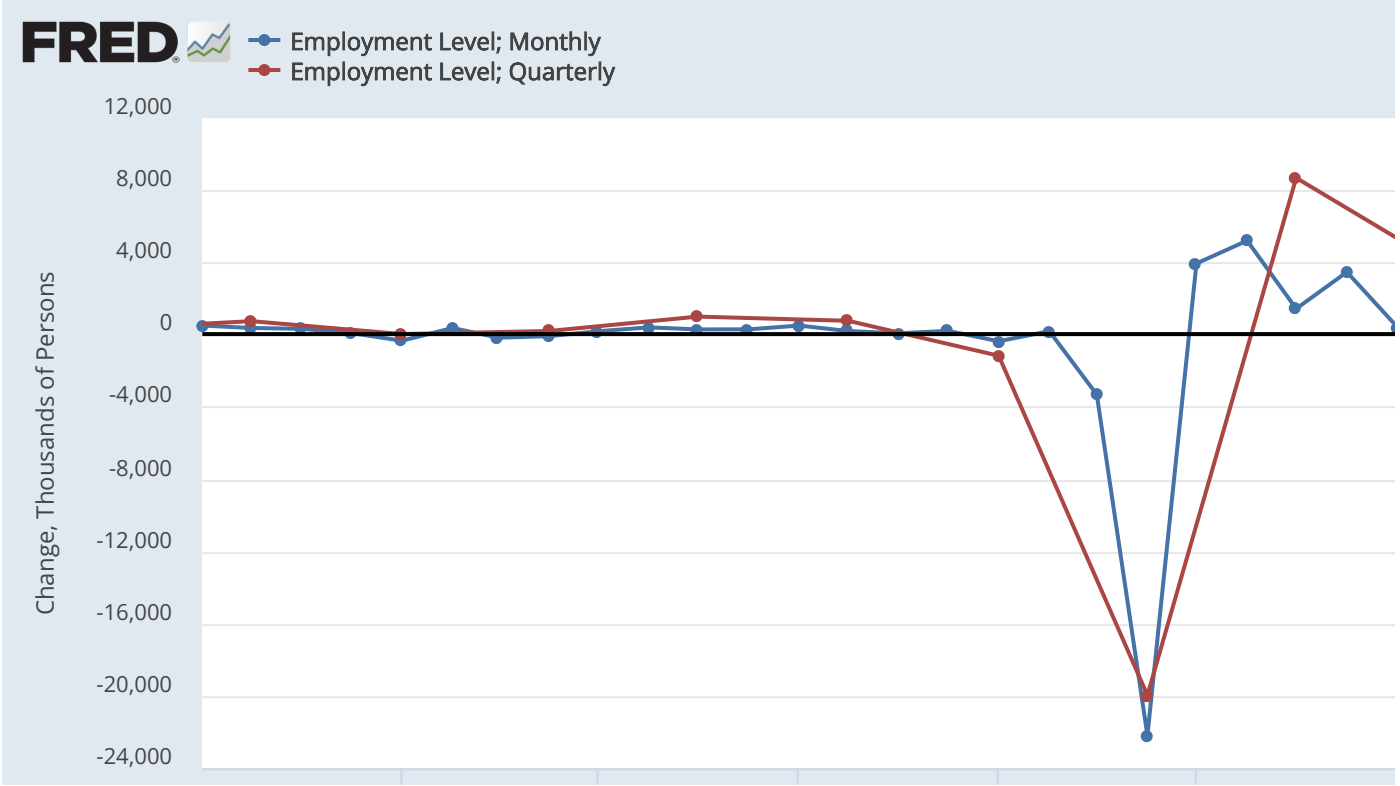

There's no hard and fast rule for determining when the U.S. economy has entered a recession, and there's no one indicator that determines a recession.

The National Bureau of Economic Research (NBER) Business Cycle Dating Committee defines a recession as a significant decline in economic activity spread across the economy and makes that determination by considering numerous indicators of economic activity. They date a recession from the peak of a business cycle through its trough. Most recently, the committee identified February 2020 as the last business cycle peak and April 2020 as the business cycle trough, making this the shortest recession on record—just 2 to 3 months.

While the beginning and ending months of a recession tend to get a lot of attention, the committee also releases the corresponding *quarters* of the peak and trough. These turning points are primarily based on quarterly averages of the monthly indicators along with prominent quarterly series such as

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- August 2022
- July 2022
- June 2022
- May 2022
- April 2022
- March 2022
- February 2022
- January 2022
- December 2021
- November 2021
- October 2021

real GDP. In most instances, the turning point quarters match the turning point months. In fact, the months and quarters *had* all been in alignment since March (Q1) 1954.[1] But for this past recession, the months and quarters of the business cycle turning points do not align.

Again, as far as the monthly turning points go, the most recent business cycle peak was in February 2020 and the trough was in April 2020, implying the only month the economy was clearly in a recessionary state was March 2020. Some time in February, the economy moved from expansion to recession; and some time in April, the economy moved from recession back to expansion.[2]

For the quarterly turning points, the committee determined that the business cycle peak occurred in the fourth quarter of 2019. This is consistent with the -5.1% decline in real GDP in the first quarter of 2020, but not in alignment with the monthly peak in February 2020. Moreover, the steep decline in employment in March 2020 more than offset the gains in January and February, generating a quarterly decline in employment of over 900,000 jobs (see the FRED Graph above).[3]

Shaded areas indicate U.S. recessions

Frequent FRED users are familiar with the phrase “Shaded areas indicate U.S. recessions” in the bottom left-hand corner of their FRED graph. You can see this shading below in the FRED graph of the unemployment rate, which also appears on the committee’s web page, with a nod to the St. Louis Fed. The recession shading is a useful visual tool for interpreting economic data. In this case, we can see that the unemployment rate rises during a recession and tends to reach a peak a few months after the recession ends.

- September 2021
- August 2021
- July 2021
- June 2021
- May 2021
- April 2021
- March 2021
- February 2021
- January 2021
- December 2020
- November 2020
- October 2020
- September 2020
- August 2020
- July 2020
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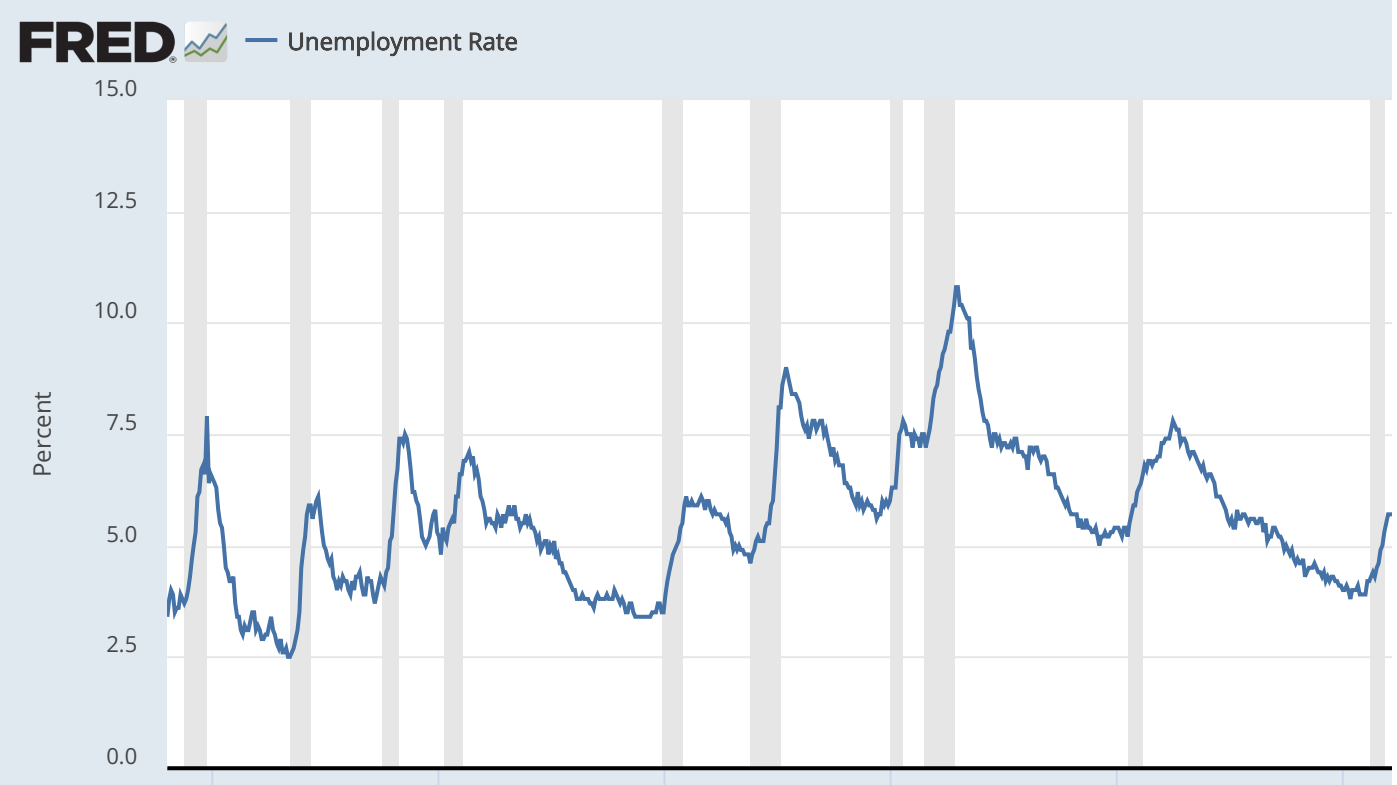
- July 2018



The FRED team applies recession shading starting with the month of the peak and ending with the month prior to the trough. This method has most accurately aligned with the turning points in economic data because of the consistency between NBER turning point months and quarters: As noted above, NBER turning point months and quarters have aligned for over a half-century!

Of course, this shading technique is not perfect and things change. The recent discrepancy between the monthly and quarterly turning points may generate some confusion when examining recent data. Rest assured, all the data behind these shaded areas do exist in FRED; and for those users who want to fine-tune their graphs, the series are here.

[1] The committee, which dates back to 1894, has identified 68 business cycle turning points; 13 of the turning months and quarters do not align.
[2] Currently, daily or weekly economic indicators aren't robust enough to make this determination. Stock indices, for example, are forward looking; so, turning points in equity prices don't always

- June 2018
- May 2018
- April 2018
- March 2018
- February 2018
- January 2018
- December 2017
- November 2017
- October 2017
- September 2017
- August 2017
- July 2017
- June 2017
- May 2017
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- May 2015
- April 2015

correspond with business cycle turning points.
[3] This NBER press release discusses the discrepancy in household employment depicted above and nonfarm payroll employment (PAYEMS).

How these graphs were created: For the first graph, search FRED for "Employment Level" and select the series "CE16OV." The default graph will be a monthly graph of the employment level in thousands of persons. To change units, go to the "Edit Graph" panel: Under "Units," select "Change, Thousands of Persons." Next, to add the quarterly employment level, use the "Add Line" tab to search for "Employment Level" and select the series "CE16OV." Next, under the "Edit Lines" tab, click the "Edit Line 2" button to change the units and frequency. Under "Units," select "Change, Thousands of Persons." Then, under "Modify frequency," select "Quarterly." Next, under the "Format" tab, select "Off" next to "Recession Shading." To add marks to the lines, select "Circle" under "Mark type" next to each line. Return to the main graph. Use the date range boxes to set the beginning date to "2018-09-01."
For the second graph, search FRED for "Unemployment Rate" and select the series "UNRATE." The default graph will be a monthly graph of the unemployment rate as a percent.

Suggested by Chuck Gascon.