

# Brave-Butters-Kelley Indexes (BBKI)

## Business Cycle Indexes and Monthly GDP Growth

November 2019

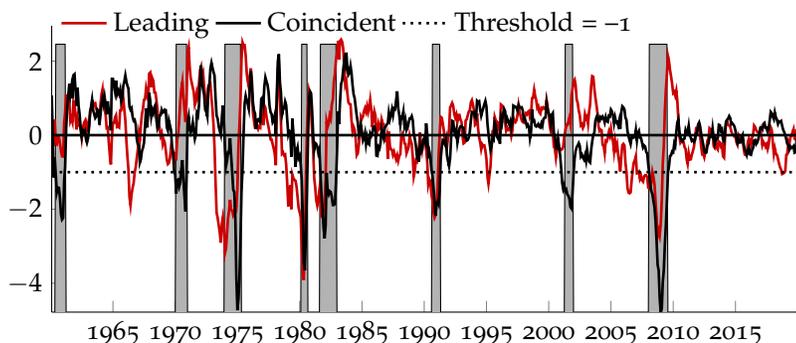
THE BRAVE-BUTTERS-KELLEY (BBK) COINCIDENT INDEX was  $-0.1$  standard deviations from trend growth in November 2019, and the BBK LEADING INDEX was  $0.2$  standard deviations from trend growth. In annualized real gross domestic product (GDP) units, the trend component of BBK MONTHLY GDP GROWTH was  $2.4\%$  in November and the cycle component was  $-0.2\%$ . The leading subcomponent contributed  $0.1\%$  and the lagging subcomponent contributed  $-0.3\%$  to the cycle component of BBK MONTHLY GDP GROWTH.

The Coincident and Leading Indexes and Monthly GDP Growth for the U.S. are constructed from a collapsed dynamic factor analysis of a panel of [500 monthly measures of real economic activity](#) and quarterly real GDP growth. Monthly GDP Growth is indexed to the quarterly estimates from the U.S. Bureau of Economic Analysis and consists of three components: cycle, trend, and irregular components. The sum of the leading and lagging subcomponents of the cycle measured in standard deviation units from trend real GDP growth is the Coincident Index. Similarly, the leading subcomponent of the cycle is the Leading Index when measured in standard deviation units from trend real GDP growth.

Recent values	Nov '19	Oct	Sep	Aug	Jul	Jun
<b>Coincident Index</b>	<b>-0.1</b>	<b>-0.5</b>	<b>-0.5</b>	<b>-0.3</b>	<b>-0.3</b>	<b>-0.3</b>
<b>Leading Index</b>	<b>0.2</b>	<b>-0.1</b>	<b>-0.1</b>	<b>0.2</b>	<b>0.1</b>	<b>0.0</b>
Cycle component	<b>-0.2</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.8</b>	<b>-0.8</b>
Leading subcomponent	<b>0.1</b>	<b>-0.1</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>
Lagging subcomponent	<b>-0.3</b>	<b>-1.0</b>	<b>-1.1</b>	<b>-0.8</b>	<b>-0.8</b>	<b>-0.8</b>
Trend component	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>	<b>2.4</b>
Irregular component			<b>0.2</b>	<b>0.5</b>	<b>0.7</b>	<b>0.5</b>
<b>Monthly GDP Growth</b>			<b>1.5</b>	<b>2.2</b>	<b>2.3</b>	<b>2.0</b>

All values are in annualized real GDP growth-equivalent units with the exception of the Coincident and Leading Indexes, which are in standard deviation units from trend real GDP growth. The irregular component of Monthly GDP Growth cannot be estimated for a given month until quarterly real GDP is observed. Therefore, we do not report Monthly GDP Growth estimates beyond the last quarter of available GDP data. The values in the table may not total because of rounding.

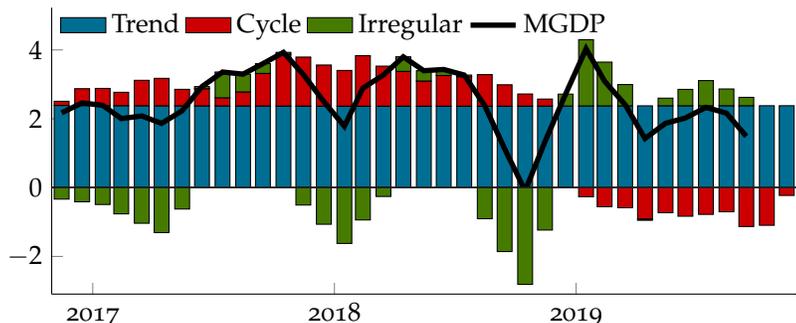
### Business Cycle Indexes (standard deviations from trend)



The shaded regions in the Business Cycle Indexes figure indicate official periods of recession for the U.S. as identified by the National Bureau of Economic Research. The dashed line corresponds to the optimal threshold values demarcating historical U.S. expansions from recessions, as described in [“A ‘big data’ view of the U.S. economy: Introducing the Brave-Butters-Kelley Indexes.”](#)

Current estimates are based on data as of December 24, 2019.

### Monthly GDP Growth (annualized)



## FEDERAL RESERVE BANK OF CHICAGO

The Brave-Butters-Kelley Indexes are a research project of the Federal Reserve Bank of Chicago. Additional information and the latest data are available online, [chicagofed.org/bbki](http://chicagofed.org/bbki). For more information, please contact Scott Brave at [sbrave@frbchi.org](mailto:sbrave@frbchi.org).