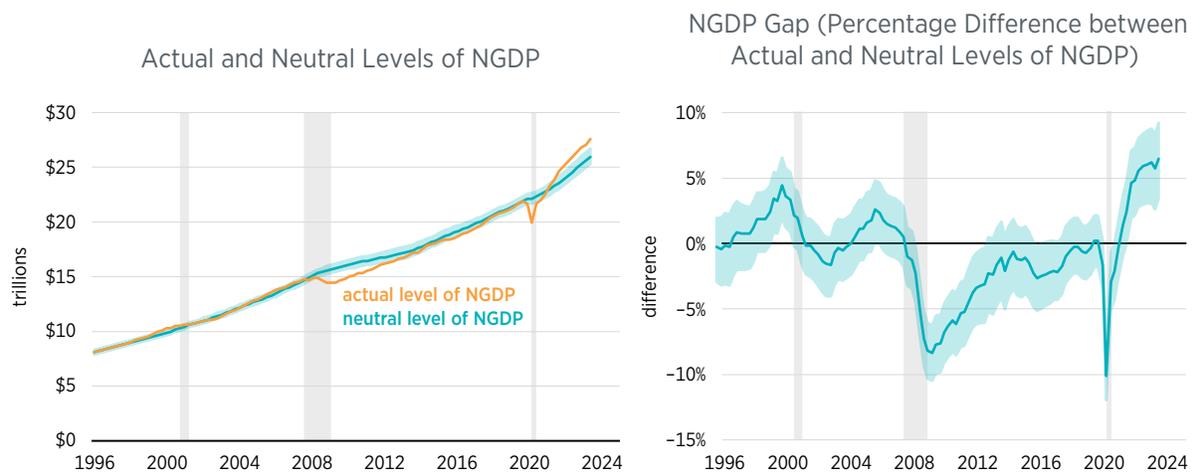


The Neutral Level of NGDP and the NGDP Gap: Q3 2023

David Beckworth

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Note: NGDP = nominal GDP. Shaded areas indicate recessions.

Source: Author's calculations based on Survey of Professional Forecasters (database), Federal Reserve Bank of Philadelphia, accessed November 19, 2023, <https://www.philadelphiafed.org/surveys-and-data/real-time-data-research/survey-of-professional-forecasters>.

The nominal GDP (NGDP) gap, a measure of unexpected changes in the dollar size of the US economy, is calculated as the percentage difference between the actual and the neutral levels of NGDP. The neutral level of NGDP, in turn, is a sum of all dollar spending, or equivalently all dollar income, expected by households and businesses coming into a specific time period and is created using data from consensus forecasts. In the third quarter of 2023, the median NGDP gap rose to 6.45 percent, notably up from the previous quarter's value of 5.70 percent.

The 6.45 percent NGDP gap means that the dollar size of the economy, \$27.62 trillion, was about \$1.67 trillion greater than its expected size of \$25.95 trillion. Moreover, NGDP was also greater

Measures of NGDP, Q2 2023 vs. Q3 2023		
MEASURE	Q2 2023	Q3 2023
Actual level of NGDP (trillions)	\$27.06	\$27.62
Median neutral level of NGDP (10th percentile, 90th percentile) (trillions)	\$25.60 (\$24.98, \$26.39)	\$25.95 (\$25.30, \$26.73)
Median NGDP gap (10th percentile, 90th percentile)	5.70% (8.32%, 2.55%)	6.45% (9.18%, 3.35%)

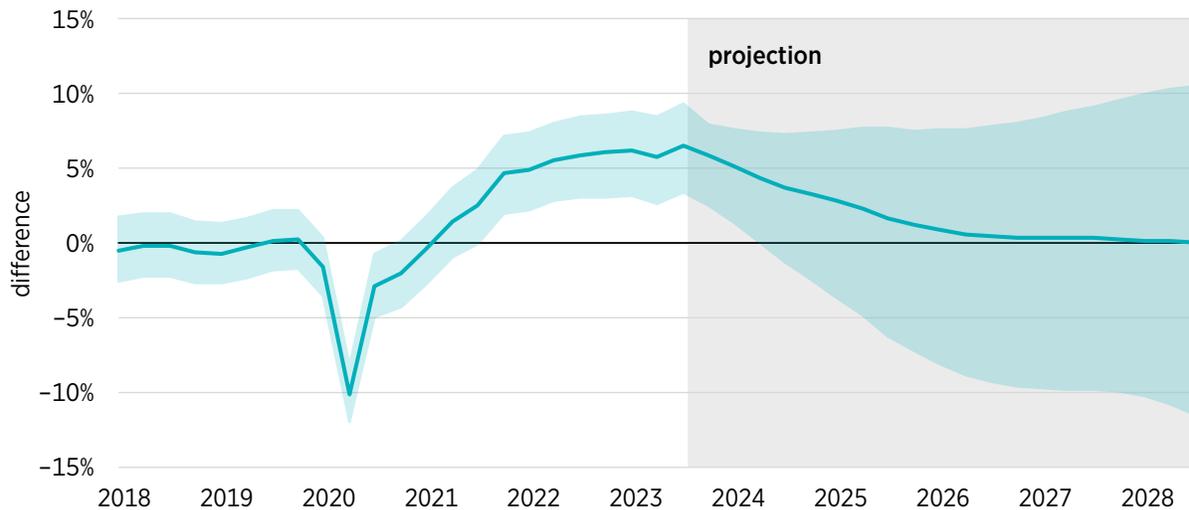
Note: NGDP = nominal GDP.

Source: Survey of Professional Forecasters (database); Federal Reserve Bank of St. Louis, FRED (database), accessed November 19, 2023, <https://fred.stlouisfed.org/>.

than the 10th and 90th percentiles of the neutral level of NGDP, which shows that this gap was significantly different from zero during this time.¹ This means aggregate spending and income in dollar terms were materially higher than their expected values, and macroeconomic conditions continued to be accommodative in the third quarter of 2023. The NGDP gap shrank in the second quarter of 2023 but now has risen owing to the robust 8.54 percent annualized growth of NGDP in the third quarter.

A forecast of the NGDP gap shows that in 2024 it will stay positive but shrink rapidly. This forecast, however, has wide prediction intervals, which means it is surrounded by a lot of uncertainty. Also, the projected NGDP gap is conditional on NGDP forecasts from early November that will likely be lowered as the effects of the Federal Reserve’s interest-rate hikes continue to slow the economy.

Actual and Forecasted NGDP Gap



Source: Author’s calculations based on Survey of Professional Forecasters (database) and Wolters Kluwer, *Blue Chip Economic Indicators: Top Analysts’ Forecasts of the U.S. Economic Outlook for the Year Ahead* (multiple issues).

A CLOSER LOOK AT THE NGDP GAP

As noted, the NGDP gap requires an estimate of the neutral level of NGDP. The neutral level of NGDP is estimated by taking an average forecast of NGDP, or total nominal income, for a given quarter based on forecasts for that period from the preceding 20 quarters. The forecast data used here are taken from the Federal Reserve Bank of Philadelphia’s Survey of Professional Forecasters.

The NDGP gap measures the percentage difference between this average forecast and the actual level of NGDP. If actual NGDP is significantly less than the neutral level, then macroeconomic conditions are contractionary. If actual NGDP is significantly greater than the neutral level, then macroeconomic conditions are expansionary.

The rationale for this understanding is twofold. First, households make economic decisions, such as whether to take out a mortgage or a car loan, based on forecasts of their nominal income. Similarly, firms may finance with debt and commit to long-term contracts on plants, raw materials, and labor given their outlook for nominal incomes. The financial contracts formalizing these economic decisions often commit households and firms to multiyear financial obligations even though their expectations of nominal income may change.

Second, if actual nominal incomes turn out to be very different from what was originally expected, households and firms will find their existing financial contracts disruptive. For example, if nominal incomes are less than the public expected, the public’s existing financial obligations will become onerous and destabilizing. Such disruptions can be avoided by maintaining total nominal income, or NGDP, on the growth path expected by the public. In other words, the Federal Reserve should aim to close the NGDP gap in order to keep macroeconomic conditions neutral.

To ensure robustness, I create a data series using real-time actual NGDP data (which are revised later). This series is called the *vintage NGDP gap*, and it contains initial-release NGDP data for each quarter that can be used to construct an NGDP gap. In other words, it shows the NGDP gap policymakers would have seen in real time, given the initial NGDP data. In addition, I create a second version of the NGDP gap, the *Blue Chip NGDP gap*, using the Blue Chip Economic Indicators instead of the Survey of Professional Forecasters. This measure provides a cross-check on the use of the latter source as a main indicator. The Blue Chip data, which are updated every month, are also used to create the monthly forecasts of the NGDP gap. All of these series—the vintage NGDP gap, the Blue Chip NGDP gap, the forecasted NGDP gap, and the regular NGDP gap—can be downloaded from the NGDP gap web page hosted by the Mercatus Center.²

For more information on how the NGDP gap is constructed, and how it may be used to understand policy, please see “The Stance of Monetary Policy: The NGDP Gap” and “The Pandemic and the NGDP Gap: A Robustness Check” policy briefs by David Beckworth.³

ABOUT THE AUTHOR

David Beckworth is director of the Program on Monetary Policy at the Mercatus Center at George Mason University and a former international economist at the US Department of the Treasury. His research focuses on monetary policy, and his work has been cited by the *Wall Street Journal*, the *Financial Times*, the *New York Times*, *Bloomberg Businessweek*, and the *Economist*. He has advised congressional staffers on monetary policy and has written for *Barron's*, *Investor's Business Daily*, the *New Republic*, the *Atlantic*, and *National Review*.

NOTES

1. The Survey of Professional Forecasters (SPF) reports the mean and median (50th percentile) of forecasts made by all the individual forecasters who submit their projections. The 10th and 90th percentiles are constructed using the same underlying individual data in the SPF.
2. David Beckworth, "Measuring Monetary Policy: The NGDP Gap" (dataset), Mercatus Center at George Mason University, Arlington, VA, April 22, 2020, <https://www.mercatus.org/publications/monetary-policy/measuring-monetary-policy-ngdp-gap>.
3. David Beckworth, "The Stance of Monetary Policy: The NGDP Gap" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, April 2020) and David Beckworth, "The Pandemic and the NGDP Gap: A Robustness Check" (Mercatus Policy Brief, Mercatus Center at George Mason University, Arlington, VA, forthcoming).