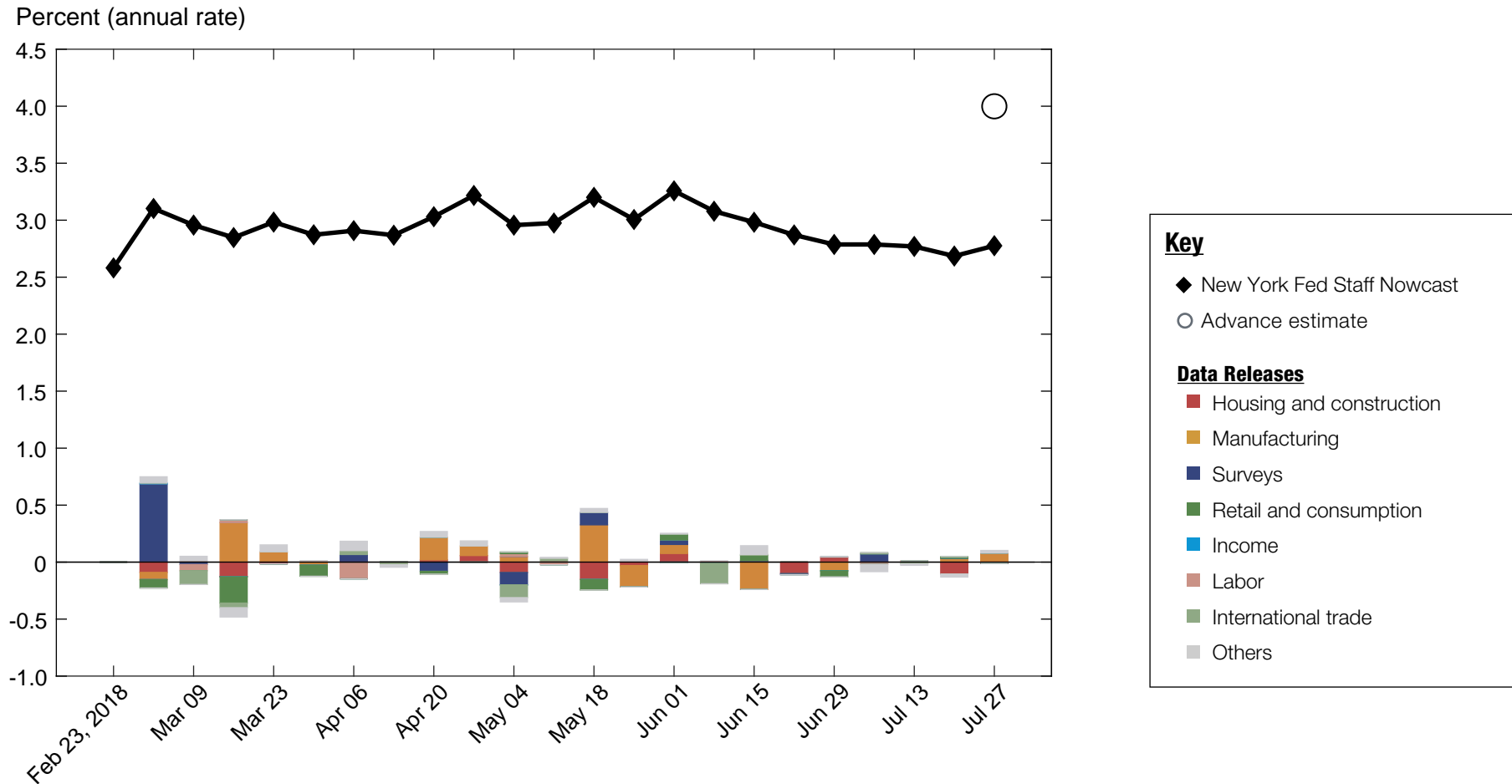# NOWCASTING REPORT

Updated: July 27, 2018

- Today's advance estimate of real GDP growth for 2018:Q2 from the Commerce Department was 4.1%. The latest New York Fed Staff Nowcast for 2018:Q2 was 2.8%.

- The New York Fed Staff Nowcast for 2018:Q3 stands at 2.8%.

- News from this week's data releases increased the nowcast for 2018:Q3 by 0.4 percentage point.

- Positive surprises from manufacturing data accounted for most of the increase.

Percent (annual rate)

Key

◆ New York Fed Staff Nowcast

○ Advance estimate

Data Releases

■ Housing and construction

■ Manufacturing

■ Surveys

■ Retail and consumption

■ Income

■ Labor

■ International trade

■ Others

Source: Authors' calculations, based on data accessed through Haver Analytics.
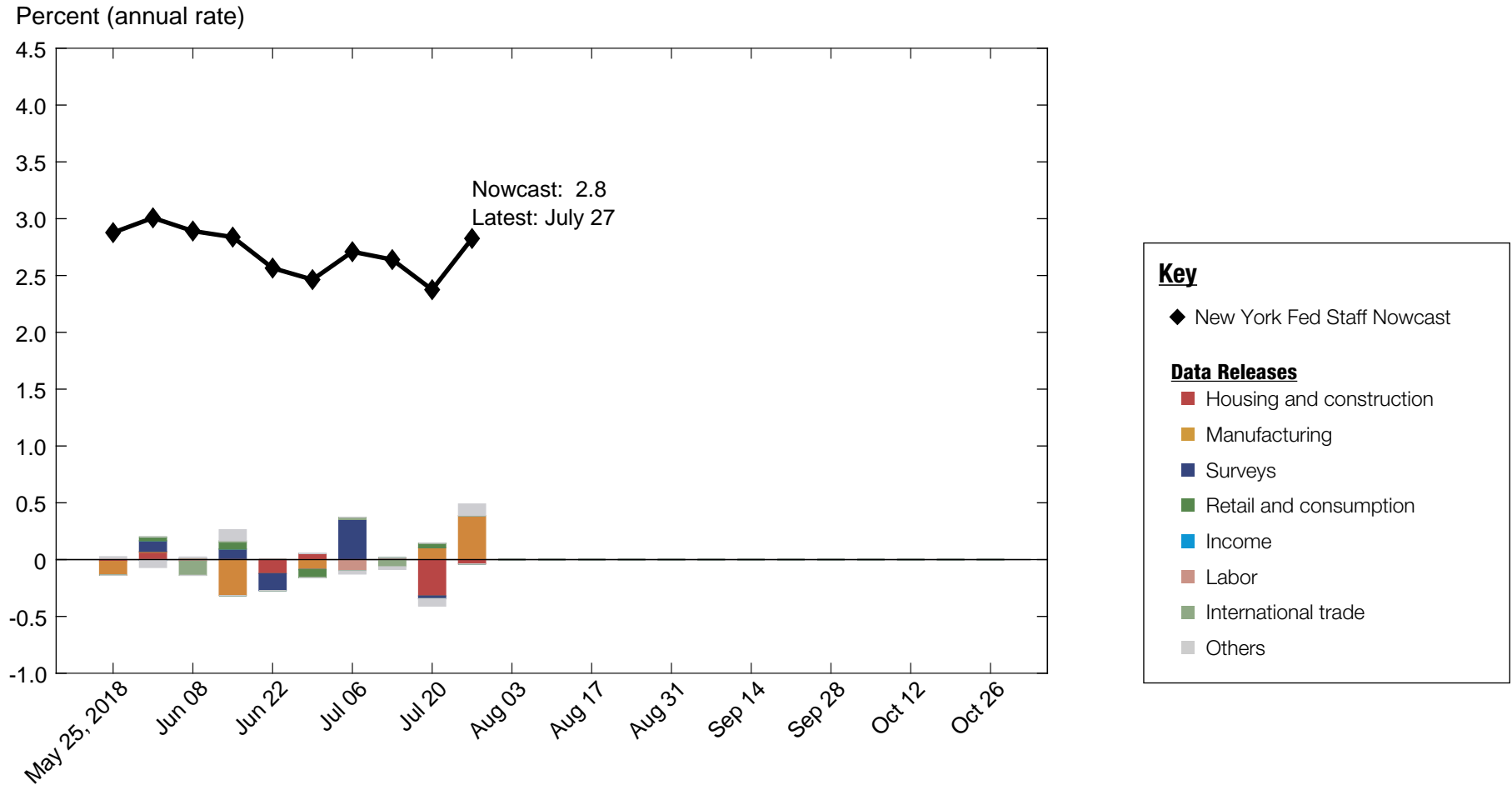Note: Colored bars reflect the impact of each data release on the nowcast.

1.1 | Nowcast Detail

Legend: ■ Housing and construction ■ Manufacturing ■ Surveys ■ Retail and consumption ■ Income ■ Labor ■ International trade ■ Others

Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b − a)]	
Jun 29									**2.79**
	10:00 AM Jul 02	■ ISM mfg.: PMI composite index	Jun	Index	57.6	60.2	0.025	0.065	
	10:00 AM Jul 02	■ ISM mfg.: Prices index	Jun	Index	77.1	76.8	0.003	-0.001	
	10:00 AM Jul 02	■ ISM mfg.: Employment index	Jun	Index	55.7	56.0	0.013	0.004	
	10:10 AM Jul 02	■ Value of construction put in place	May	MoM % chg.	0.577	0.386	0.015	-0.003	
	10:00 AM Jul 03	■ Inventories: Total business	May	MoM % chg.	0.484	0.375	-0.039	0.004	
	8:05 AM Jul 05	■ ADP nonfarm private payroll employment	Jun	Level chg. (thousands)	215.3	177.0	0.131*	-0.005	
	10:00 AM Jul 05	■ ISM nonmanufacturing: NMI composite index	Jun	Index	58.7	59.1	0.003	0.001	
	8:30 AM Jul 06	■ All employees: Total nonfarm	Jun	Level chg. (thousands)	205.5	213.0	0.123*	0.001	
	8:30 AM Jul 06	■ Exports: Goods and services	May	MoM % chg.	1.01	1.94	0.049	0.046	
	8:30 AM Jul 06	■ Imports: Goods and services	May	MoM % chg.	1.28	0.413	0.040	-0.035	
	8:30 AM Jul 06	■ Civilian unemployment rate	Jun	Ppt. chg.	-0.060	0.200	-0.055	-0.014	
		■ Data revisions						-0.001	
		■ Parameter revisions						-0.061	
Jul 06									**2.79**
	10:00 AM Jul 10	■ JOLTS: Job openings: Total	May	Level chg. (thousands)	19.5	-202.0	-0.049*	0.011	
	8:30 AM Jul 11	■ PPI: Final demand	Jun	MoM % chg.	0.242	0.258	0.061	0.001	
	8:40 AM Jul 12	■ CPI-U: All items	Jun	MoM % chg.	0.239	0.129	0.043	-0.005	
	8:40 AM Jul 12	■ CPI-U: All items less food and energy	Jun	MoM % chg.	0.168	0.162	0.053	-0.000	
	8:30 AM Jul 13	■ Import price index	Jun	MoM % chg.	0.776	-0.390	0.011	-0.012	
	8:30 AM Jul 13	■ Export price index	Jun	MoM % chg.	0.449	0.313	0.023	-0.003	
		■ Data revisions						-0.009	
Jul 13									**2.77**
	8:30 AM Jul 16	■ Retail sales and food services	Jun	MoM % chg.	0.369	0.485	0.106	0.012	
	8:30 AM Jul 16	■ Empire State Mfg. Survey: General business conditions	Jul	Index	23.3	22.6	0.000	-0.000	
	9:20 AM Jul 17	■ Industrial production index	Jun	MoM % chg.	0.424	0.619	0.133	0.026	
	9:20 AM Jul 17	■ Capacity utilization	Jun	Ppt. chg.	0.291	0.338	0.173	0.008	
	8:30 AM Jul 18	■ Housing starts	Jun	MoM % chg.	-0.601	-12.3	0.006	-0.069	
	8:30 AM Jul 18	■ Building permits	Jun	Level chg. (thousands)	23.0	-28.0	0.001	-0.035	
	8:30 AM Jul 19	■ Phila. Fed Mfg. business outlook: Current activity	Jul	Index	26.7	25.7	-0.001	0.001	
		■ Data revisions						-0.027	
Jul 20									**2.69**
	10:00 AM Jul 25	■ New single family houses sold	Jun	MoM % chg.	-1.28	-5.26	0.003	-0.012	
	8:30 AM Jul 26	■ Manufacturers' new orders: Durable goods	Jun	MoM % chg.	1.02	0.995	0.007	-0.000	
	8:30 AM Jul 26	■ Merchant wholesalers: Inventories: Total	Jun	MoM % chg.	0.709	0.014	-0.025	0.017	
	8:30 AM Jul 26	■ Manufacturers' shipments: Durable goods	Jun	MoM % chg.	0.584	1.67	0.047	0.051	
	8:30 AM Jul 26	■ Mfrs.' unfilled orders: All manufacturing industries	Jun	MoM % chg.	0.706	0.376	0.002	-0.001	
	8:30 AM Jul 26	■ Manufacturers' inventories: Durable goods	Jun	MoM % chg.	0.463	-0.107	-0.022	0.012	
		■ Data revisions						0.023	
Jul 27									**2.78**
	8:30 AM Jul 27	■ Real gross domestic product (advance)	Q2	QoQ % chg. AR	2.78	**4.1**			
						We have concluded our updates of the Q2 nowcast			

Source: Authors' calculations, based on data accessed through Haver Analytics.

Notes: MoM % chg. indicates month over month percentage change. QoQ % chg. indicates quarter over quarter percentage change. The weights with the asterisk are multiplied by 1,000 for legibility.

Percent (annual rate)

Nowcast: 2.8
Latest: July 27

Key

◆ New York Fed Staff Nowcast

Data Releases
- Housing and construction
- Manufacturing
- Surveys
- Retail and consumption
- Income
- Labor
- International trade
- Others

Source: Authors' calculations, based on data accessed through Haver Analytics.
Note: Colored bars reflect the impact of each data release on the nowcast.

2.1 | Nowcast Detail

■ Housing and construction ■ Manufacturing ■ Surveys ■ Retail and consumption ■ Income ■ Labor ■ International trade ■ Others

Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b − a)]	
Jun 29									**2.46**
	10:00 AM Jul 02	■ ISM mfg.: PMI composite index	Jun	Index	57.6	60.2	0.129	0.333	
	10:00 AM Jul 02	■ ISM mfg.: Prices index	Jun	Index	77.1	76.8	0.022	-0.006	
	10:00 AM Jul 02	■ ISM mfg.: Employment index	Jun	Index	55.7	56.0	0.053	0.016	
	10:10 AM Jul 02	■ Value of construction put in place	May	MoM % chg.	0.577	0.386	0.028	-0.005	
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	8:30 AM Jul 06	■ Civilian unemployment rate	Jun	Ppt. chg.	-0.060	0.200	-0.190	-0.049	
		■ Data revisions						0.009	
		■ Parameter revisions						-0.035	
Jul 06									**2.71**
	10:00 AM Jul 10	■ JOLTS: Job openings: Total	May	Level chg. (thousands)	19.5	-202.0	-0.077*	0.017	
	8:30 AM Jul 11	■ PPI: Final demand	Jun	MoM % chg.	0.242	0.258	0.175	0.003	
	8:40 AM Jul 12	■ CPI-U: All items	Jun	MoM % chg.	0.239	0.129	0.145	-0.016	
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	8:30 AM Jul 13	■ Export price index	Jun	MoM % chg.	0.449	0.313	0.077	-0.010	
		■ Data revisions						-0.009	
Jul 13									**2.64**
	8:30 AM Jul 16	■ Retail sales and food services	Jun	MoM % chg.	0.369	0.485	0.339	0.039	
	8:30 AM Jul 16	■ Empire State Mfg. Survey: General business conditions	Jul	Index	23.3	22.6	0.018	-0.012	
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	8:30 AM Jul 18	■ Building permits	Jun	Level chg. (thousands)	23.0	-28.0	0.002	-0.114	
	8:30 AM Jul 19	■ Phila. Fed Mfg. business outlook: Current activity	Jul	Index	26.7	25.7	0.012	-0.013	
		■ Data revisions						-0.064	
Jul 20									**2.38**
	10:00 AM Jul 25	■ New single family houses sold	Jun	MoM % chg.	-1.28	-5.26	0.010	-0.039	
	8:30 AM Jul 26	■ Manufacturers' new orders: Durable goods	Jun	MoM % chg.	1.02	0.995	0.020	-0.000	
	8:30 AM Jul 26	■ Merchant wholesalers: Inventories: Total	Jun	MoM % chg.	0.709	0.014	-0.144	0.100	
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	8:30 AM Jul 26	■ Manufacturers' inventories: Durable goods	Jun	MoM % chg.	0.463	-0.107	-0.262	0.149	
	8:30 AM Jul 27	■ Real gross domestic product	Q2	QoQ % chg. AR	2.76	4.00	0.003	0.003	
		■ Data revisions						0.099	
Jul 27									**2.83**

Source: Authors' calculations, based on data accessed through Haver Analytics.
Notes: MoM % chg. indicates month over month percentage change. QoQ % chg. indicates quarter over quarter percentage change. The weights with the asterisk are multiplied by 1,000 for legibility.

Nowcasting Report Q&A

1. What is the ultimate goal of the exercise?

Our model produces a "nowcast" of GDP growth, incorporating a wide range of macroeconomic data as it becomes available. With this approach, we aim to read the real-time flow of information and evaluate its effects on current economic conditions. The platform provides a model-based counterpart to the more routine analysis at the bank, which has traditionally been based on expert knowledge.

2. What is the modeling strategy?

The platform employs Kalman-filtering techniques and a dynamic factor model. The approach has a number of desirable features. It is based on:

- a reliable big data framework that captures in a parsimonious way the salient features of macroeconomic data dynamics;
- a design that digests the data as "news," mimicking the way markets work.

3. What are the input data? What has been driving the data selection?

We include all the market-moving indicators—the same data that are also constantly monitored by market participants and commentators.

4. Why should we trust the model?

Extensive back-testing of the model, research, and practical experience have shown that the platform is able to approximate best practices in macroeconomic forecasts. The model produces forecasts that are as accurate as, and strongly correlated with, predictions based on best judgment.

The methodology has been tested for accuracy in many countries, including large developed economies (the Euro area, Italy, France, Germany, Spain, the United Kingdom, Japan, and Canada), small open economies (Australia, Ireland, Belgium, New Zealand, the Czech Republic, and Scotland), fast-growing economies (Brazil, Russia, India, China, and South Africa), and developing economies (Mexico, Indonesia, and Argentina).

5. How should we read the output of the model?

- The model produces forecasts for all variables taking into account their dynamic interactions.
- Since it is a fully specified dynamic model, the platform provides an intuitive reading of the incoming data as "news."
- The difference between two consecutive forecasts (that is, the forecast revision) is the weighted average of the news during the week.
- News is defined as the difference between released data and model predictions. The weights account for the information content as well as the timeliness of the data releases.
- The contribution of new data to the forecast revision is reported in the two charts with colored bars. To make the charts easier to read, we grouped variables in a few broad categories. Detailed information about the composition of the groupings is provided in the accompanying tables.

References

■ *Banbura, M., D. Giannone, M. Modugno, and L. Reichlin*. 2013. "Nowcasting and the Real-Time Data Flow." In G. Elliott and A. Timmermann, eds., *Handbook of Economic Forecasting*, Vol. 2. Amsterdam: Elsevier-North Holland.

■ *Bok, B., D. Caratelli, D. Giannone, A. Sbordone, and A. Tambalotti.* 2017. "Macroeconomic Nowcasting and Forecasting with Big Data." *Federal Reserve Bank of New York Staff Reports,* no. 830, November.

■ *Giannone, D., L. Reichlin, and D. Small.* 2008. "Nowcasting: The Real-Time Informational Content of Macroeconomic Data." *Journal of Monetary Economics* 55, no.4 (May): 665-76.

Nowcasting Report FAQs

1. What is the schedule for reporting and updating the nowcast for each quarter?

We start reporting the nowcast of GDP growth for a reference quarter one week after the publication of the second official GDP estimate for two quarters prior. For example, we began reporting the nowcast for 2017:Q2 on Friday, March 10, 2017, following the government's second estimate of 2016:Q4 GDP on Tuesday, February 28, 2017. We continue to update the nowcast for a reference quarter until the release of the advance GDP estimate, roughly one month after the end of the quarter. For 2017:Q2, this occurred on July 28, 2017, at which point we stopped updating the nowcast for this quarter. We retain the reference quarter's progression plot and detail table in the Nowcasting Report until the publication of the second GDP estimate, roughly two months after the end of the quarter. Following the second estimate of 2017:Q2 GDP on August 30, 2017, we removed 2017:Q2 from the Nowcasting Report and began reporting the nowcast for 2017:Q4.

2. What are the major conceptual differences between the New York Fed Staff Nowcast and the Atlanta Fed's Nowcast?

The New York Fed Staff Nowcast and the Atlanta Fed's GDPNow are both based on statistical filtering techniques applied to a dynamic factor model. These techniques are very common in big data analytics since they effectively summarize the information contained in large data sets through a small number of common factors. The general framework for macroeconomic nowcasting has been developed in the academic literature over the past ten years, as discussed in the Q&A included in this report. The New York Fed Staff Nowcast is a straightforward application of the most advanced techniques developed in this academic literature. GDPNow adapts these techniques to mimic the methods used by the BEA to estimate real GDP growth, as well explained by GDPNow's own FAQs.

Because GDPNow and the New York Fed Staff Nowcast are different models, they can generate different forecasts of real GDP growth. Our policy is not to comment on or interpret any differences between the forecasts of these two models.

3. Is the "annual rate" the y/y growth rate?

No. We track the annualized quarterly ("q/q") growth rate of real GDP, not the four-quarter ("y/y") growth rate.

4. Can we obtain the data underlying this analysis?

We are not making the underlying data available at this time. The tables list the data series employed in calculating our estimates. Sources include the U.S. Bureau of Labor Statistics, Institute for Supply Management, U.S. Census Bureau, U.S. Bureau of Economic Analysis, the New York and Philadelphia Feds, the Fed Board of Governors, and the ADP (Automatic Data Processing, Inc.).

Authors

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