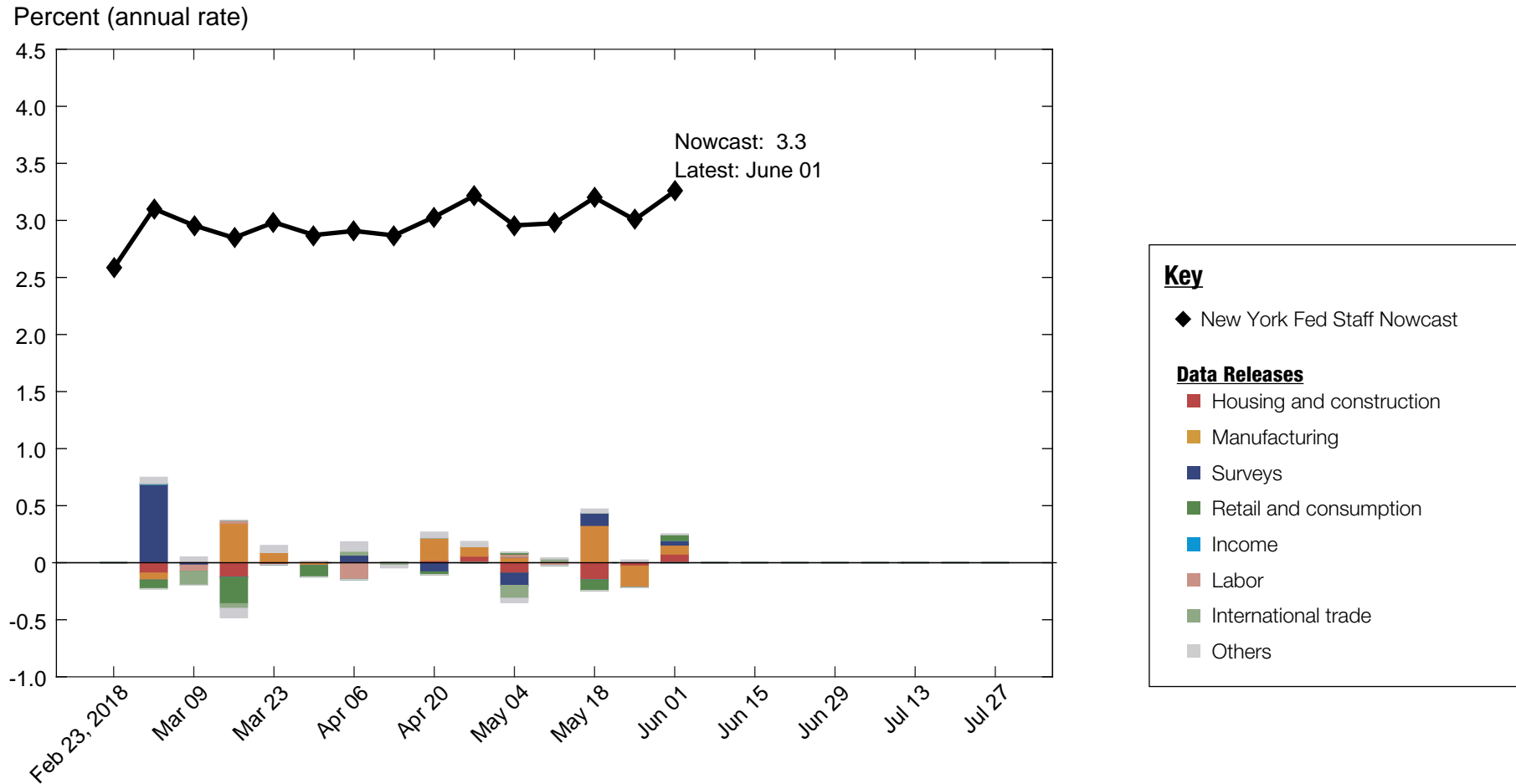# NOWCASTING REPORT

Updated: June 1, 2018

- The New York Fed Staff Nowcast stands at 3.3% for 2018:Q2.

- This week's data releases increased the nowcast for 2018:Q2 by 0.3 percentage point.

- Positive surprises from personal consumption expenditures, wholesale inventories, and construction data accounted for the increase.

Percent (annual rate)

Nowcast: 3.3
Latest: June 01

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.
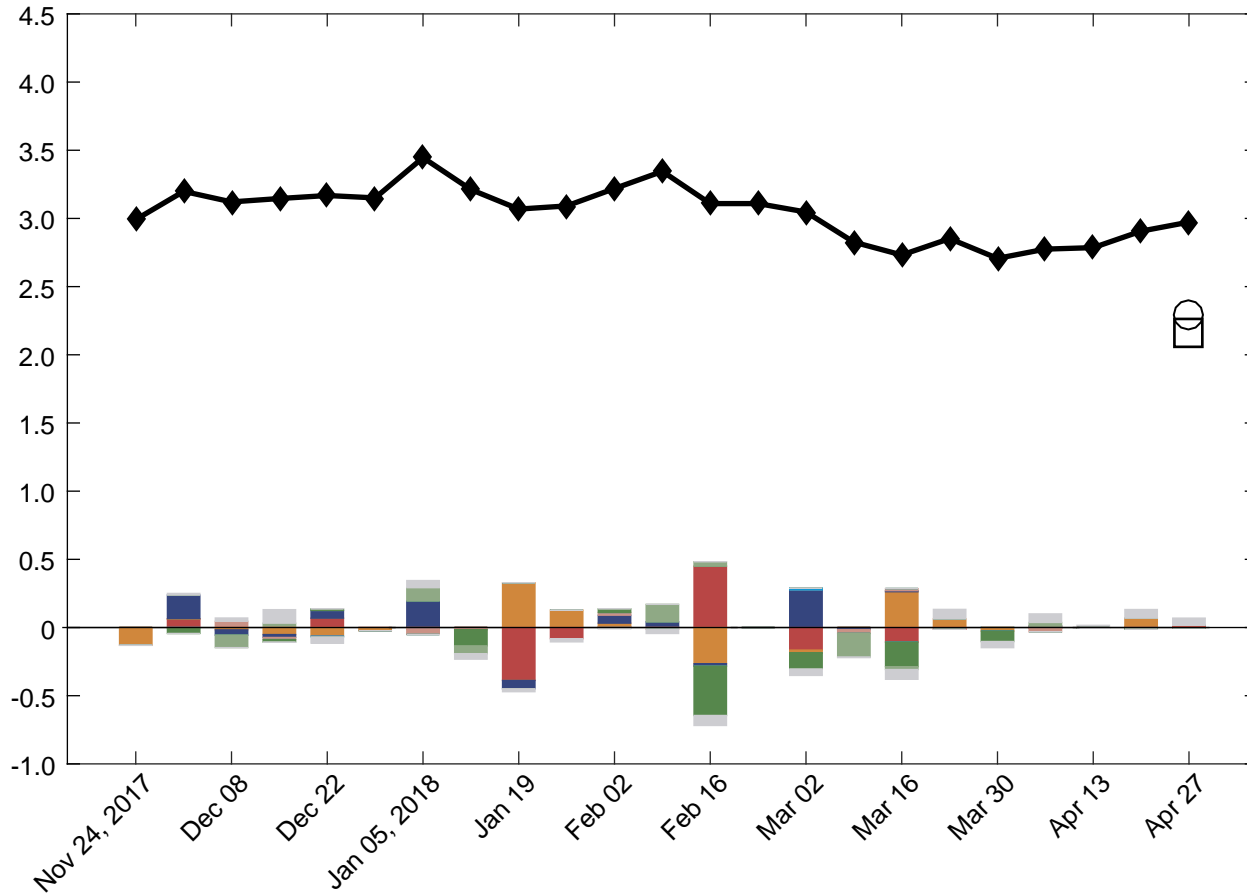Note: Colored bars reflect the impact of each data release on the nowcast.

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)]	
May 04									**2.96**
	10:00 AM May 08	■ JOLTS: Job openings: Total	Mar	Level chg. (thousands)	149.5	472.0	-0.072*	-0.023	
	8:30 AM May 09	■ PPI: Final demand	Apr	MoM % chg.	0.184	0.087	0.152	-0.015	
	8:30 AM May 10	■ CPI-U: All items	Apr	MoM % chg.	0.103	0.221	0.129	0.015	
	8:30 AM May 10	■ CPI-U: All items less food and energy	Apr	MoM % chg.	0.166	0.098	0.161	-0.011	
	8:30 AM May 11	■ Import price index	Apr	MoM % chg.	-0.035	0.316	0.038	0.013	
	8:30 AM May 11	■ Export price index	Apr	MoM % chg.	0.253	0.554	0.067	0.020	
		■ Data revisions						0.019	
May 11									**2.97**
	8:30 AM May 15	■ Retail sales and food services	Apr	MoM % chg.	0.551	0.298	0.367	-0.093	
	8:30 AM May 15	■ Empire State Mfg. Survey: General business conditions	May	Index	16.3	20.1	0.009	0.035	
	8:30 AM May 16	■ Housing starts	Apr	MoM % chg.	1.22	-3.67	0.020	-0.100	
	8:30 AM May 16	■ Building permits	Apr	Level chg. (thousands)	-4.19	-25.0	0.003	-0.053	
	9:20 AM May 16	■ Industrial production index	Apr	MoM % chg.	0.207	0.719	0.358	0.183	
	9:20 AM May 16	■ Capacity utilization	Apr	Ppt. chg.	0.130	0.432	0.475	0.144	
	8:30 AM May 17	■ Philly Fed Mfg. business outlook: Current activity	May	Index	21.6	34.4	0.006	0.075	
		■ Data revisions						0.034	
May 18									**3.20**
	10:00 AM May 23	■ New single family houses sold	Apr	MoM % chg.	0.855	-1.49	0.013	-0.030	
	8:30 AM May 25	■ Manufacturers' new orders: Durable goods	Apr	MoM % chg.	0.678	-1.66	0.022	-0.052	
	8:30 AM May 25	■ Manufacturers' shipments: Durable goods	Apr	MoM % chg.	0.857	-0.059	0.131	-0.120	
	8:30 AM May 25	■ Mfrs.' unfilled orders: All manufacturing industries	Apr	MoM % chg.	0.656	0.482	-0.027	0.005	
	8:30 AM May 25	■ Manufacturers' inventories: Durable goods	Apr	MoM % chg.	0.235	0.291	-0.368	-0.021	
		■ Data revisions						0.024	
May 25									**3.01**
	8:05 AM May 30	■ ADP nonfarm private payroll employment	May	Level chg. (thousands)	193.6	178.0	1.013*	-0.016	
	8:30 AM May 30	■ Merchant wholesalers: Inventories: Total	Apr	MoM % chg.	0.441	0.024	-0.190	0.079	
	8:30 AM May 30	■ Real gross domestic income	Q1	QoQ % chg. AR	2.56	2.77	0.012	0.003	
	8:30 AM May 31	■ Real disposable personal income	Apr	MoM % chg.	0.245	0.188	0.029	-0.002	
	8:30 AM May 31	■ PCE less food and energy: Chain price index	Apr	MoM % chg.	0.148	0.157	0.238	0.002	
	8:30 AM May 31	■ PCE: Chain price index	Apr	MoM % chg.	0.118	0.222	0.141	0.015	
	8:30 AM May 31	■ Real personal consumption expenditures	Apr	MoM % chg.	0.202	0.354	0.338	0.051	
	8:30 AM Jun 01	■ All employees: Total nonfarm	May	Level chg. (thousands)	195.2	223.0	0.323*	0.009	
	8:30 AM Jun 01	■ Civilian unemployment rate	May	Ppt. chg.	-0.029	-0.100	-0.114	0.008	
	10:00 AM Jun 01	■ ISM mfg.: Pmi composite index	May	Index	58.3	58.7	0.053	0.023	
	10:00 AM Jun 01	■ ISM mfg.: Prices index	May	Index	78.0	79.5	0.007	0.011	
	10:00 AM Jun 01	■ Value of construction put in place	Apr	MoM % chg.	-0.441	1.84	0.033	0.076	
	10:00 AM Jun 01	■ ISM mfg.: Employment index	May	Index	56.0	56.3	0.021	0.005	
		■ Data revisions						-0.012	
Jun 01									**3.26**

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)

Key

- ◆ New York Fed Staff Nowcast
- ○ Advance estimate
- □ Second 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.

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

Update	Release Date	Data Series	Reference Period	Units	Forecast [a]	Actual [b]	Weight [c]	Impact [c(b − a)]	Nowcast GDP Growth
Mar 30									**2.71**
	10:00 AM Apr 02	Value of construction put in place	Feb	MoM % chg.	0.368	0.071	0.018	-0.005	
	10:00 AM Apr 02	ISM mfg.: Pmi composite index	Mar	Index	59.3	59.3	0.026	-0.000	
	10:00 AM Apr 02	ISM mfg.: Prices index	Mar	Index	73.0	78.1	0.003	0.015	
	10:00 AM Apr 02	ISM mfg.: Employment index	Mar	Index	58.4	57.3	0.011	-0.012	
	8:05 AM Apr 04	ADP nonfarm private payroll employment	Mar	Level chg. (thousands)	251.7	241.0	0.139*	-0.001	
	10:00 AM Apr 04	Inventories: Total business	Feb	MoM % chg.	0.732	0.600	-0.064	0.008	
	10:00 AM Apr 04	ISM nonmanufacturing: NMI composite index	Mar	Index	58.8	58.8	0.003	-0.000	
	8:30 AM Apr 05	Exports: Goods and services	Feb	MoM % chg.	1.41	1.74	0.051	0.017	
	8:30 AM Apr 05	Imports: Goods and services	Feb	MoM % chg.	1.51	1.72	0.043	0.009	
	8:30 AM Apr 06	All employees: Total nonfarm	Mar	Level chg. (thousands)	260.1	103.0	0.125*	-0.020	
	8:30 AM Apr 06	Civilian unemployment rate	Mar	Ppt. chg.	-0.109	0.000	-0.055	-0.006	
		Data revisions						-0.009	
		Parameter revisions						0.073	
Apr 06									**2.77**
	8:30 AM Apr 10	PPI: Final demand	Mar	MoM % chg.	0.215	0.261	0.061	0.003	
	8:30 AM Apr 11	CPI-U: All items	Mar	MoM % chg.	0.228	-0.063	0.046	-0.013	
	8:30 AM Apr 11	CPI-U: All items less food and energy	Mar	MoM % chg.	0.172	0.176	0.060	0.000	
	8:30 AM Apr 12	Import price index	Mar	MoM % chg.	0.443	0.000	0.011	-0.005	
	8:30 AM Apr 12	Export price index	Mar	MoM % chg.	0.335	0.318	0.024	-0.000	
	10:00 AM Apr 13	JOLTS: Job openings: Total	Feb	Level chg. (thousands)	-105.5	-176.0	-0.047*	0.003	
		Data revisions						0.023	
Apr 13									**2.79**
	8:30 AM Apr 16	Retail sales and food services	Mar	MoM % chg.	0.627	0.561	0.117	-0.008	
	8:30 AM Apr 16	Empire State Mfg. Survey: General business conditions	Apr	Index	21.5	15.8	0.000	-0.002	
	8:30 AM Apr 17	Housing starts	Mar	MoM % chg.	2.68	1.85	0.007	-0.006	
	8:30 AM Apr 17	Building permits	Mar	Level chg. (thousands)	18.8	33.0	0.001	0.011	
	9:20 AM Apr 17	Industrial production index	Mar	MoM % chg.	0.200	0.515	0.120	0.038	
	9:20 AM Apr 17	Capacity utilization	Mar	Ppt. chg.	0.118	0.282	0.158	0.026	
	8:30 AM Apr 19	Philly Fed Mfg. business outlook: Current activity	Apr	Index	22.1	23.2	-0.001	-0.001	
		Data revisions						0.063	
Apr 20									**2.91**
	10:00 AM Apr 24	New single family houses sold	Mar	MoM % chg.	-0.382	4.05	0.004	0.017	
	8:30 AM Apr 26	Manufacturers' new orders: Durable goods	Mar	MoM % chg.	0.433	2.56	0.008	0.018	
	8:30 AM Apr 26	Merchant wholesalers: Inventories: Total	Mar	MoM % chg.	0.643	0.475	-0.031	0.005	
	8:30 AM Apr 26	Manufacturers' shipments: Durable goods	Mar	MoM % chg.	1.06	0.289	0.050	-0.039	
	8:30 AM Apr 26	Mfrs.' unfilled orders: All manufacturing industries	Mar	MoM % chg.	0.594	0.810	0.002	0.001	
	8:30 AM Apr 26	Manufacturers' inventories: Durable goods	Mar	MoM % chg.	0.431	0.075	-0.034	0.012	
		Data revisions						0.052	
Apr 27									**2.97**
	8:30 AM Apr 27	Real gross domestic product (advance)	Q1	QoQ % chg. AR	2.97	**2.3**			
		We have concluded our updates of the Q1 nowcast							
	8:30 AM May 30	Real gross domestic product (second)	Q1	QoQ % chg. AR		**2.2**			
		The second GDP release marks our final report of this quarter							

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

New York Fed Time-Series Analysis Team