

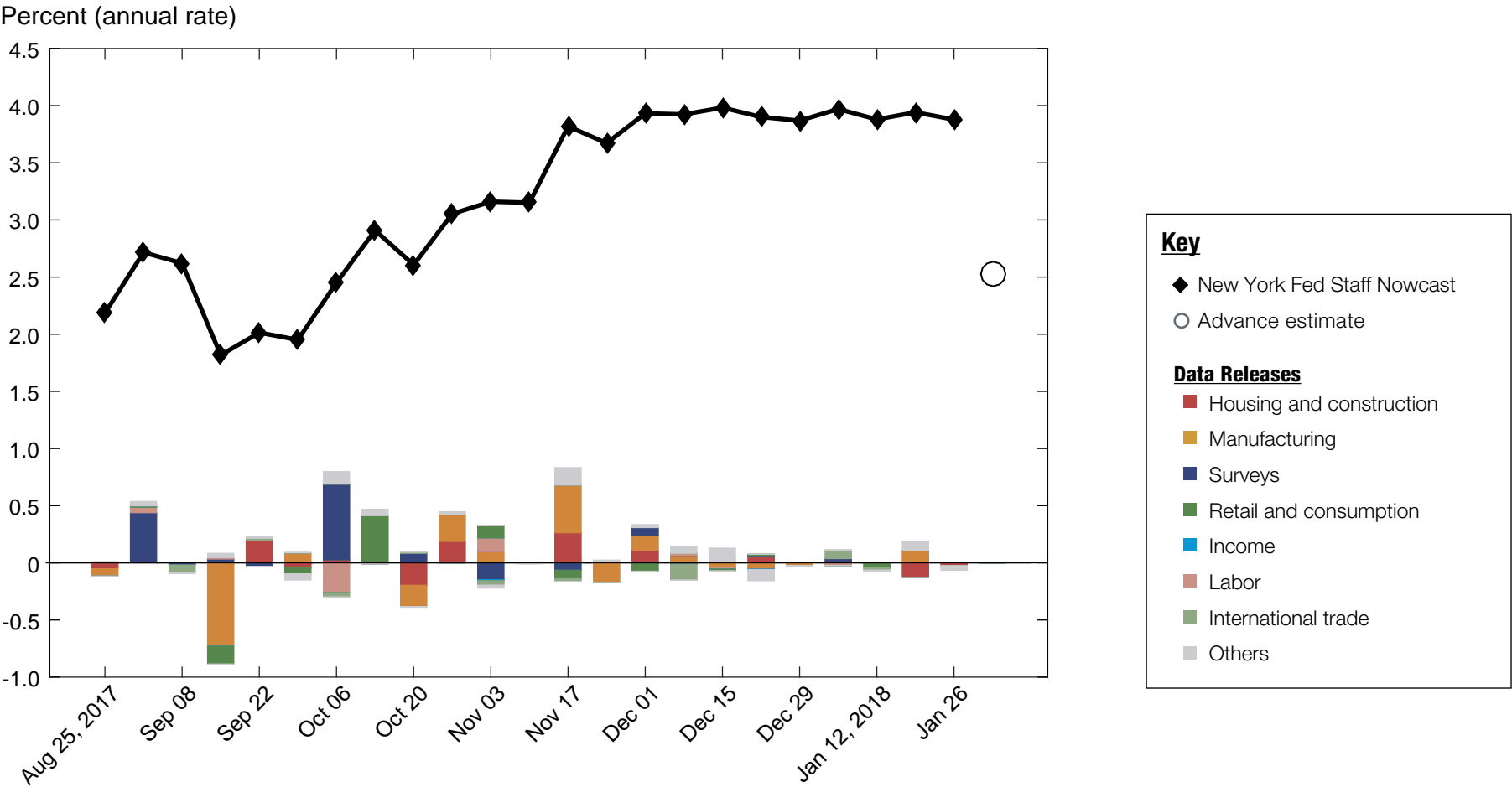
NOWCASTING REPORT

Updated: January 26, 2018

- Today's advance estimate of real GDP growth for 2017:Q4 from the Commerce Department was 2.6%. The latest New York Fed Staff Nowcast for 2017:Q4 was 3.9%.
- The New York Fed Staff Nowcast for 2018:Q1 stands at 3.1%.
- News from this week's data releases left the nowcast for 2018:Q1 broadly unchanged.
- Positive surprises from manufacturing data were offset by a negative surprise from new home sales data.

The New York Fed Staff Nowcast is not an official forecast of the Federal Reserve Bank of New York, its president, the Federal Reserve System, or the Federal Open Market Committee (FOMC).

1 | 2017:Q4 GDP Growth



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

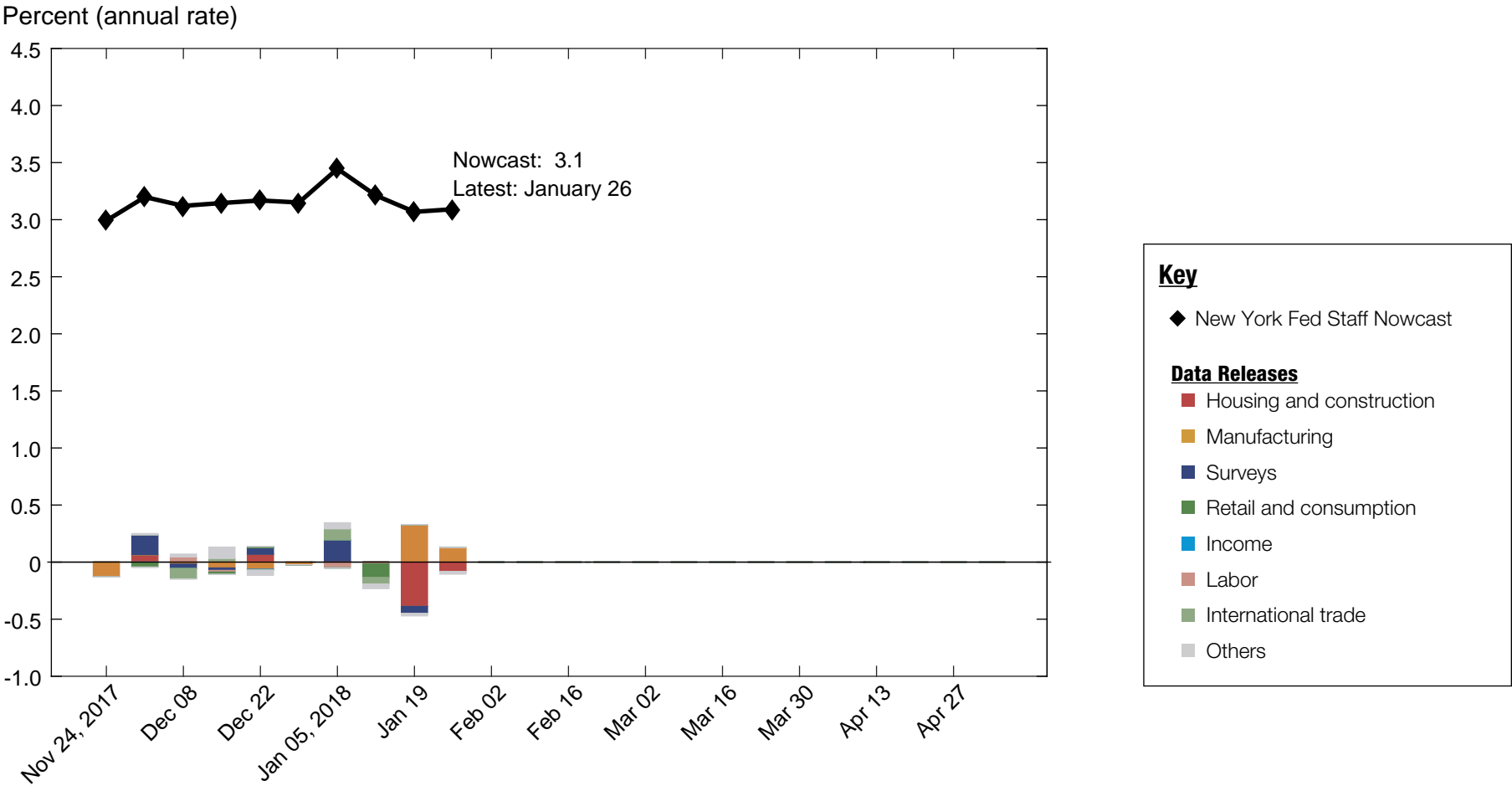
1.1 | Nowcast Detail

<div> <div>Housing and construction</div> <div>Manufacturing</div> <div>Surveys</div> <div>Retail and consumption</div> <div>Income</div> <div>Labor</div> <div>International trade</div> <div>Others</div> </div>									
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Dec 28									3.87
	10:00 AM Jan 03	ISM mfg.: Prices index	Dec	Index	65.1	69.0	0.003	0.011	
	10:00 AM Jan 03	Value of construction put in place	Nov	MoM % chg.	0.626	0.795	0.019	0.003	
	10:00 AM Jan 03	ISM mfg.: Employment index	Dec	Index	58.8	57.0	0.008	-0.015	
	10:20 AM Jan 03	ISM mfg.: Pmi composite index	Dec	Index	57.9	59.7	0.023	0.042	
	8:05 AM Jan 04	ADP nonfarm private payroll employment	Dec	Level chg. (thousands)	209.3	251.0	0.210*	0.009	
	8:30 AM Jan 05	All employees: Total nonfarm	Dec	Level chg. (thousands)	271.2	148.0	0.137*	-0.017	
	8:30 AM Jan 05	Civilian unemployment rate	Dec	Ppt. chg.	-0.072	0.000	-0.133	-0.010	
	8:30 AM Jan 05	Exports: Goods and services	Nov	MoM % chg.	1.48	2.27	0.045	0.035	
	8:30 AM Jan 05	Imports: Goods and services	Nov	MoM % chg.	1.30	2.46	0.034	0.040	
	10:00 AM Jan 05	ISM nonmanufacturing: NMI composite index	Dec	Index	58.0	55.9	0.002	-0.004	
		Data revisions						-0.011	
		Parameter revisions						0.018	
Jan 05									3.97
	10:20 AM Jan 05	Inventories: Total business	Nov	MoM % chg.	0.304	0.389	-0.080	-0.007	
	10:00 AM Jan 09	JOLTS: Job openings: Total	Nov	Level chg. (thousands)	171.8	-46.0	0.039*	-0.008	
	8:30 AM Jan 10	Import price index	Dec	MoM % chg.	0.766	0.080	0.010	-0.007	
	8:30 AM Jan 10	Export price index	Dec	MoM % chg.	0.414	-0.080	0.022	-0.011	
	8:30 AM Jan 11	PPI: Final demand	Dec	MoM % chg.	0.228	-0.087	0.023	-0.007	
	8:30 AM Jan 12	Retail sales and food services	Dec	MoM % chg.	0.670	0.352	0.118	-0.038	
	8:40 AM Jan 12	CPI-U: All items	Dec	MoM % chg.	0.307	0.150	0.035	-0.006	
	8:40 AM Jan 12	CPI-U: All items less food and energy	Dec	MoM % chg.	0.149	0.277	0.042	0.005	
		Data revisions						-0.013	
Jan 12									3.88
	8:30 AM Jan 16	Empire State Mfg. Survey: General business conditions	Jan	Index	19.9	17.7	0.000	-0.001	
	9:20 AM Jan 17	Industrial production index	Dec	MoM % chg.	0.461	0.894	0.126	0.054	
	9:20 AM Jan 17	Capacity utilization	Dec	Ppt. chg.	0.300	0.636	0.161	0.054	
	8:30 AM Jan 18	Housing starts	Dec	MoM % chg.	3.96	-8.24	0.008	-0.101	
	8:30 AM Jan 18	Building permits	Dec	Level chg. (thousands)	27.9	-1.00	0.001	-0.025	
	8:30 AM Jan 18	Philly Fed Mfg. business outlook: Current activity	Jan	Index	24.4	22.2	-0.001	0.001	
		Data revisions						0.080	
Jan 18									3.94
	10:00 AM Jan 25	New single family houses sold	Dec	MoM % chg.	-3.31	-9.29	0.004	-0.025	
		Data revisions						-0.039	
Jan 26									3.88
	8:30 AM Jan 26	Real gross domestic product (advance)	Q4	QoQ % chg. AR	3.88	2.6			
					We have concluded our updates of the Q4 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.

2 | 2018:Q1 GDP Growth



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

<div> <div>Housing and construction</div> <div>Manufacturing</div> <div>Surveys</div> <div>Retail and consumption</div> <div>Income</div> <div>Labor</div> <div>International trade</div> <div>Others</div> </div>									
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Dec 28									3.15
	10:00 AM Jan 03	ISM mfg.: Prices index	Dec	Index	65.1	69.0	0.020	0.078	
	10:00 AM Jan 03	Value of construction put in place	Nov	MoM % chg.	0.626	0.795	0.038	0.006	
	10:00 AM Jan 03	ISM mfg.: Employment index	Dec	Index	58.8	57.0	0.049	-0.089	
	10:20 AM Jan 03	ISM mfg.: Pmi composite index	Dec	Index	57.9	59.7	0.127	0.232	
	8:05 AM Jan 04	ADP nonfarm private payroll employment	Dec	Level chg. (thousands)	209.3	251.0	1.204*	0.050	
	8:30 AM Jan 05	All employees: Total nonfarm	Dec	Level chg. (thousands)	271.2	148.0	0.567*	-0.070	
	8:30 AM Jan 05	Civilian unemployment rate	Dec	Ppt. chg.	-0.072	0.000	-0.306	-0.022	
	8:30 AM Jan 05	Exports: Goods and services	Nov	MoM % chg.	1.48	2.27	0.061	0.048	
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	10:00 AM Jan 05	ISM nonmanufacturing: NMI composite index	Dec	Index	58.0	55.9	0.015	-0.032	
		Data revisions						-0.001	
		Parameter revisions						0.046	
Jan 05									3.45
	10:20 AM Jan 05	Inventories: Total business	Nov	MoM % chg.	0.304	0.389	-0.111	-0.009	
	10:00 AM Jan 09	JOLTS: Job openings: Total	Nov	Level chg. (thousands)	171.8	-46.0	0.074*	-0.016	
	8:30 AM Jan 10	Import price index	Dec	MoM % chg.	0.766	0.080	0.037	-0.026	
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		Data revisions						-0.010	
Jan 12									3.21
	8:30 AM Jan 16	Empire State Mfg. Survey: General business conditions	Jan	Index	19.9	17.7	0.015	-0.033	
	9:20 AM Jan 17	Industrial production index	Dec	MoM % chg.	0.461	0.894	0.376	0.163	
	9:20 AM Jan 17	Capacity utilization	Dec	Ppt. chg.	0.300	0.636	0.490	0.165	
	8:30 AM Jan 18	Housing starts	Dec	MoM % chg.	3.96	-8.24	0.025	-0.310	
	8:30 AM Jan 18	Building permits	Dec	Level chg. (thousands)	27.9	-1.00	0.003	-0.078	
	8:30 AM Jan 18	Philly Fed Mfg. business outlook: Current activity	Jan	Index	24.4	22.2	0.013	-0.028	
		Data revisions						-0.021	
Jan 18									3.07
	10:00 AM Jan 25	New single family houses sold	Dec	MoM % chg.	-3.31	-9.29	0.014	-0.082	
	8:30 AM Jan 26	Manufacturers' new orders: Durable goods	Dec	MoM % chg.	1.08	2.89	0.021	0.038	
	8:30 AM Jan 26	Merchant wholesalers: Inventories: Total	Dec	MoM % chg.	0.598	0.200	-0.151	0.060	
	8:30 AM Jan 26	Manufacturers' shipments: Durable goods	Dec	MoM % chg.	0.656	0.609	0.117	-0.005	
	8:30 AM Jan 26	Mfrs.' unfilled orders: All manufacturing industries	Dec	MoM % chg.	0.588	0.604	-0.029	-0.000	
	8:30 AM Jan 26	Manufacturers' inventories: Durable goods	Dec	MoM % chg.	0.426	0.320	-0.342	0.036	
	8:40 AM Jan 26	Real gross domestic product	Q4	QoQ % chg. AR	3.92	2.53	0.020	-0.028	
		Data revisions						0.005	
Jan 26									3.09

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.
- 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. For how long do you report a quarter?

We start reporting the nowcast of GDP growth for a reference quarter about one month before the quarter begins; we stop updating it about one month after the quarter closes.

Precise dates are related to the Commerce Department's schedule for the release of official GDP estimates. For example, we began reporting the nowcast for 2016:Q1 on November 20, 2015, just after the government released the second GDP estimate for 2015:Q3. We stopped updating the nowcast for 2016:Q1 on April 28, 2016, with the release of the advance GDP estimate for the reference quarter. We continued reporting 2016:Q1 until the second GDP estimate for the quarter became available. At that point, we started computing the nowcasts for 2016:Q3.

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