

NOWCASTING REPORT

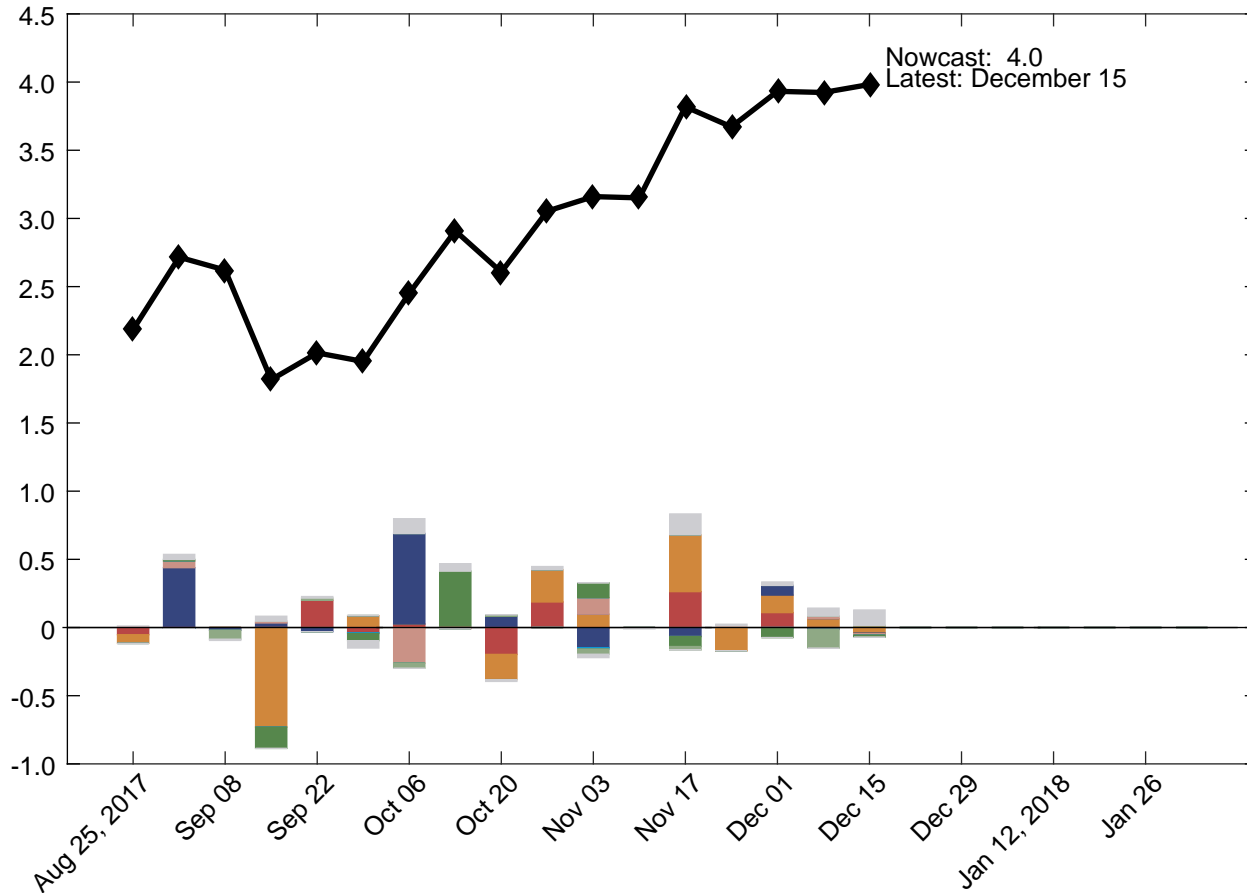
Updated: December 15, 2017

- The New York Fed Staff Nowcast stands at 4.0% for 2017:Q4 and 3.1% for 2018:Q1.
- News from this week's data releases increased the nowcast for 2017:Q4 by 0.1 percentage point and left the nowcast for 2018:Q1 broadly unchanged.
- Small negative surprises from industrial production and capacity utilization data were offset by the positive impact of data revisions.

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

Percent (annual rate)



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

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

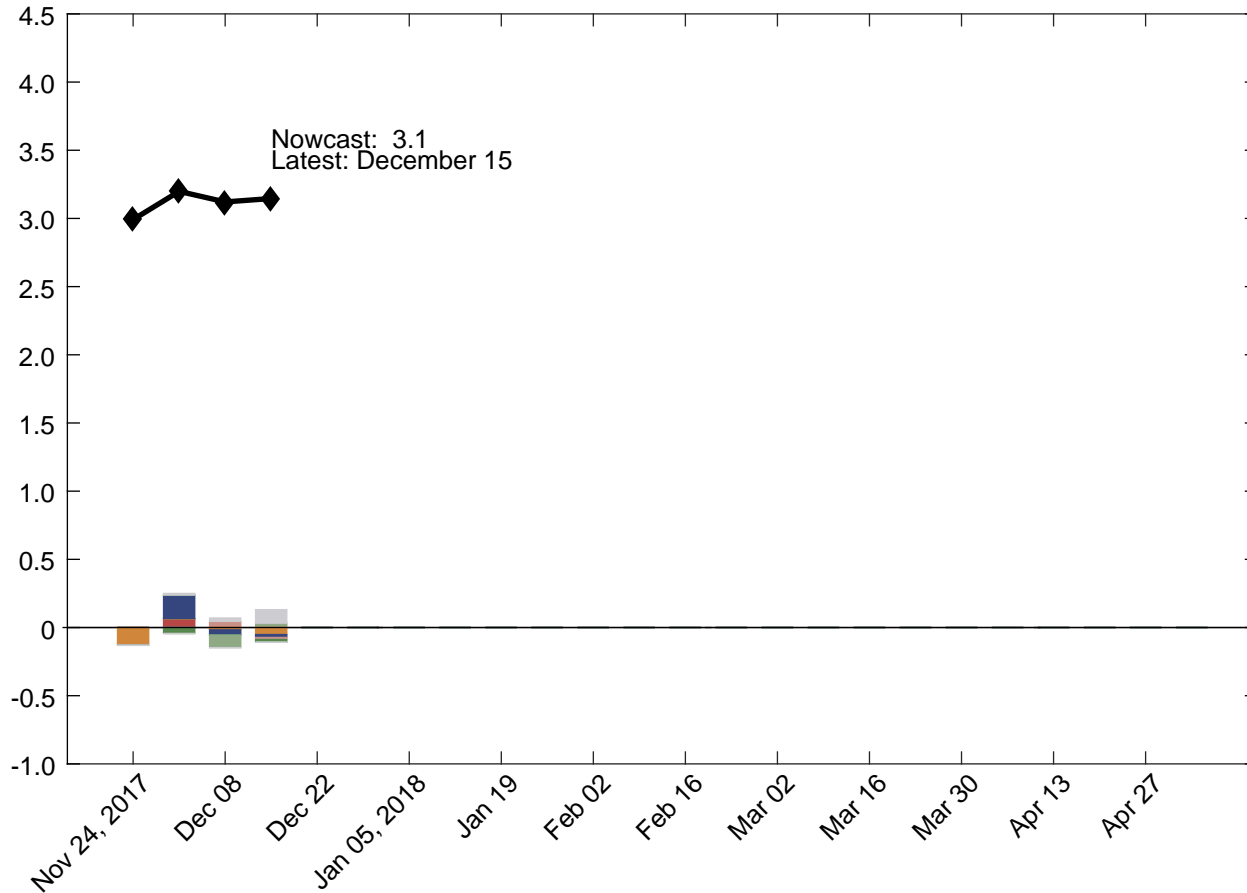
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Nov 17	8:30 AM Nov 22	Manufacturers' new orders: Durable goods	Oct	MoM % chg.	2.11	-1.18	0.023	-0.076	3.82
	8:30 AM Nov 22	Manufacturers' shipments: Durable goods	Oct	MoM % chg.	1.43	0.133	0.119	-0.154	
	8:30 AM Nov 22	Mfrs.' unfilled orders: All manufacturing industries	Oct	MoM % chg.	0.454	-0.043	-0.033	0.016	
	8:30 AM Nov 22	Manufacturers' inventories: Durable goods	Oct	MoM % chg.	0.236	0.126	-0.390	0.043	
		Data revisions						0.024	
Nov 22	10:00 AM Nov 27	New single family houses sold	Oct	MoM % chg.	-1.85	6.20	0.010	0.081	3.67
	8:30 AM Nov 28	Merchant wholesalers: Inventories: Total	Oct	MoM % chg.	0.397	-0.408	-0.159	0.128	
	8:30 AM Nov 29	Real gross domestic income	Q3	QoQ % chg. AR	2.09	2.51	0.014	0.006	
	8:30 AM Nov 30	Real disposable personal income	Oct	MoM % chg.	0.431	0.312	0.039	-0.005	
	8:30 AM Nov 30	PCE less food and energy: Chain price index	Oct	MoM % chg.	0.151	0.207	0.209	0.012	
	8:30 AM Nov 30	PCE: Chain price index	Oct	MoM % chg.	0.271	0.144	0.120	-0.015	
	8:40 AM Nov 30	Real personal consumption expenditures	Oct	MoM % chg.	0.321	0.110	0.327	-0.069	
	10:00 AM Dec 01	ISM mfg.: Pmi composite index	Nov	Index	57.4	58.2	0.055	0.045	
	10:00 AM Dec 01	ISM mfg.: Prices index	Nov	Index	67.1	65.5	0.008	-0.013	
	10:00 AM Dec 01	Value of construction put in place	Oct	MoM % chg.	0.508	1.39	0.033	0.029	
	10:00 AM Dec 01	ISM mfg.: Employment index	Nov	Index	57.9	59.7	0.022	0.039	
		Data revisions						0.023	
Dec 01	10:00 AM Dec 04	Inventories: Total business	Oct	MoM % chg.	0.262	-0.095	-0.182	0.065	3.93
	8:30 AM Dec 05	Exports: Goods and services	Oct	MoM % chg.	1.79	-0.011	0.070	-0.125	
	8:30 AM Dec 05	Imports: Goods and services	Oct	MoM % chg.	1.83	1.59	0.047	-0.011	
	10:00 AM Dec 05	ISM nonmanufacturing: NMI composite index	Nov	Index	59.3	57.4	0.007	-0.014	
	8:05 AM Dec 06	ADP nonfarm private payroll employment	Nov	Level chg. (thousands)	170.1	190.0	0.497*	0.010	
	8:30 AM Dec 08	All employees: Total nonfarm	Nov	Level chg. (thousands)	173.3	228.0	0.281*	0.015	
	8:30 AM Dec 08	Civilian unemployment rate	Nov	Ppt. chg.	-0.032	0.000	-0.201	-0.006	
			Data revisions						
Dec 08	10:00 AM Dec 11	JOLTS: Job openings: Total	Oct	Level chg. (thousands)	36.5	-181.0	0.049*	-0.011	3.92
	8:30 AM Dec 12	PPI: Final demand	Nov	MoM % chg.	0.206	0.439	0.033	0.008	
	8:40 AM Dec 13	CPI-U: All items	Nov	MoM % chg.	0.180	0.386	0.068	0.014	
	8:40 AM Dec 13	CPI-U: All items less food and energy	Nov	MoM % chg.	0.179	0.117	0.082	-0.005	
	8:30 AM Dec 14	Retail sales and food services	Nov	MoM % chg.	0.848	0.788	0.243	-0.014	
	8:30 AM Dec 14	Import price index	Nov	MoM % chg.	0.236	0.726	0.015	0.007	
	8:30 AM Dec 14	Export price index	Nov	MoM % chg.	0.204	0.484	0.031	0.009	
	8:30 AM Dec 15	Empire State Mfg. Survey: General business conditions	Dec	Index	19.1	18.0	0.003	-0.003	
	9:20 AM Dec 15	Industrial production index	Nov	MoM % chg.	0.298	0.237	0.258	-0.016	
	9:20 AM Dec 15	Capacity utilization	Nov	Ppt. chg.	0.202	0.125	0.335	-0.026	
			Data revisions						
Dec 15								3.98	

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

Percent (annual rate)



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	8:30 AM Dec 08	■ Civilian unemployment rate	Nov	Ppt. chg.	-0.032	0.000	-0.283	-0.009	
			■ Data revisions					0.025	
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	9:20 AM Dec 15	■ Capacity utilization	Nov	Ppt. chg.	0.202	0.125	0.417	-0.032	
			■ Data revisions					0.070	
Dec 15								3.15	

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

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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