

# NOWCASTING REPORT

Updated: December 8, 2017

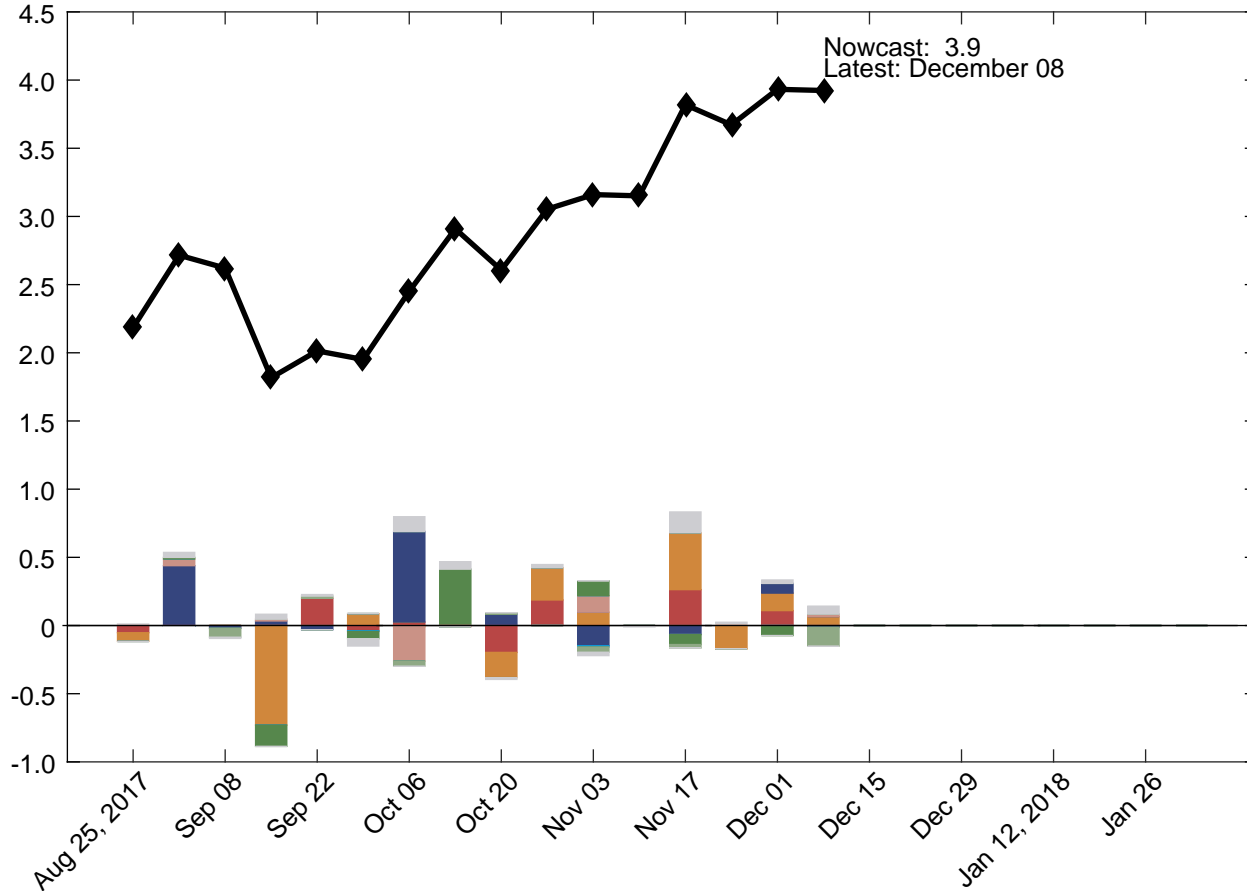
- The New York Fed Staff Nowcast stands at 3.9% for 2017:Q4 and 3.1% for 2018:Q1.
- News from this week's data releases left the nowcast for 2017:Q4 broadly unchanged and decreased the nowcast for 2018:Q1 by 0.1 percentage point.
- A negative surprise from exports data accounted for most of the decrease.

---

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

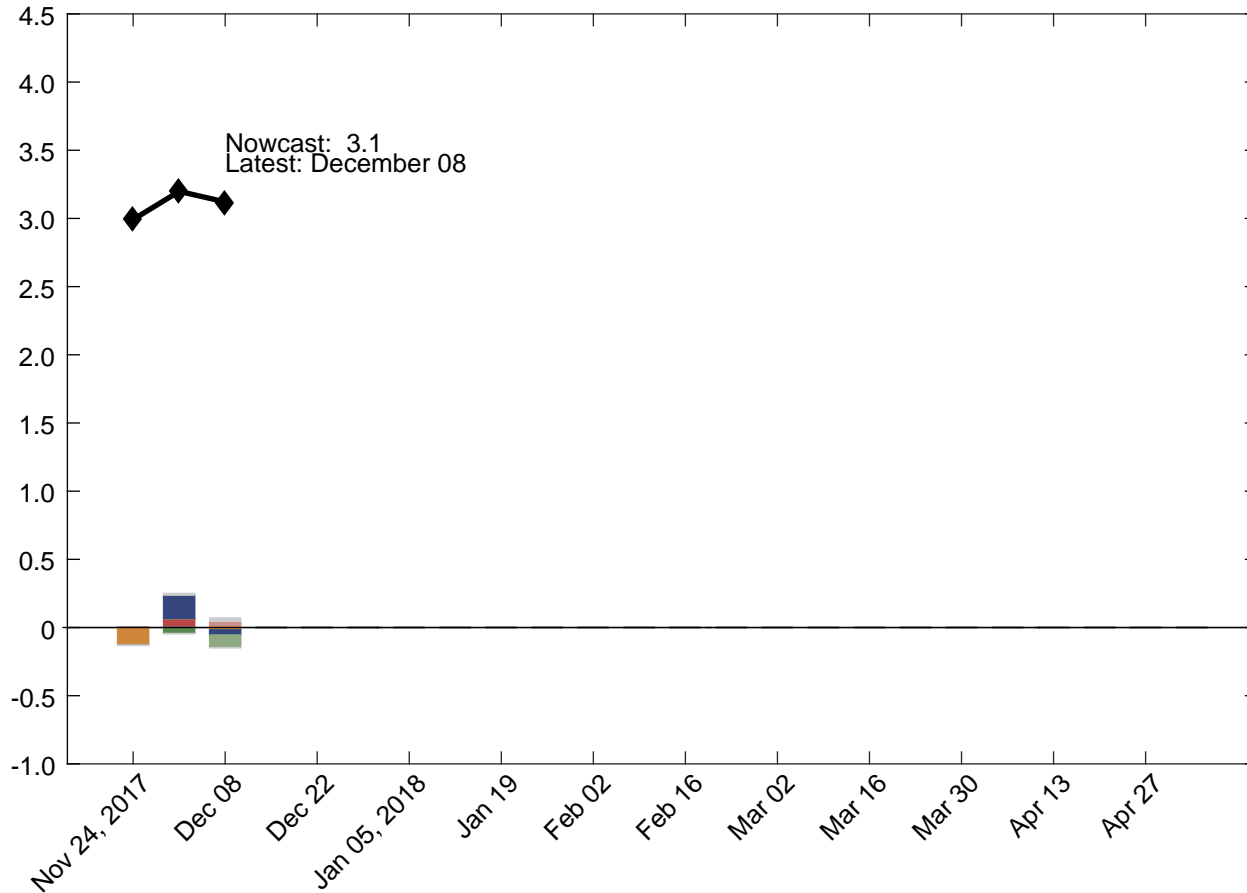
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Nov 09									<b>3.15</b>
	8:30 AM Nov 14	■ PPI: Final demand	Oct	MoM % chg.	0.216	0.441	0.047	0.011	
	8:30 AM Nov 15	■ Retail sales and food services	Oct	MoM % chg.	0.435	0.234	0.364	-0.073	
	8:30 AM Nov 15	■ Empire State Mfg. Survey: General business conditions	Nov	Index	26.1	19.4	0.008	-0.054	
	8:40 AM Nov 15	■ CPI-U: All items	Oct	MoM % chg.	0.376	0.108	0.088	-0.023	
	8:40 AM Nov 15	■ CPI-U: All items less food and energy	Oct	MoM % chg.	0.152	0.225	0.102	0.007	
	8:30 AM Nov 16	■ Export price index	Oct	MoM % chg.	0.496	0.000	0.034	-0.017	
	8:30 AM Nov 16	■ Philly Fed Mfg. business outlook: Current activity	Nov	Index	24.5	22.7	0.006	-0.012	
	8:30 AM Nov 16	■ Import price index	Oct	MoM % chg.	0.739	0.242	0.017	-0.009	
	9:10 AM Nov 16	■ Industrial production index	Oct	MoM % chg.	0.381	0.945	0.378	0.213	
	9:10 AM Nov 16	■ Capacity utilization	Oct	Ppt. chg.	0.248	0.660	0.495	0.204	
	8:30 AM Nov 17	■ Housing starts	Oct	MoM % chg.	6.62	13.7	0.026	0.184	
	8:30 AM Nov 17	■ Building permits	Oct	Level chg. (thousands)	40.4	72.0	0.003	0.079	
		■ Data revisions						0.158	
Nov 17									<b>3.82</b>
	8:30 AM Nov 22	■ Manufacturers' new orders: Durable goods	Oct	MoM % chg.	2.11	-1.18	0.023	-0.076	
	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									<b>3.67</b>
	10:00 AM Nov 27	■ New single family houses sold	Oct	MoM % chg.	-1.85	6.20	0.010	0.081	
	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									<b>3.93</b>
	10:00 AM Dec 04	■ Inventories: Total business	Oct	MoM % chg.	0.262	-0.095	-0.182	0.065	
	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						0.058	
Dec 08									<b>3.92</b>

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)



### 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

<span style="color: #c00000;">■</span> Housing and construction <span style="color: #e69d00;">■</span> Manufacturing <span style="color: #000080;">■</span> Surveys <span style="color: #008000;">■</span> Retail and consumption <span style="color: #0000ff;">■</span> Income <span style="color: #a52a2a;">■</span> Labor <span style="color: #808000;">■</span> International trade <span style="color: #cccccc;">■</span> Others									
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Nov 09									<b>2.94</b>
	8:30 AM Nov 14	■ PPI: Final demand	Oct	MoM % chg.	0.216	0.441	0.051	0.011	
	8:30 AM Nov 15	■ Retail sales and food services	Oct	MoM % chg.	0.435	0.234	0.202	-0.041	
	8:30 AM Nov 15	■ Empire State Mfg. Survey: General business conditions	Nov	Index	26.1	19.4	0.021	-0.139	
	8:40 AM Nov 15	■ CPI-U: All items	Oct	MoM % chg.	0.376	0.108	0.105	-0.028	
	8:40 AM Nov 15	■ CPI-U: All items less food and energy	Oct	MoM % chg.	0.152	0.225	0.120	0.009	
	8:30 AM Nov 16	■ Export price index	Oct	MoM % chg.	0.496	0.000	0.047	-0.023	
	8:30 AM Nov 16	■ Philly Fed Mfg. business outlook: Current activity	Nov	Index	24.5	22.7	0.019	-0.035	
	8:30 AM Nov 16	■ Import price index	Oct	MoM % chg.	0.739	0.242	0.027	-0.013	
	9:10 AM Nov 16	■ Industrial production index	Oct	MoM % chg.	0.381	0.945	0.225	0.127	
	9:10 AM Nov 16	■ Capacity utilization	Oct	Ppt. chg.	0.248	0.660	0.290	0.120	
	8:30 AM Nov 17	■ Housing starts	Oct	MoM % chg.	6.62	13.7	0.012	0.086	
	8:30 AM Nov 17	■ Building permits	Oct	Level chg. (thousands)	40.4	72.0	0.001	0.038	
		■ Data revisions						0.068	
Nov 17									<b>3.12</b>
	8:30 AM Nov 22	■ Manufacturers' new orders: Durable goods	Oct	MoM % chg.	2.11	-1.18	0.013	-0.044	
	8:30 AM Nov 22	■ Manufacturers' shipments: Durable goods	Oct	MoM % chg.	1.43	0.133	0.073	-0.095	
	8:30 AM Nov 22	■ Mfrs.' unfilled orders: All manufacturing industries	Oct	MoM % chg.	0.454	-0.043	0.002	-0.001	
	8:30 AM Nov 22	■ Manufacturers' inventories: Durable goods	Oct	MoM % chg.	0.236	0.126	-0.091	0.010	
		■ Data revisions						-0.001	
Nov 22									<b>2.99</b>
	10:00 AM Nov 27	■ New single family houses sold	Oct	MoM % chg.	-1.85	6.20	0.005	0.039	
	8:30 AM Nov 28	■ Merchant wholesalers: Inventories: Total	Oct	MoM % chg.	0.397	-0.408	-0.003	0.003	
	8:30 AM Nov 29	■ Real gross domestic income	Q3	QoQ % chg. AR	2.09	2.51	0.003	0.001	
	8:30 AM Nov 30	■ Real disposable personal income	Oct	MoM % chg.	0.431	0.312	0.019	-0.002	
	8:30 AM Nov 30	■ PCE less food and energy: Chain price index	Oct	MoM % chg.	0.151	0.207	0.236	0.013	
	8:30 AM Nov 30	■ PCE: Chain price index	Oct	MoM % chg.	0.271	0.144	0.142	-0.018	
	8:40 AM Nov 30	■ Real personal consumption expenditures	Oct	MoM % chg.	0.321	0.110	0.196	-0.041	
	10:00 AM Dec 01	■ ISM mfg.: Pmi composite index	Nov	Index	57.4	58.2	0.134	0.110	
	10:00 AM Dec 01	■ ISM mfg.: Prices index	Nov	Index	67.1	65.5	0.022	-0.035	
	10:00 AM Dec 01	■ Value of construction put in place	Oct	MoM % chg.	0.508	1.39	0.027	0.023	
	10:00 AM Dec 01	■ ISM mfg.: Employment index	Nov	Index	57.9	59.7	0.055	0.099	
		■ Data revisions						0.015	
Dec 01									<b>3.20</b>
	10:00 AM Dec 04	■ Inventories: Total business	Oct	MoM % chg.	0.262	-0.095	0.047	-0.017	
	8:30 AM Dec 05	■ Exports: Goods and services	Oct	MoM % chg.	1.79	-0.011	0.046	-0.083	
	8:30 AM Dec 05	■ Imports: Goods and services	Oct	MoM % chg.	1.83	1.59	0.032	-0.008	
	10:00 AM Dec 05	■ ISM nonmanufacturing: NMI composite index	Nov	Index	59.3	57.4	0.021	-0.039	
	8:05 AM Dec 06	■ ADP nonfarm private payroll employment	Nov	Level chg. (thousands)	170.1	190.0	1.186*	0.024	
	8:30 AM Dec 08	■ All employees: Total nonfarm	Nov	Level chg. (thousands)	173.3	228.0	0.566*	0.031	
	8:30 AM Dec 08	■ Civilian unemployment rate	Nov	Ppt. chg.	-0.032	0.000	-0.283	-0.009	
		■ Data revisions						0.025	
Dec 08									<b>3.12</b>

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