

# NOWCASTING REPORT

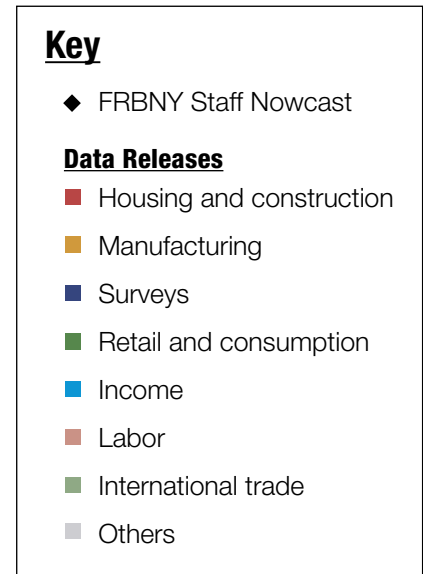
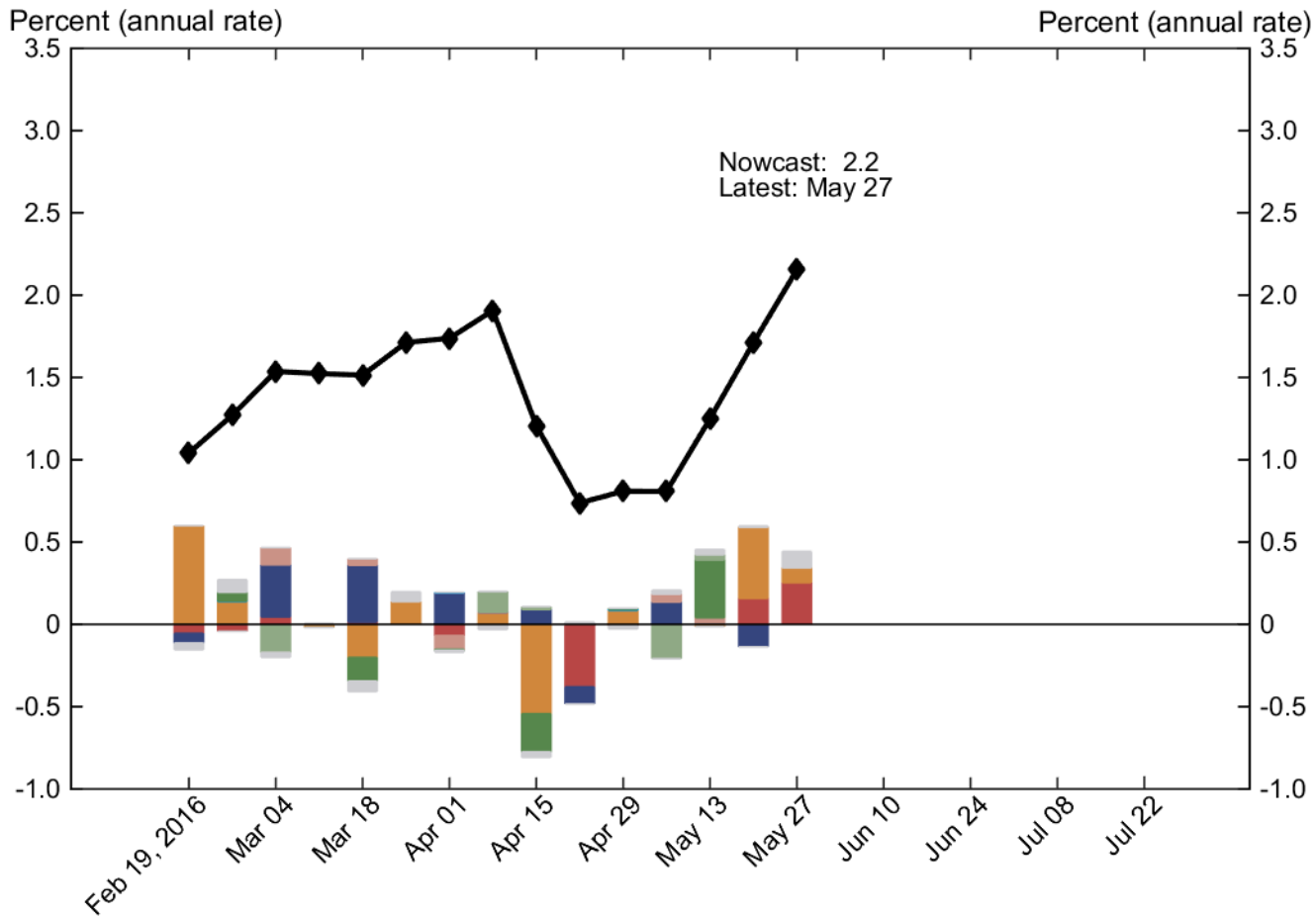
Updated: May 27, 2016

- The FRBNY Staff Nowcast for GDP growth in 2016:Q2 has increased for the third week in a row and stands now at 2.2%.
- Positive news came from new single family houses sold and manufacturers' new orders of durable goods.
- This week's second estimate of GDP growth for 2016:Q1 from the Commerce Department was 0.8%. In the advance estimate released last month, GDP growth was 0.5%. The last FRBNY Staff Nowcast for that quarter, computed before the release of the advance estimate, was 0.7%.

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The FRBNY 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). While we are precluded from publishing our estimates during blackouts surrounding FOMC meetings, we continue to update our model internally and share the analysis in the next Nowcasting Report.

# 1 | 2016:Q2 GDP Growth



Source: Authors' calculations.

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

# 1.1 | Nowcast Detail

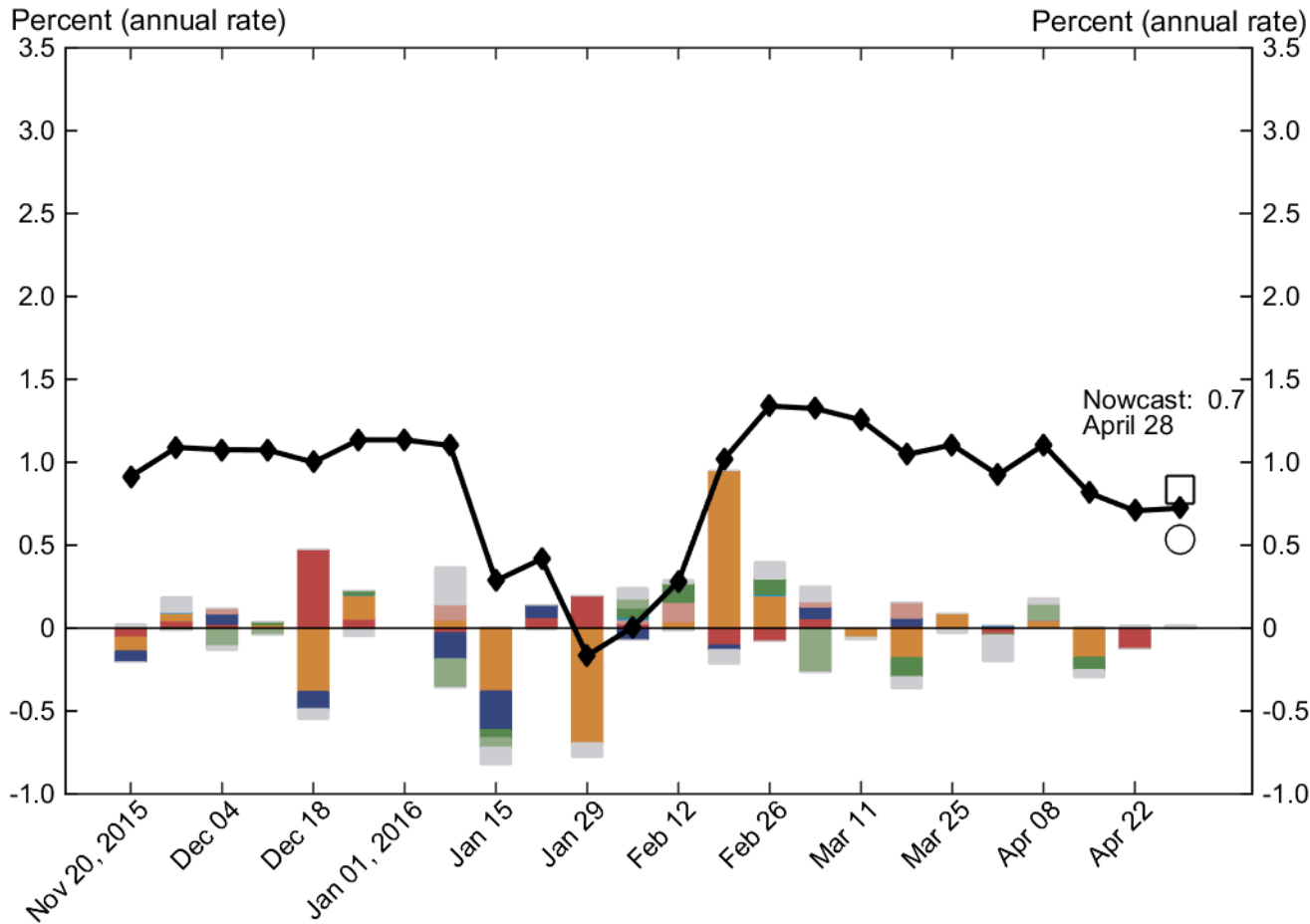
■ Housing and construction 
 ■ Manufacturing 
 ■ Surveys 
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 ■ Others

Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth		
					[a]	[b]	[c]	[c(b - a)]			
Apr 29	10:00 AM May 02	ISM mfg.: Pmi composite index	Apr	Index	51.3	50.8	0.089	-0.040	<b>0.81</b>		
	10:00 AM May 02	ISM mfg.: Prices index	Apr	Index	52.4	59.0	0.016	0.105			
	10:00 AM May 02	Value of construction put in place	Mar	MoM % chg.	0.369	0.341	0.054	-0.002			
	10:00 AM May 02	ISM mfg.: Employment index	Apr	Index	48.0	49.2	0.035	0.042			
	8:05 AM May 04	Adp nonfarm private payroll employment	Apr	Level chg. (thousands)	186.1	155.0	-0.002	0.048			
	8:30 AM May 04	Exports: Goods and services	Mar	MoM % chg.	-0.422	-0.867	0.086	-0.038			
	8:30 AM May 04	Imports: Goods and services	Mar	MoM % chg.	-0.846	-3.58	0.062	-0.169			
	10:00 AM May 04	ISM nonmanufacturing: NMI composite index	Apr	Index	53.9	55.7	0.016	0.029			
	10:00 AM May 04	Nonfarm business sector: Unit labor cost	Q1	QoQ % chg. AR	-0.179	4.00	-0.002	-0.009			
	8:30 AM May 06	All employees: Total nonfarm	Apr	Level chg. (thousands)	144.1	160.0	0.250*	0.004			
	8:30 AM May 06	Civilian unemployment rate	Apr	Ppt. chg.	0.026	0.000	-0.205	0.005			
			Data revisions					0.024			
	May 06	10:00 AM May 10	JOLTS: Job openings: Total	Mar	Level chg. (thousands)	-41.8	149.0	0.209*		0.040	<b>0.81</b>
		10:00 AM May 10	Merchant wholesalers: Inventories: Total	Mar	MoM % chg.	0.344	0.119	-0.160		0.036	
8:30 AM May 12		Import price index	Apr	MoM % chg.	0.193	0.340	0.030	0.004			
8:30 AM May 12		Export price index	Apr	MoM % chg.	0.014	0.508	0.055	0.027			
8:30 AM May 13		Retail sales and food services	Apr	MoM % chg.	0.128	1.26	0.311	0.351			
8:30 AM May 13		PPI: Final demand	Apr	MoM % chg.	0.053	0.183	0.043	0.006			
10:00 AM May 13		Inventories: Total business	Mar	MoM % chg.	0.158	0.443	-0.174	-0.050			
			Data revisions					0.026			
May 13	8:30 AM May 16	Empire State Mfg. Survey: General business conditions	May	Index	8.10	-9.02	0.008	-0.143	<b>1.25</b>		
	8:30 AM May 17	CPI-U: All items	Apr	MoM % chg.	0.129	0.408	0.058	0.016			
	8:30 AM May 17	Housing starts	Apr	MoM % chg.	2.87	6.64	0.027	0.104			
	8:30 AM May 17	CPI-U: All items less food and energy	Apr	MoM % chg.	0.136	0.195	0.018	0.001			
	8:30 AM May 17	Building permits	Apr	Level chg. (thousands)	18.4	39.0	0.003	0.054			
	9:10 AM May 17	Industrial production index	Apr	MoM % chg.	0.104	0.655	0.369	0.203			
	9:10 AM May 17	Capacity utilization	Apr	Ppt. chg.	-0.017	0.479	0.460	0.228			
	8:30 AM May 19	Philly Fed Mfg. business outlook: Current activity	May	Index	-2.78	-1.80	0.006	0.006			
			Data revisions					-0.008			
May 19	10:00 AM May 24	New single family houses sold	Apr	MoM % chg.	0.728	16.6	0.016	0.254	<b>1.71</b>		
	8:30 AM May 26	Manufacturers' new orders: Durable goods	Apr	MoM % chg.	-0.103	3.36	0.029	0.099			
	8:30 AM May 26	Manufacturers' shipments: Durable goods	Apr	MoM % chg.	0.671	0.639	0.126	-0.004			
	8:30 AM May 26	Mfrs.' unfilled orders: All manufacturing industries	Apr	MoM % chg.	0.132	0.559	-0.026	-0.011			
	8:30 AM May 26	Manufacturers' inventories: Durable goods	Apr	MoM % chg.	-0.166	-0.179	-0.454	0.006			
	8:30 AM May 27	Real gross domestic income	Q1	QoQ % chg. AR	0.917	2.21	0.020	0.026			
		Data revisions					0.074				
May 27								<b>2.15</b>			

Source: Authors' calculations.

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 | 2016:Q1 GDP Growth



### Key

- ◆ FRBNY Staff Nowcast
- Advance GDP estimate
- Second GDP estimate

### Data Releases

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

Source: Authors' calculations.

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

## 2.1 | Nowcast Detail

■ Housing and construction 
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Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Apr 01	8:30 AM Apr 05	Imports: Goods and services	Feb	MoM % chg.	0.048	1.33	0.042	0.054	<b>0.92</b>
	8:30 AM Apr 05	Exports: Goods and services	Feb	MoM % chg.	0.229	1.01	0.054	0.042	
	10:00 AM Apr 05	ISM nonmanufacturing: NMI composite index	Mar	Index	54.4	54.5	0.002	0.000	
	10:00 AM Apr 05	JOLTS: Job openings: Total	Feb	Level chg. (thousands)	-178.2	-159.0	0.153*	0.003	
	10:00 AM Apr 08	Merchant wholesalers: Inventories: Total	Feb	MoM % chg.	0.082	-0.480	-0.085	0.048	
			Data revisions					0.034	
Apr 08	8:30 AM Apr 12	Import price index	Mar	MoM % chg.	-0.114	0.171	0.009	0.002	<b>1.11</b>
	8:30 AM Apr 12	Export price index	Mar	MoM % chg.	-0.126	0.000	0.019	0.002	
	8:30 AM Apr 13	Retail sales and food services	Mar	MoM % chg.	0.416	-0.303	0.105	-0.076	
	8:30 AM Apr 13	PPI: Final demand	Mar	MoM % chg.	0.033	-0.091	0.016	-0.002	
	10:00 AM Apr 13	Inventories: Total business	Feb	MoM % chg.	-0.068	-0.093	-0.081	0.002	
	8:30 AM Apr 14	CPI-U: All items	Mar	MoM % chg.	0.038	0.090	0.029	0.002	
	8:30 AM Apr 14	CPI-U: All items less food and energy	Mar	MoM % chg.	0.195	0.069	0.010	-0.001	
	8:30 AM Apr 15	Empire State Mfg. Survey: General business conditions	Apr	Index	3.32	9.56	0.001	0.003	
	9:10 AM Apr 15	Industrial production index	Mar	MoM % chg.	0.098	-0.577	0.146	-0.099	
	9:10 AM Apr 15	Capacity utilization	Mar	Ppt. chg.	-0.013	-0.460	0.179	-0.080	
			Data revisions					-0.044	
	Apr 15	8:30 AM Apr 19	Housing starts	Mar	MoM % chg.	-3.82	-8.79	0.009	
8:30 AM Apr 19		Building permits	Mar	Level chg. (thousands)	-0.765	-91.0	0.001	-0.078	
8:30 AM Apr 21		Philly Fed Mfg. business outlook: Current activity	Apr	Index	6.73	-1.60	-0.000	0.003	
			Data revisions					0.014	
Apr 21	10:00 AM Apr 25	New single family houses sold	Mar	MoM % chg.	-1.05	-1.54	0.005	-0.003	<b>0.71</b>
	8:30 AM Apr 26	Manufacturers' new orders: Durable goods	Mar	MoM % chg.	0.177	0.781	0.011	0.007	
	8:30 AM Apr 26	Manufacturers' shipments: Durable goods	Mar	MoM % chg.	-0.257	-0.452	0.049	-0.009	
	8:30 AM Apr 26	Mfrs.' unfilled orders: All manufacturing industries	Mar	MoM % chg.	0.221	-0.108	0.000	-0.000	
	8:30 AM Apr 26	Manufacturers' inventories: Durable goods	Mar	MoM % chg.	0.177	0.001	-0.083	0.015	
			Data revisions					0.006	
Apr 28	8:30 AM Apr 28	Real gross domestic product (advance)	Q1	QoQ % chg. AR	0.723	<b>0.54</b>	We have concluded our updates of the Q1 nowcast		<b>0.72</b>
	8:30 AM May 27	Real gross domestic product (second)	Q1	QoQ % chg. AR		<b>0.84</b>			

Source: Authors' calculations.

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 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 2016:Q1 on November 20, 2015, just after the government released the second GDP estimate for 2016: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 FRBNY Staff Nowcast and the Atlanta Fed's Nowcast?**

The FRBNY 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 FRBNY 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 FRBNY 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 GDP, not the four quarters ("y/y") growth rate.

### **Authors**

FRBNY Time-Series Analysis Team