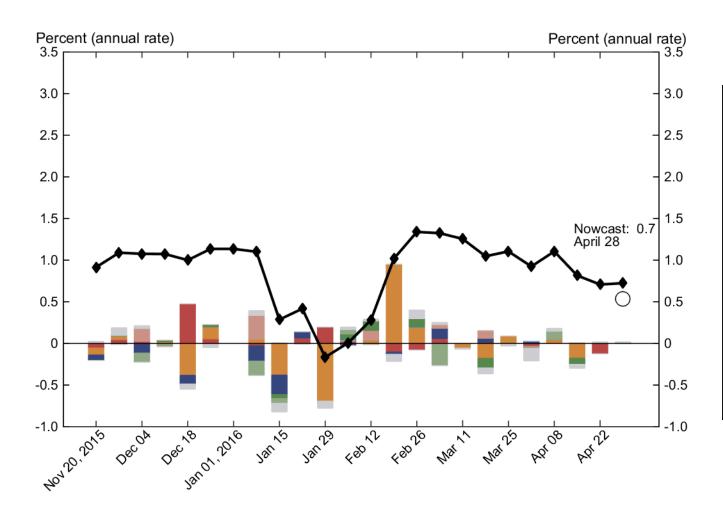
## **NOWCASTING REPORT**

Updated: April 29, 2016

- This week's advance GDP release was 0.5% (0.54% when taken to two digits) which is close to the latest nowcast of 0.7% (0.72% to two digits) and consistent with the weakness predicted by the model since we started tracking the first-quarter GDP growth in November 2015.
- GDP growth prospects remain moderate for 2016:Q2, standing at 0.8%.
- News from the past two weeks' data releases, since the April 15 nowcast was released, had an overall negative effect on the nowcast for the second quarter.
- Housing and manufacturing news had the largest negative impact on the nowcasts, while manufacturers' inventories of durable goods provided a small but positive surprise.

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.

# 1 | 2016:Q1 GDP Growth





Source: Authors' calculations.

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

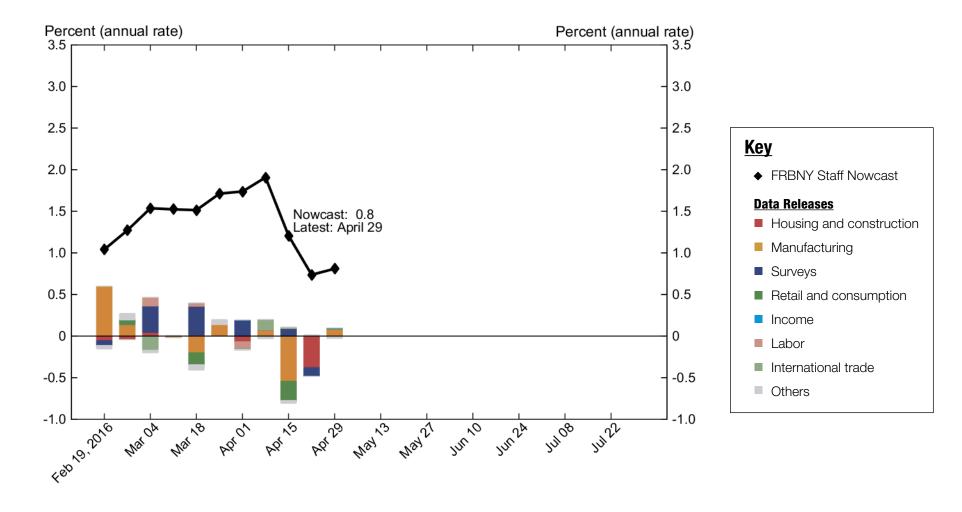
# 1.1 | Nowcast Detail

Jpdate	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Grow
					[a]	[b]	[c]	[c(b-a)]	
Apr 01									0.
	8:30 AM Apr 05	■ Imports: Goods and services	Feb	MoM % chg.	0.048	1.33	0.042	0.054	
	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 % cha.	0.082	-0.480	-0.085	0.048	
	,	■ Data revisions		3				0.034	
or 08									1
	8:30 AM Apr 12	■ Import price index	Mar	MoM % chg.	-0.114	0.171	0.009	0.002	
	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	Ptt. chg.	-0.013	-0.460	0.179	-0.080	
		Data revisions		9.				-0.044	
or 15									0
	8:30 AM Apr 19	■ Housing starts	Mar	MoM % chg.	-3.82	-8.79	0.009	-0.047	
	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	1-					0.014	
or 21									0
	10:00 AM Apr 25	■ New single family houses sold	Mar	MoM % chg.	-1.05	-1.54	0.005	-0.003	
	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	
pr 28									0
		Nowcast stopped: Advanced release of GDP							O
		NOWCAST STOPPED. ADVANCED TELEASE OF ADE							U

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:Q2 GDP Growth



Source: Authors' calculations.

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

# 2.1 | Nowcast Detail

Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growt
					[a]	[b]	[c]	[c(b-a)]	
Apr 01									1.7
	8:30 AM Apr 05	■ Imports: Goods and services	Feb	MoM % chg.	0.048	1.33	0.052	0.067	
	8:30 AM Apr 05	Exports: Goods and services	Feb	MoM % chg.	0.229	1.01	0.074	0.058	
	10:00 AM Apr 05	■ ISM nonmanufacturing: NMI composite index	Mar	Index	54.4	54.5	0.019	0.003	
	10:00 AM Apr 05	JOLTS: Job openings: Total	Feb	Level chg. (thousands)	-178.2	-159.0	0.179*	0.003	
	10:00 AM Apr 08	Merchant wholesalers: Inventories: Total	Feb	MoM % chg.	0.082	-0.480	-0.123	0.069	
		Data revisions					****	-0.031	
Apr 08									1.9
	8:30 AM Apr 12	■ Import price index	Mar	MoM % chg.	-0.114	0.171	0.035	0.010	
	8:30 AM Apr 12	Export price index	Mar	MoM % chg.	-0.126	0.000	0.063	0.008	
	8:30 AM Apr 13	Retail sales and food services	Mar	MoM % chg.	0.416	-0.303	0.321	-0.231	
	8:30 AM Apr 13	PPI: Final demand	Mar	MoM % chg.	0.033	-0.091	0.049	-0.006	
	10:00 AM Apr 13	■ Inventories: Total business	Feb	MoM % chg.	-0.068	-0.093	-0.117	0.003	
	8:30 AM Apr 14	CPI-U: All items	Mar	MoM % chg.	0.038	0.090	0.098	0.005	
	8:30 AM Apr 14	CPI-U: All items less food and energy	Mar	MoM % chg.	0.195	0.069	0.030	-0.004	
	8:30 AM Apr 15	■ Empire State Mfg. Survey: General business conditions	Apr	Index	3.32	9.56	0.014	0.090	
	9:10 AM Apr 15	Industrial production index	Mar	MoM % chq.	0.098	-0.577	0.442	-0.299	
	9:10 AM Apr 15	Capacity utilization	Mar	Ptt. chg.	-0.013	-0.460	0.553	-0.247	
	0.10711717170	Data revisions	IVICI	r tt. ong.	0.010	0.100	0.000	-0.029	
Apr 15									1.:
	8:30 AM Apr 19	■ Housing starts	Mar	MoM % chg.	-3.82	-8.79	0.028	-0.138	
	8:30 AM Apr 19	■ Building permits	Mar	Level chg. (thousands)	-0.765	-91.0	0.003	-0.241	
	8:30 AM Apr 21	■ Philly Fed Mfg. business outlook: Current activity	Apr	Index	6.73	-1.60	0.012	-0.104	
	'	■ Data revisions	·					0.015	
pr 21									0.
	10:00 AM Apr 25	■ New single family houses sold	Mar	MoM % chg.	-1.05	-1.54	0.016	-0.008	
	8:30 AM Apr 26	■ Manufacturers' new orders: Durable goods	Mar	MoM % chg.	0.177	0.781	0.029	0.018	
	8:30 AM Apr 26	Manufacturers' shipments: Durable goods	Mar	MoM % chg.	-0.257	-0.452	0.128	-0.025	
	8:30 AM Apr 26	■ Mfrs.' unfilled orders: All manufacturing industries	Mar	MoM % chg.	0.221	-0.108	-0.027	0.009	
	8:30 AM Apr 26	■ Manufacturers' inventories: Durable goods	Mar	MoM % chg.	0.177	0.001	-0.479	0.084	
	8:30 AM Apr 28	Real gross domestic product	Q1	QoQ % chg. AR	0.723	0.537	-0.019	0.004	
	8:30 AM Apr 29	Real disposable personal income	Mar	MoM % chg.	0.129	0.315	0.036	0.007	
	8:30 AM Apr 29	PCE less food and energy: Chain price index	Mar	MoM % chg.	0.132	0.052	0.121	-0.010	
	8:30 AM Apr 29	PCE: Chain price index	Mar	MoM % chg.	0.048	0.054	0.119	0.001	
	8:40 AM Apr 29	Real personal consumption expenditures	Mar	MoM % chg.	0.034	0.048	0.396	0.006	
		Data revisions		g.				-0.014	
Apr 29									0.8
	l								
Г									
	Housing and c	onstruction Manufacturing Surveys Reta	ail and consu	Imption Income	Labor	Intern	ational tra	de 🔲 Oth	ers
		_ = 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							.

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.

#### **Authors**

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