

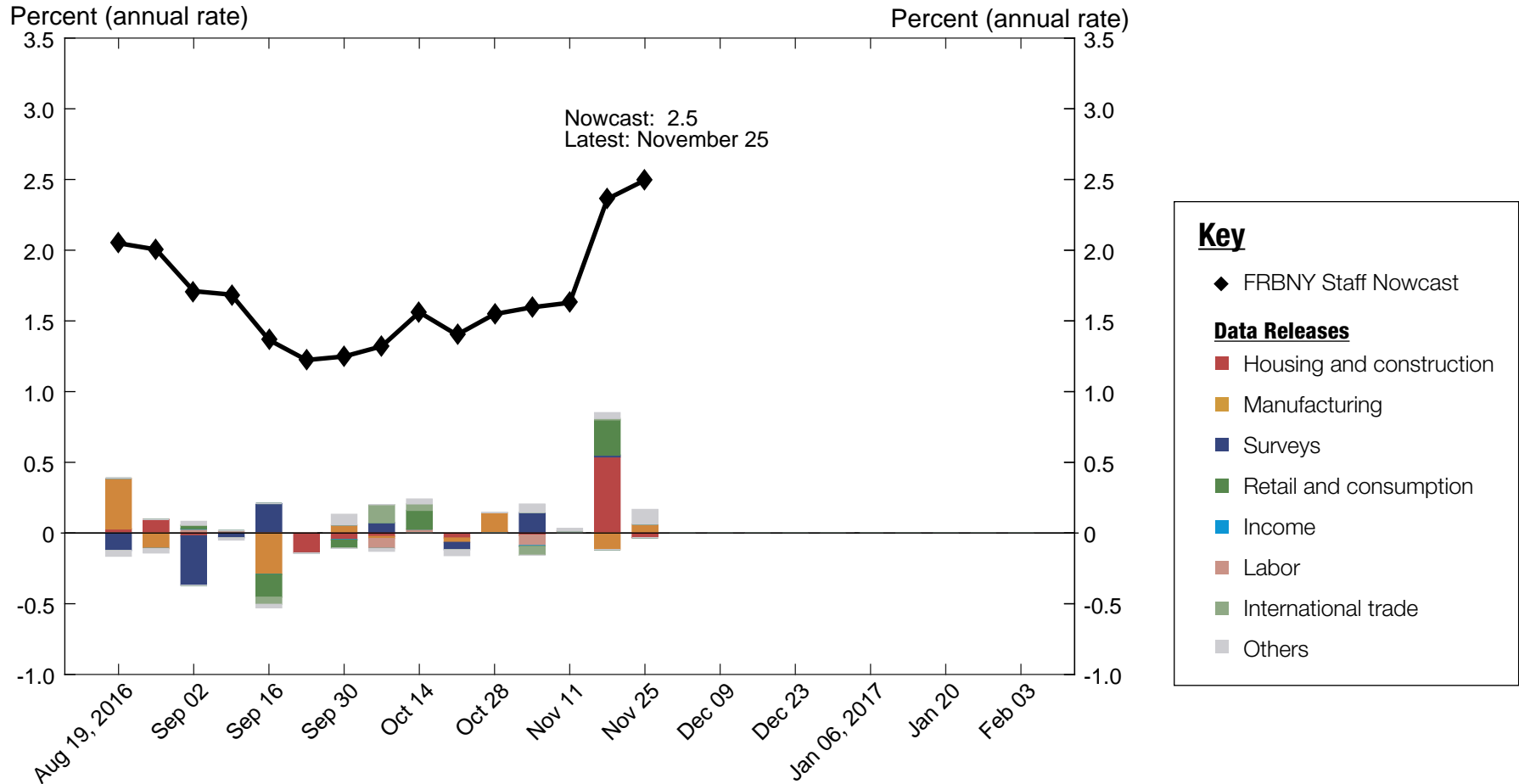
NOWCASTING REPORT

Updated: November 25, 2016

- The FRBNY Staff Nowcast stands at 2.5% for 2016:Q4.
- News from this week's data releases provided mixed signals, but on balance had a slightly positive impact on the nowcast.
- Positive contributions came from new orders of durable goods and wholesale inventories, but other items in the advance durable goods report had negative contributions.

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:Q4 GDP Growth



Source: Authors' calculations.

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

1.1 | Nowcast Detail

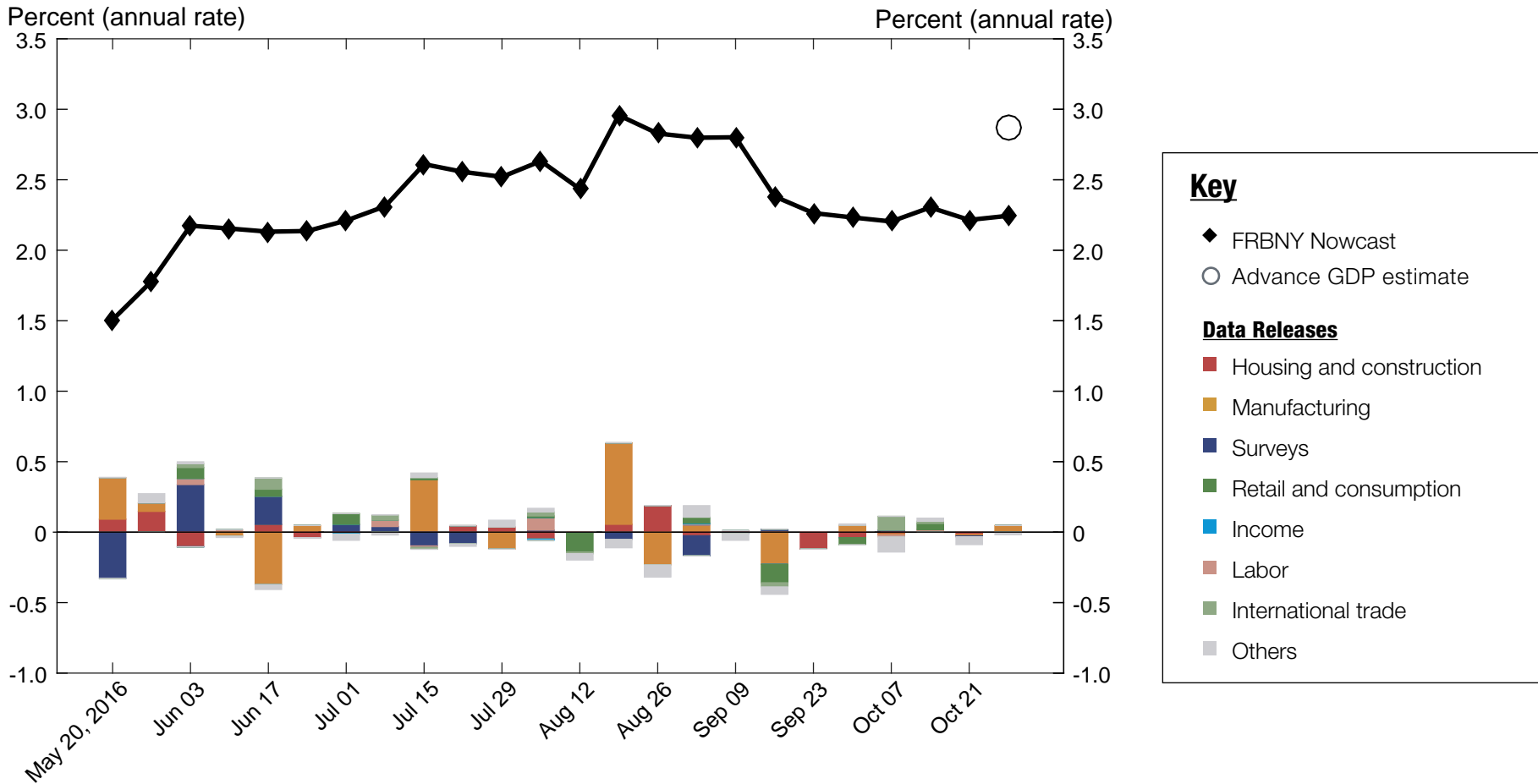
■ Housing and construction
 ■ Manufacturing
 ■ Surveys
 ■ Retail and consumption
 ■ Income
 ■ Labor
 ■ International trade
 ■ Others

Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Oct 28									1.55
	8:30 AM Oct 31	Real disposable personal income	Sep	MoM % chg.	0.215	0.050	0.032	-0.005	
	8:30 AM Oct 31	PCE less food and energy: Chain price index	Sep	MoM % chg.	0.153	0.111	0.261	-0.011	
	8:30 AM Oct 31	PCE: Chain price index	Sep	MoM % chg.	0.151	0.214	0.161	0.010	
	8:40 AM Oct 31	Real personal consumption expenditures	Sep	MoM % chg.	0.267	0.264	0.396	-0.001	
	10:00 AM Nov 01	ISM mfg.: Pmi composite index	Oct	Index	51.5	51.9	0.097	0.036	
	10:00 AM Nov 01	ISM mfg.: Prices index	Oct	Index	53.3	54.5	0.013	0.015	
	10:00 AM Nov 01	Value of construction put in place	Sep	MoM % chg.	-0.049	-0.380	0.048	-0.016	
	10:00 AM Nov 01	ISM mfg.: Employment index	Oct	Index	49.6	52.9	0.035	0.114	
	8:05 AM Nov 02	ADP nonfarm private payroll employment	Oct	Level chg. (thousands)	198.3	146.0	1.442*	-0.075	
	10:00 AM Nov 03	ISM nonmanufacturing: NMI composite index	Oct	Index	56.5	54.8	0.012	-0.019	
	10:00 AM Nov 03	Inventories: Total business	Sep	MoM % chg.	0.156	0.157	-0.169	-0.000	
	10:10 AM Nov 03	Nonfarm business sector: Unit labor cost	Q3	QoQ % chg. AR	0.988	0.320	-0.000	0.000	
	8:30 AM Nov 04	All employees: Total nonfarm	Oct	Level chg. (thousands)	162.9	161.0	0.279*	-0.001	
	8:30 AM Nov 04	Civilian unemployment rate	Oct	Ppt. chg.	-0.072	-0.100	-0.122	0.003	
	8:30 AM Nov 04	Exports: Goods and services	Sep	MoM % chg.	0.343	0.551	0.089	0.019	
	8:30 AM Nov 04	Imports: Goods and services	Sep	MoM % chg.	-0.039	-1.31	0.063	-0.080	
		Data revisions						0.060	
Nov 04									1.60
	11:00 AM Nov 08	JOLTS: Job openings: Total	Sep	Level chg. (thousands)	254.9	33.0	-0.064*	0.014	
		Data revisions						0.018	
Nov 09									1.63
	9:30 AM Nov 15	Retail sales and food services	Oct	MoM % chg.	0.127	0.824	0.357	0.249	
	9:30 AM Nov 15	Import price index	Oct	MoM % chg.	0.124	0.497	0.027	0.010	
	9:30 AM Nov 15	Export price index	Oct	MoM % chg.	0.163	0.166	0.052	0.000	
	9:30 AM Nov 15	Empire State Mfg. Survey: General business conditions	Nov	Index	0.242	1.50	0.007	0.009	
	9:30 AM Nov 16	PPI: Final demand	Oct	MoM % chg.	0.139	0.000	0.064	-0.009	
	10:10 AM Nov 16	Industrial production index	Oct	MoM % chg.	0.176	0.042	0.472	-0.063	
	10:10 AM Nov 16	Capacity utilization	Oct	Ppt. chg.	0.077	-0.012	0.607	-0.054	
	9:30 AM Nov 17	Housing starts	Oct	MoM % chg.	4.85	25.5	0.023	0.472	
	9:30 AM Nov 17	Building permits	Oct	Level chg. (thousands)	-20.8	4.00	0.003	0.067	
	9:30 AM Nov 17	Philly Fed Mfg. business outlook: Current activity	Nov	Index	6.97	7.60	0.005	0.003	
	9:50 AM Nov 17	CPI-U: All items	Oct	MoM % chg.	0.207	0.357	0.065	0.010	
	9:50 AM Nov 17	CPI-U: All items less food and energy	Oct	MoM % chg.	0.145	0.149	0.050	0.000	
		Data revisions						0.040	
Nov 17									2.36
	9:30 AM Nov 23	Manufacturers' new orders: Durable goods	Oct	MoM % chg.	0.991	4.81	0.024	0.091	
	9:30 AM Nov 23	Manufacturers' shipments: Durable goods	Oct	MoM % chg.	0.308	0.096	0.126	-0.027	
	9:30 AM Nov 23	Mfrs.' unfilled orders: All manufacturing industries	Oct	MoM % chg.	0.018	0.735	-0.034	-0.024	
	9:30 AM Nov 23	Manufacturers' inventories: Durable goods	Oct	MoM % chg.	-0.143	0.025	-0.472	-0.079	
	11:00 AM Nov 23	New single family houses sold	Oct	MoM % chg.	1.23	-1.92	0.011	-0.034	
	9:35 AM Nov 25	Merchant wholesalers: Inventories: Total	Oct	MoM % chg.	0.174	-0.366	-0.191	0.103	
		Data revisions						0.103	
Nov 25									2.50

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:Q3 GDP Growth



Source: Authors' calculations.
 Note: Colored bars reflect the impact of each data release on the nowcast.

2.1 | Nowcast Detail

■ Housing and construction
 ■ Manufacturing
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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)]	
Sep 30	10:00 AM Oct 03	ISM mfg.: Pmi composite index	Sep	Index	51.1	51.5	0.024	0.011	2.23
	10:00 AM Oct 03	ISM mfg.: Prices index	Sep	Index	55.3	53.0	0.002	-0.005	
	10:00 AM Oct 03	Value of construction put in place	Aug	MoM % chg.	-0.214	-0.738	0.024	-0.012	
	10:00 AM Oct 03	ISM mfg.: Employment index	Sep	Index	49.8	49.7	0.006	-0.001	
	8:05 AM Oct 05	ADP nonfarm private payroll employment	Sep	Level chg. (thousands)	180.2	154.0	0.202*	-0.005	
	8:30 AM Oct 05	Exports: Goods and services	Aug	MoM % chg.	-0.156	0.789	0.058	0.055	
	8:30 AM Oct 05	Imports: Goods and services	Aug	MoM % chg.	0.216	1.17	0.045	0.043	
	10:00 AM Oct 05	ISM nonmanufacturing: NMI composite index	Sep	Index	52.8	57.1	0.002	0.010	
	10:00 AM Oct 05	Inventories: Total business	Aug	MoM % chg.	0.038	0.183	-0.059	-0.009	
	8:30 AM Oct 07	All employees: Total nonfarm	Sep	Level chg. (thousands)	165.2	156.0	0.057*	-0.001	
	8:30 AM Oct 07	Civilian unemployment rate	Sep	Ppt. chg.	-0.047	0.100	-0.046	-0.007	
			Data revisions					0.015	
			Parameter revisions					-0.122	
	Oct 07	10:00 AM Oct 12	JOLTS: Job openings: Total	Aug	Level chg. (thousands)	41.4	-388.0	-0.044*	
8:30 AM Oct 13		Import price index	Sep	MoM % chg.	-0.077	0.083	0.011	0.002	
8:30 AM Oct 13		Export price index	Sep	MoM % chg.	-0.257	0.333	0.024	0.014	
8:30 AM Oct 14		Retail sales and food services	Sep	MoM % chg.	0.266	0.623	0.120	0.043	
8:30 AM Oct 14		PPI: Final demand	Sep	MoM % chg.	0.085	0.272	0.042	0.008	
			Data revisions					0.014	
Oct 14	8:40 AM Oct 17	Empire State Mfg. Survey: General business conditions	Oct	Index	2.49	-6.80	0.000	-0.002	2.30
	9:20 AM Oct 17	Industrial production index	Sep	MoM % chg.	0.107	0.059	0.162	-0.008	
	9:20 AM Oct 17	Capacity utilization	Sep	Ppt. chg.	0.019	0.008	0.206	-0.002	
	8:40 AM Oct 18	CPI-U: All items	Sep	MoM % chg.	0.178	0.292	0.028	0.003	
	8:40 AM Oct 18	CPI-U: All items less food and energy	Sep	MoM % chg.	0.185	0.112	0.024	-0.002	
	8:30 AM Oct 19	Housing starts	Sep	MoM % chg.	2.12	-8.96	0.008	-0.084	
	8:30 AM Oct 19	Building permits	Sep	Level chg. (thousands)	-7.54	73.0	0.001	0.068	
	8:30 AM Oct 20	Philly Fed Mfg. business outlook: Current activity	Oct	Index	3.33	9.70	-0.001	-0.004	
			Data revisions					-0.057	
Oct 20	8:30 AM Oct 26	Merchant wholesalers: Inventories: Total	Sep	MoM % chg.	0.312	0.209	-0.054	0.006	2.22
	10:00 AM Oct 26	New single family houses sold	Sep	MoM % chg.	2.28	3.13	0.004	0.004	
	8:30 AM Oct 27	Manufacturers' new orders: Durable goods	Sep	MoM % chg.	-0.123	-0.123	0.009	0.000	
	8:30 AM Oct 27	Manufacturers' shipments: Durable goods	Sep	MoM % chg.	-0.039	0.846	0.049	0.043	
	8:30 AM Oct 27	Mfrs.' unfilled orders: All manufacturing industries	Sep	MoM % chg.	0.184	-0.350	0.002	-0.001	
	8:30 AM Oct 27	Manufacturers' inventories: Durable goods	Sep	MoM % chg.	0.068	0.132	-0.064	-0.004	
			Data revisions					-0.018	
Oct 28	8:30 AM Oct 28	Real gross domestic product (advance)	Q3	QoQ % chg. AR	2.24	2.87	We have concluded our updates of the Q3 nowcast		2.24

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 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 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 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

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