

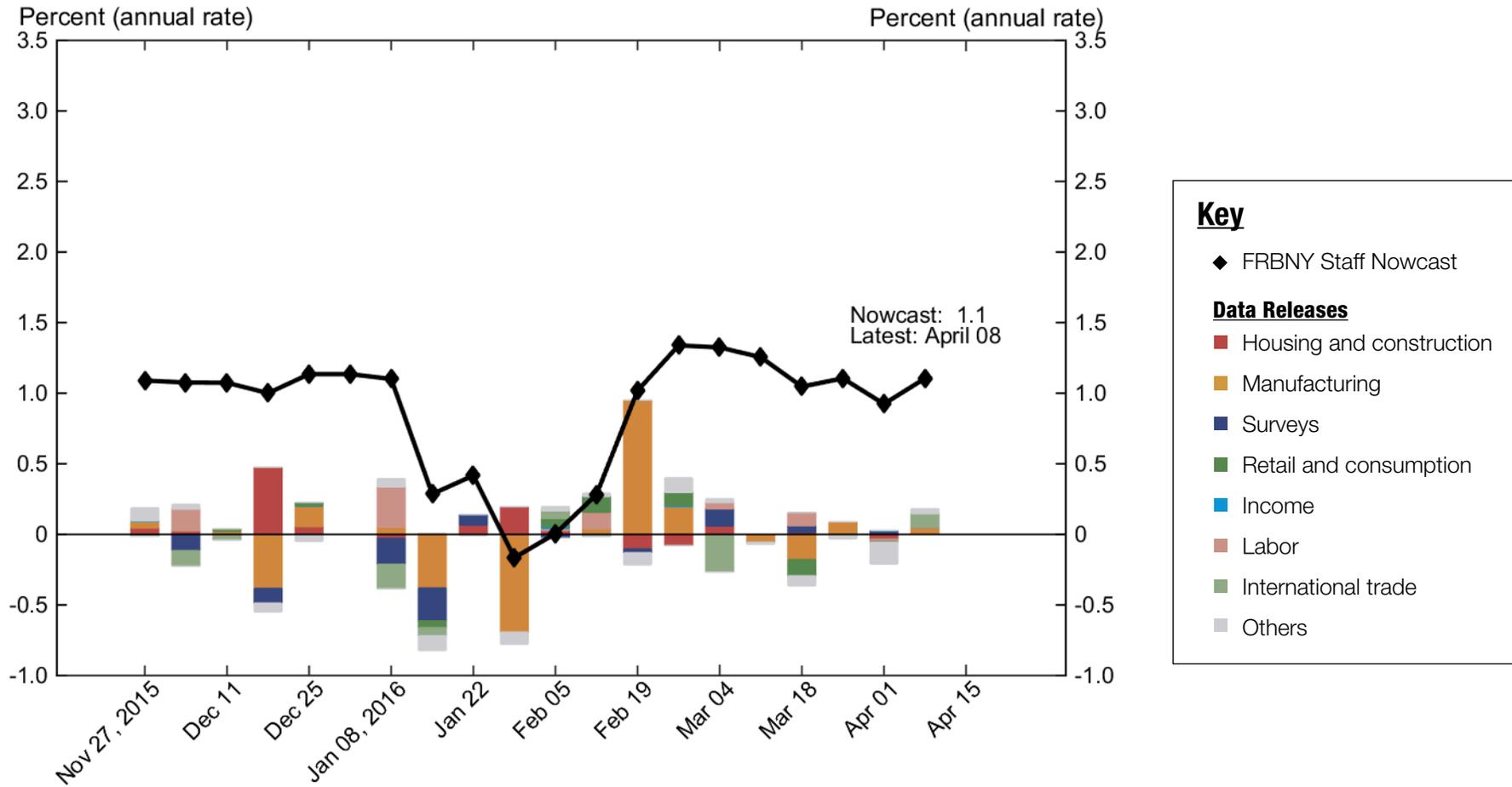
NOWCASTING REPORT

Updated: April 8, 2016

- GDP growth prospects remain moderate for the first half of the year: the nowcasts stand at 1.1% for 2016:Q1 and 1.9% for 2016:Q2.
- News from this week's data releases was all positive, pushing up the nowcasts for both Q1 and Q2 by about 0.2 percentage point.
- The largest contribution came from trade data and wholesale inventories.

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

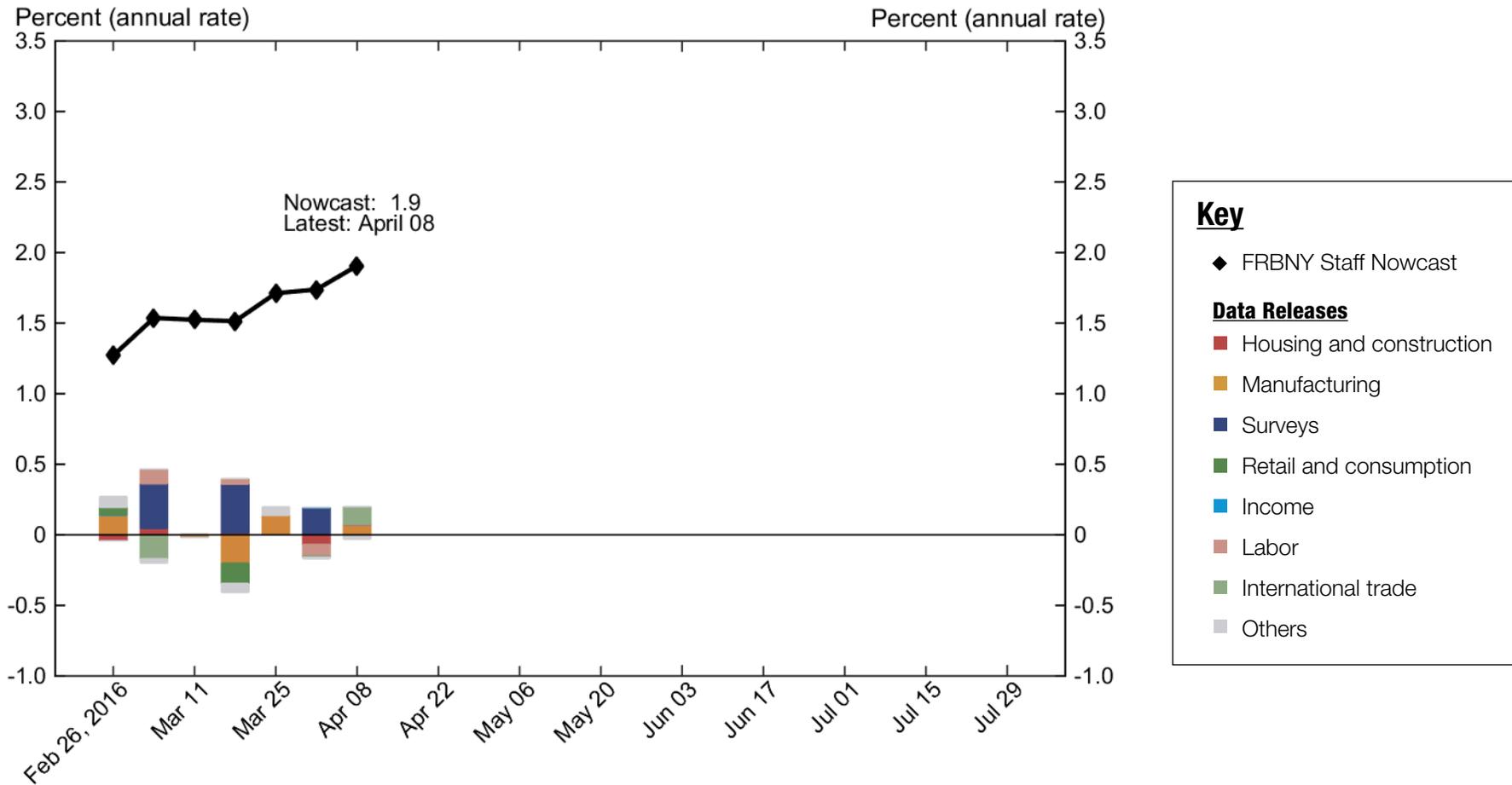
Update	Release Date	Data Series	Reference Period	Units	Forecast	Actual	Weight	Impact	Nowcast GDP Growth
					[a]	[b]	[c]	[c(b - a)]	
Mar 11									1.26
	8:30 AM Mar 15	■ Retail sales and food services	Feb	MoM % chg.	0.399	-0.146	0.211	-0.115	
	8:30 AM Mar 15	■ PPI: Final demand	Feb	MoM % chg.	0.109	-0.182	0.028	-0.008	
	8:30 AM Mar 15	■ Empire State Mfg. Survey: General business conditions	Mar	Index	-7.43	0.620	0.003	0.027	
	10:00 AM Mar 15	■ Inventories: Total business	Jan	MoM % chg.	-0.070	0.055	-0.215	-0.027	
	8:30 AM Mar 16	■ Housing starts	Feb	MoM % chg.	1.30	5.18	0.019	0.074	
	8:30 AM Mar 16	■ Building permits	Feb	Level chg. (thousands)	-3.73	-37.0	0.002	-0.060	
	8:40 AM Mar 16	■ CPI-U: All items	Feb	MoM % chg.	0.106	-0.168	0.029	-0.008	
	8:40 AM Mar 16	■ CPI-U: All items less food and energy	Feb	MoM % chg.	0.194	0.283	0.013	0.001	
	9:15 AM Mar 16	■ Industrial production index	Feb	MoM % chg.	-0.252	-0.561	0.288	-0.089	
	9:20 AM Mar 16	■ Capacity utilization	Feb	Ptt. chg.	-0.235	-0.415	0.352	-0.063	
	8:30 AM Mar 17	■ Philly Fed Mfg. business outlook: Current activity	Mar	Index	-0.607	12.4	0.002	0.021	
	10:05 AM Mar 17	■ JOLTS: Job openings: Total	Jan	Level chg. (thousands)	-74.0	260.0	0.281*	0.094	
		■ Data revisions						-0.055	
Mar 17									1.05
	10:00 AM Mar 23	■ New single family houses sold	Feb	MoM % chg.	1.76	1.99	0.008	0.002	
	8:30 AM Mar 24	■ Manufacturers' new orders: Durable goods	Feb	MoM % chg.	-2.19	-2.78	0.020	-0.012	
	8:30 AM Mar 24	■ Manufacturers' shipments: Durable goods	Feb	MoM % chg.	-0.971	-0.883	0.091	0.008	
	8:30 AM Mar 24	■ Mfrs.' unfilled orders: All manufacturing industries	Feb	MoM % chg.	0.249	-0.356	-0.011	0.007	
	8:30 AM Mar 24	■ Manufacturers' inventories: Durable goods	Feb	MoM % chg.	0.018	-0.287	-0.275	0.084	
	8:30 AM Mar 25	■ Real gross domestic income	Q4	QoQ % chg. AR	1.09	0.909	0.018	-0.003	
		■ Data revisions						-0.027	
Mar 25									1.11
	8:30 AM Mar 28	■ Real disposable personal income	Feb	MoM % chg.	0.163	0.280	0.026	0.003	
	8:30 AM Mar 28	■ PCE less food and energy: Chain price index	Feb	MoM % chg.	0.120	0.149	0.072	0.002	
	8:30 AM Mar 28	■ PCE: Chain price index	Feb	MoM % chg.	0.119	-0.106	0.055	-0.012	
	8:40 AM Mar 28	■ Real personal consumption expenditures	Feb	MoM % chg.	0.213	0.195	0.265	-0.005	
	8:15 AM Mar 30	■ ADP nonfarm private payroll employment	Mar	Level chg. (thousands)	222.0	200.0	0.494*	-0.011	
	8:30 AM Apr 01	■ All employees: Total nonfarm	Mar	Level chg. (thousands)	184.6	215.0	0.098*	0.003	
	8:30 AM Apr 01	■ Civilian unemployment rate	Mar	Ptt. chg.	0.028	0.100	-0.114	-0.008	
	10:00 AM Apr 01	■ Value of construction put in place	Feb	MoM % chg.	0.844	-0.529	0.025	-0.034	
	10:00 AM Apr 01	■ ISM mfg.: PMI composite index	Mar	Index	51.4	51.8	0.022	0.010	
	10:00 AM Apr 01	■ ISM mfg.: Prices index	Mar	Index	40.8	51.5	0.003	0.032	
	10:00 AM Apr 01	■ ISM mfg.: Employment index	Mar	Index	50.3	48.1	0.007	-0.016	
		■ Data revisions						-0.045	
		■ Parameter revisions						-0.099	
Apr 01									0.92
	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 % chg.	0.082	-0.480	-0.085	0.048	
		■ Data revisions						0.034	
Apr 08									1.11

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

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 Growth
					[a]	[b]	[c]	[c(b - a)]	
Mar 11									1.52
	8:30 AM Mar 15	■ Retail sales and food services	Feb	MoM % chg.	0.399	-0.146	0.263	-0.143	
	8:30 AM Mar 15	■ PPI: Final demand	Feb	MoM % chg.	0.109	-0.182	0.045	-0.013	
	8:30 AM Mar 15	■ Empire State Mfg. Survey: General business conditions	Mar	Index	-7.43	0.620	0.018	0.148	
	10:00 AM Mar 15	■ Inventories: Total business	Jan	MoM % chg.	-0.070	0.055	-0.025	-0.003	
	8:30 AM Mar 16	■ Housing starts	Feb	MoM % chg.	1.30	5.18	0.022	0.087	
	8:30 AM Mar 16	■ Building permits	Feb	Level chg. (thousands)	-3.73	-37.0	0.002	-0.072	
	8:40 AM Mar 16	■ CPI-U: All items	Feb	MoM % chg.	0.106	-0.168	0.057	-0.016	
	8:40 AM Mar 16	■ CPI-U: All items less food and energy	Feb	MoM % chg.	0.194	0.283	0.023	0.002	
	9:15 AM Mar 16	■ Industrial production index	Feb	MoM % chg.	-0.252	-0.561	0.372	-0.115	
	9:20 AM Mar 16	■ Capacity utilization	Feb	Ptt. chg.	-0.235	-0.415	0.460	-0.083	
	8:30 AM Mar 17	■ Philly Fed Mfg. business outlook: Current activity	Mar	Index	-0.607	12.4	0.015	0.198	
	10:05 AM Mar 17	■ JOLTS: Job openings: Total	Jan	Level chg. (thousands)	-74.0	260.0	0.118*	0.039	
		■ Data revisions						-0.037	
Mar 17									1.51
	10:00 AM Mar 23	■ New single family houses sold	Feb	MoM % chg.	1.76	1.99	0.010	0.002	
	8:30 AM Mar 24	■ Manufacturers' new orders: Durable goods	Feb	MoM % chg.	-2.19	-2.78	0.024	-0.014	
	8:30 AM Mar 24	■ Manufacturers' shipments: Durable goods	Feb	MoM % chg.	-0.971	-0.883	0.106	0.009	
	8:30 AM Mar 24	■ Mfrs.' unfilled orders: All manufacturing industries	Feb	MoM % chg.	0.249	-0.356	-0.021	0.013	
	8:30 AM Mar 24	■ Manufacturers' inventories: Durable goods	Feb	MoM % chg.	0.018	-0.287	-0.419	0.128	
	8:30 AM Mar 25	■ Real gross domestic income	Q4	QoQ % chg. AR	1.09	0.909	-0.003	0.001	
		■ Data revisions						0.059	
Mar 25									1.71
	8:30 AM Mar 28	■ Real disposable personal income	Feb	MoM % chg.	0.163	0.280	0.032	0.004	
	8:30 AM Mar 28	■ PCE less food and energy: Chain price index	Feb	MoM % chg.	0.120	0.149	0.110	0.003	
	8:30 AM Mar 28	■ PCE: Chain price index	Feb	MoM % chg.	0.119	-0.106	0.107	-0.024	
	8:40 AM Mar 28	■ Real personal consumption expenditures	Feb	MoM % chg.	0.213	0.195	0.312	-0.006	
	8:15 AM Mar 30	■ ADP nonfarm private payroll employment	Mar	Level chg. (thousands)	222.0	200.0	3.386*	-0.074	
	8:30 AM Apr 01	■ All employees: Total nonfarm	Mar	Level chg. (thousands)	184.6	215.0	0.346*	0.011	
	8:30 AM Apr 01	■ Civilian unemployment rate	Mar	Ptt. chg.	0.028	0.100	-0.260	-0.019	
	10:00 AM Apr 01	■ Value of construction put in place	Feb	MoM % chg.	0.844	-0.529	0.050	-0.069	
	10:00 AM Apr 01	■ ISM mfg.: PMI composite index	Mar	Index	51.4	51.8	0.125	0.055	
	10:00 AM Apr 01	■ ISM mfg.: Prices index	Mar	Index	40.8	51.5	0.023	0.246	
	10:00 AM Apr 01	■ ISM mfg.: Employment index	Mar	Index	50.3	48.1	0.051	-0.110	
		■ Data revisions						-0.034	
		■ Parameter revisions						0.042	
Apr 01									1.74
	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									1.91

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

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

FRBNY Time-Series Analysis Team