

# **ECONOMIC FORECASTING DURING THE CORONA WHAT THE BANK OF FRANCE IS DOING**

SUERF/BOCCONI WEBINAR "ECONOMIC FORECASTING DURING AND AFTER CORONA"



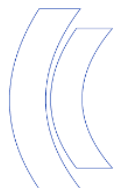
## NOWCASTING THE ECONOMIC ACTIVITY DURING THE COVID-19 CRISIS: WHY STANDARD MODELS DID NOT WORK?

- The shock of lockdown measures, affecting simultaneously both supply (manufacturing and mostly services) and demand (consumption), as well as their composition, could not be possibly taken on board by aggregate models.
- Timely data on economic activity also not available (greater need of high frequency data); hard and traditional soft data (surveys) directly affected by the lockdown and by the magnitude of the shock
- The models traditionally used to nowcast GDP at the BdF (e.g. our reference MIBA model) are based on econometric specifications that, although very well performing in normal times, proved to be inadequate to account for the large drop of activity and its very asymmetric sectoral composition.
- An example: end-March the MIBA model predicted -1.2% for Q1, against -5.8% released end-April.



# THE SECTORAL DASHBOARD: AN ALTERNATIVE TOOL FOR MONITORING BUSINESS ACTIVITY AND NOWCASTING DURING THE COVID-19 CRISIS

- Developed at the BdF in the aftermath of the lockdown.
- Evaluation of the pandemic shock computed for each sector of the economy.
- Mainly (but not exclusively) based on BdF survey data (Monthly Business Survey on industry and services) to calibrate the shocks :
  - additional questions on current/expected level of activity, with respect to “normal”, number of closing days...
  - using text-mining on free comments as additional input to the balance of replies
- Two main outcomes:
  - an estimate of the aggregate loss of activity (in terms of value-added), related to a specific period of sanitary measures (*e.g. a typical lockdown week*), and its evolution over time
  - an estimate of GDP growth rate for the current quarter.
- Released every month on the BdF website.



# THE SECTORAL DASHBOARD

## Impact of the Covid-19 crisis on value added by industry in June

(%)

Industry	VA share	Impact on activity in June
<b>Agriculture and manufacturing industry</b>	<b>15</b>	<b>-9</b>
Agriculture and agri-food industry	4	-2
Energy, water, waste, coking and refining	3	-7
Manufacturing industry excl. food, coking and refining	9	-13
<b>Construction</b>	<b>6</b>	<b>-10</b>
<b>Market services</b>	<b>57</b>	<b>-10</b>
Wholesale and retail trade, transport, accommodation and food services	18	-15
Financial and real estate services	17	-3
Other market services	22	-11
<b>Non-market services</b>	<b>22</b>	<b>-5</b>
<b>Total GDP</b>	<b>100</b>	<b>-9</b>

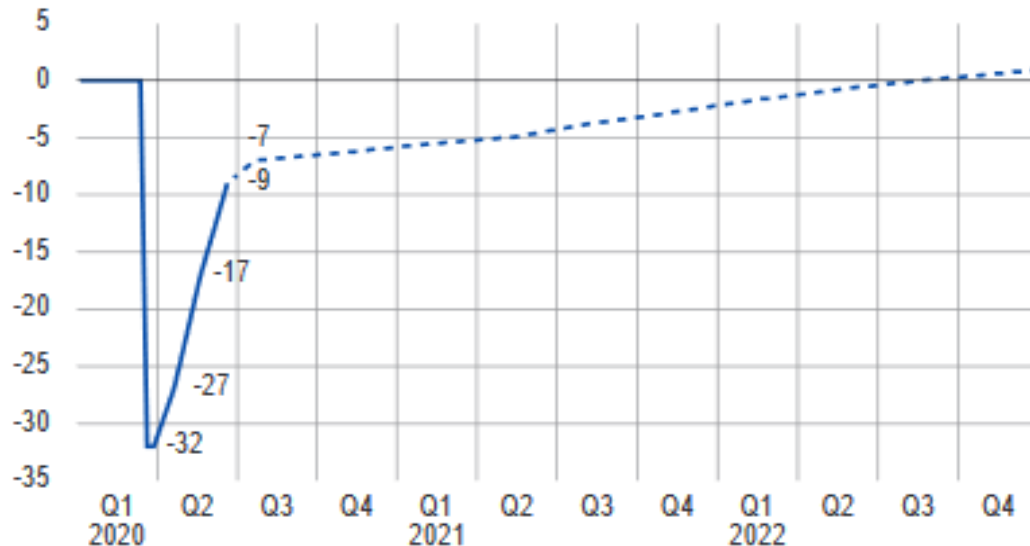
Note: The estimates presented in this table may differ from firms' opinions regarding their level of activity provided in the previous charts. In addition to differences in scope, the estimates in the table also use other information, such as the number of closure days, balances of opinion on production and activity, and capacity utilisation rates.

- In June, the loss of activity amounted to -9% compared to normal. It was -17% during the first phase of the lockdown exit in late May. Recovery driven by services and construction. GDP Q2 predicted at -14% (released at -13,8% end-July).
- In July, the loss of activity slightly improved to -7%: gradual improvement with respect to previous months.
- Evaluation for August and Q3 to be released on September 14th.

# THE « BIRD-WING » MEDIUM-TERM RECOVERY PATH OF THE FRENCH ECONOMY

## GDP loss in France

(% gap relative to the final quarter of 2019)



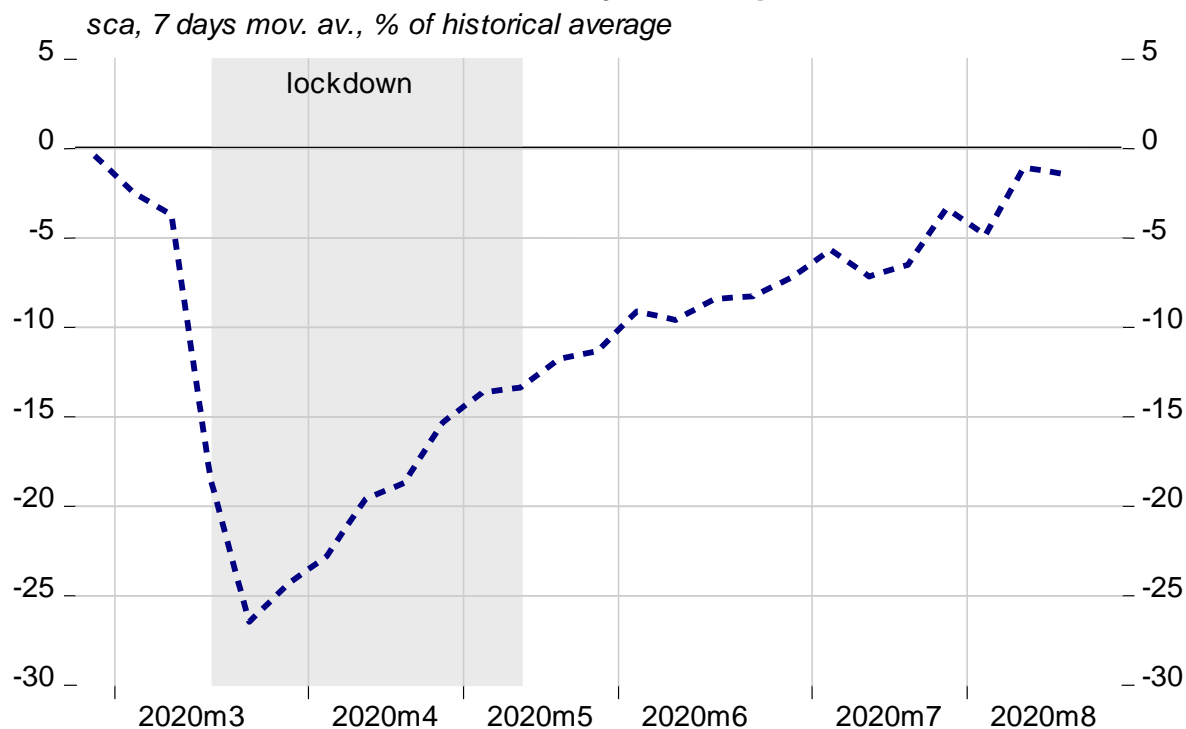
Source: the solid line plots the GDP losses estimated over-time and reported in the updates of business conditions through to end-June; the dashed line shows the GDP loss for July estimated in this update, extended through the end of 2022 using the June 2020 macroeconomic projections published on June 9<sup>th</sup>.

Update of the medium-term projection on September 14<sup>th</sup>

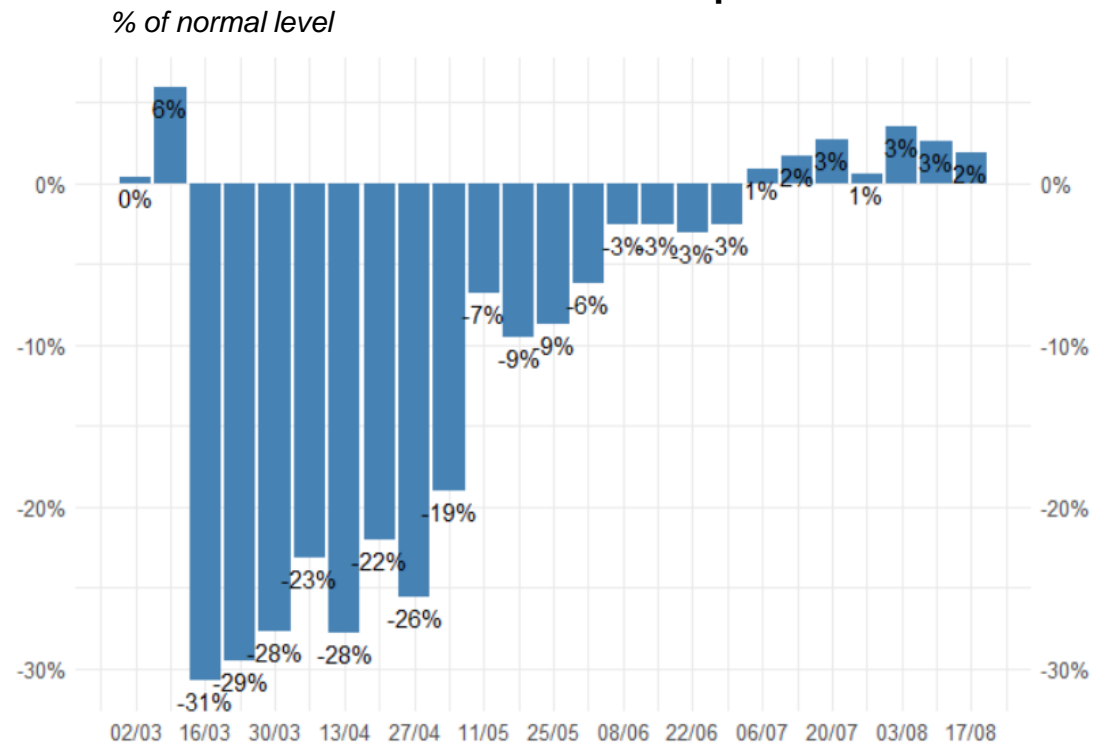
- The evaluation provided by the sectoral dashboard feeds into the medium-term analysis: a longer bridge between the short-term analysis and a structural analysis than usually (3 to 5 quarters depending on the sanitary scenarios).
- According to the Banque de France macroeconomic projections (June 9<sup>th</sup>), economic activity is expected to decline by 10% in 2020 before rebounding by 7% in 2021 and by 4% in 2022.
- France is only expected to return to its pre-crisis level of activity during the course of 2022.
- Unprecedented magnitude of uncertainty, risks related to the pandemic outpace the other risks

# HIGH FREQUENCY INDICATORS AS ADDITIONAL INPUT TO THE SECTORAL DASHBOARD

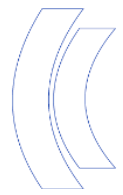
## Firm's electricity consumption



## Household consumption



- Firm's electricity consumption used to assess the overall activity of the manufacturing sector, as well as to calibrate shocks in the dashboard for specific sectors (*e.g. railways, but data available only from beginning of 2020*).
- Bank card transactions are used to monitor sectors whose production mainly supplies HH final consumption (*e.g. retail trade, accommodation and food services*).
- Correct potential biases in the data is key (*e.g. whether condition for electricity consumption, change in payment behavior for credit card transactions*)



## WHAT'S NEXT ?

- Probably turn back to the standard models once the crisis will be sufficiently behind us, as the sectoral dashboard is likely not suited for nowcasting GDP in normal time.
- But potential new applications with the high-frequency data explored so far, such as:
  - Use bank card transactions in predictive models/regressions for households' consumption.
  - Develop a high-frequency indicator of economic activity (a weekly activity index) based on a range of relevant data.
  - Explore the potential of big data (e.g. google data)