



Deep Impact: A Scenario Analysis of the Covid-19 Crisis in Belgium¹



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ABSTRACT

The sanitary measures adopted on a global scale to contain the Covid-19 pandemic have inflicted a shock never seen before on the Belgian economy, be it in terms of depth or suddenness. Because usual forecasting tools cannot be relied upon in such unique circumstances, forecasters had to turn to scenario analysis and model simulations to get a sense of the macroeconomic impact of the shock. This note discusses the outcome of a scenario prepared by staff from the National Bank of Belgium and the Federal Planning Bureau. Considering a 7-week lockdown followed by a recovery spreading until mid-2021, real GDP is expected to contract by 8 percentage points in 2020, with a strong rebound envisaged in 2021. The scenario is premised on the absence of any significant damage to the productive potential of the economy and on a swift pickup of private consumption from the second half of 2020, reflecting effective protection of disposable income and the unwinding of pent-up demand. On the production side, liquidity stress is considerable but deemed manageable so that solvency is largely preserved. Thus, mass bankruptcies and persistent job losses are not part of the scenario. The expected effect on public finances is commensurate to the shock with a deficit of at least 7,5 percent of GDP and public debt around 115 percent at end-2020.

¹ This note reports on a simulation exercise performed by Koen Burggraeve and Gregory De Walque under the guidance of Catherine Fuss (all National Bank of Belgium). Igor Lebrun and Filip Vanhorebeek (both Federal Planning Bureau) contributed to the elaboration of the scenario. Comments from NBB and FPB colleagues as well as members of the Economic Risk Management Group are gratefully acknowledged. The official press release can be found [here](#). The usual disclaimer applies.



Assessing the Macroeconomic Impact of a Pandemic: A Scenario, not a Forecast

The fight against the Covid-19 pandemic triggered unprecedented sanitary measures, halting entire swathes of the Belgian economy, restricting people mobility, and disrupting normal operations in most if not all industries. Within a few weeks, more than 1.2 million private sector employees have been placed under temporary unemployment, whereas 300,000 self-employed had to stop working. The shock was acute and swift, putting countless companies and households under severe liquidity stress.

A quantitative assessment of the shock's macroeconomic impact and of the benefits of safeguarding the production base is required to gauge the need for policy support. While the measures taken so far to cushion income losses are bold and effective, they may fall short of sheltering the production capacity of the economy.² Hence companies profitable prior to the lockdown could face bankruptcy or run up debt forcing them to cut back on planned investment. The result would be a much more protracted slowdown than envisaged in the V-shaped recovery typically associated with temporary disturbances.

This note takes a first pass at such an assessment based on information available in early April. The analysis differs from conventional macroeconomic projections in that the latter essentially reflect extrapolations of past trends, an approach that is obviously invalid in the face of unprecedented circumstances. Instead, analysts had to form priors as to where the shock would hit, how it would propagate and how long its effects would be felt throughout the economic fabric of the country and the consumption-saving behavior of its citizens. A lockdown of such magnitude thus entails a complex web of effects on both the supply and demand sides of the economy.

The analysis is predicated on four main hypotheses: (1) an estimate of the initial impact on the supply side as measured by business surveys,³ (2) the likely duration of the lockdown, (3) the pace at which sanitary restrictions are lifted and economic activity recovers, and (4) the existence (and the extent) of any permanent loss

² These measures include faster access to temporary unemployment, replacement income for the self-employed, suspension of mortgage payments for households hit by the crisis, bank loans guaranteed by the federal government and regional support for affected companies.

³ See ERMG press release: <https://www.nbb.be/en/articles/belgian-corporations-estimate-coronavirus>.

compared to the pre-crisis trajectory expected for the economy. The effects of that scenario on household income and consumption, companies' gross operating surplus and public finances are then estimated with a macro-econometric model of the Belgian economy.

Of course, such an approach can only provide a snapshot reflecting available information at a point in time, and its outcome is only as relevant as the underlying assumptions. The uncertainty around point estimates is considerable, but unlike conventional forecasts, confidence intervals cannot be estimated. Alternative scenarios will soon be elaborated to give a broad sense of the results' sensitivity to some of the key assumptions, including the length of the lockdown, their real impact on activity, the pace at which restrictions are lifted, the international context, and the measures aimed at safeguarding the production base.

The scenario

The scenario reflects the following hypotheses:

- Lockdown measures remain in place for seven weeks, with an assumed loss of one-third of the private sector's value added.
- The recovery is gradual, extending until mid-2021, after which economic activity is assumed to return to its pre-crisis growth trajectory, while remaining two percentage points below its expected level prior to the crisis. The idea is to take into account plausible developments post-crisis, including a phased lifting of the lockdown, a gradual restart of value chains and production lines, continued disruptions in global value chains, uncertainty in the international environment, and potential bankruptcies or investment plan cancellations that would not have happened had the Covid-19 crisis not erupted. The recovery is expected to be relatively sharp in the third quarter, reflecting some pent-up demand for durables.
- Recipients of temporary unemployment benefits are presumed to be full-time workers. This is a strong assumption which could lead to overestimate disposable income losses for households and underestimate the reduction in companies' gross operating surplus.
- Inflation is frozen at its initial baseline level. Although the size of the shock would normally cause inflation to fall sharply, consumer prices are currently facing conflicting influences that are hard to gauge (falling oil prices but price increases related to shortages or disrupted distribution).

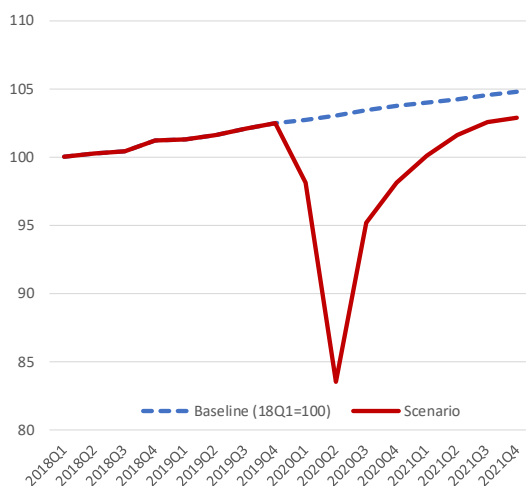
- As regards policy measures, the scenario only factors in the decisions concerning temporary unemployment and replacement income for the self-employed. Absent reliable information at the time of building the scenario, public consumption – i.e. compensation of public employees and government purchase of goods and services – is unchanged from its initial baseline. Public investment, meanwhile, has been adjusted down in line with the collapse in the construction sector and related anecdotal evidence. Other measures, including regional support to companies, for instance, are not considered.

Outcome

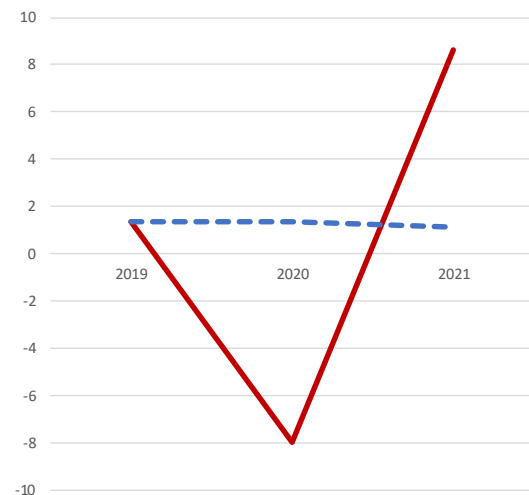
The key results can be summarized as follows:

- The 2020 real GDP would be shrinking by 8 percent, with a quarterly fall of around 4 percent in the first quarter and 15 percent in the second, followed by a robust recovery in the second half of the year – though not by enough to make up for the initial losses.

Real GDP
(index 2018 Q1 = 100)



Real GDP growth
(annual rate)

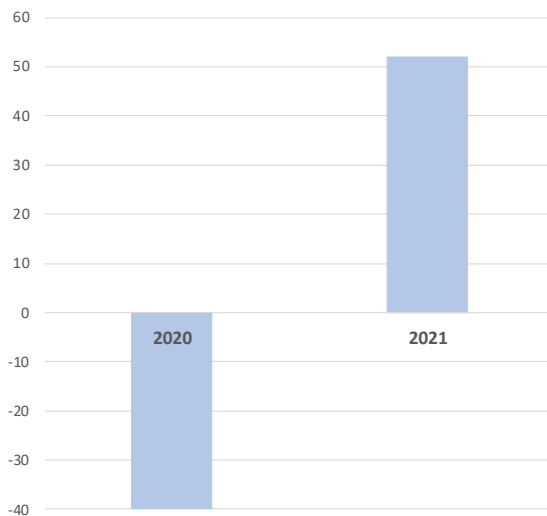


- The budget deficit would deteriorate by 5.3 percentage points of GDP to reach 7.5 percent, mainly on account of automatic stabilizers (unemployment benefits and reduced tax revenues). The public debt would rise to 115% of GDP by the end of this year, reflecting the double whammy

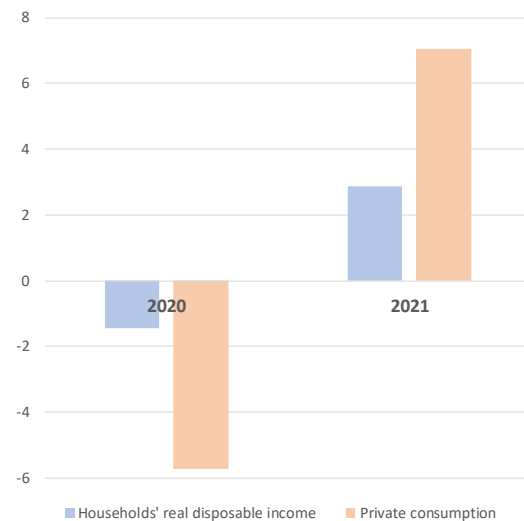
of the higher borrowing requirement and the contraction in nominal GDP. It is worth noting that these estimates exclude the costs of certain announced measures and rising health care costs in the context of the crisis, which together could add up to another full percentage point of GDP to the deficit.

- Households' real disposable income would fall by 1.5 percentage point compared to 2019. In relative terms, this is more modest than the contraction in GDP, reflecting the buffering role of automatic stabilizers. By contrast, companies' gross operating surplus would slump by 40 percent compared to 2019, in line with lower turnover in many sectors.

Gross operating surplus
(annual change in percent)



Income and consumption: pent-up demand?
(annual change in percent)



- By design, lockdown measures constrain households' consumption choices. Thus, real private consumption contracts by 5.7 percent in 2020 compared with 2019. Given the relatively modest reduction in real disposable income, the scenario points to an accumulation of forced savings (in aggregate terms) which might unwind at the reopening of retail stores and other activities (pent-up demand). In the scenario, this corresponds to a marked pick up in consumption from the third quarter of 2020 onwards.



Risks

While we take some comfort in the fact that the orders of magnitude are in line with the most recent projections by international organizations and forecasters, considerable uncertainty surrounds these results. In our view, and despite the unprecedented severity of the recession, we see risks as tilted to the downside. Those risks include:

- Less favorable epidemiological dynamics than currently expected, calling for a lengthier and even stricter lockdown.
- Ever-increasing production losses during the lockdown period as a result of wider disruptions to value chains over time.
- An economic recovery hobbled by mass bankruptcies and job losses in sectors that are fundamentally more vulnerable to liquidity shortages and that are more deeply impacted by the lockdown.
- A temporary burst in inflation if consumption bounces back faster than production and distribution capacities. Conversely, persistently subdued demand – caused, for instance by persistent fear and a corresponding accumulation of precautionary savings – could depress prices and raise the risk of deflation.
- A lengthy deterioration in the international environment, due to the risk of more negative spill-over effects between economies, for instance in the event of a resurgence in the pandemic.

Conclusion

Overall, the NBB-FPB scenario envisages that the negative effects of the crisis will be temporary and mainly concentrated in the first half of 2020. Businesses will experience so far unseen gyrations in their gross operating surplus, whereas households' disposable income and consumption will exhibit a much smoother profile (in an aggregate sense at least) owing to social safety nets and other measures. Companies are left with liquidity support (extended credit facilities under State guarantee, deferred tax payments, etc.) that will increase their debt burden by the end of the lockdown.

The recovery envisaged in 2021 critically depends on the assumption that existing liquidity support will be enough to prevent the bankruptcy of companies that were viable pre-crisis. However, the aggregate numbers discussed above hide very different situations by sector or industry. For one thing, not every sector can extract margins allowing firms to maintain comfortable cash buffers to weather extreme shocks. Besides, the intensity of the shock is not the same for all sectors and industries either. Hence, illiquid companies with limited equity or hit harder by the



crisis run a distinctly greater risk of going bust. To defuse that risk, additional measures focusing on these companies are likely needed to preserve solvency. These measures should be temporary from the outset and calibrated on actual losses to avoid windfall effects.