

# Forecasting under high uncertainty - Towards a fuller appreciation of the risk environment

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Over recent weeks, several international institutions published their best guesses at quantifying the economic damage by the novel Coronavirus on national, regional and the global economy. One cannot go without noticing the considerable variation between projections and the frequency of revisions given the uncertainty ahead. Economic forecasting in a 'business-as-usual' environment is already challenging, let alone when confronted by a black swan event such as the COVID-19 outbreak. Economists attempt to use their sophisticated econometric toolkit to model the severity of the decline in output and debate which shape – be it U, V or W – the economic recovery will assume. However, the uncertainty ahead warrants a caveat that these projections are subject to notable downside risks with economic repercussions which no model can possibly capture.

Being inherently unquantifiable, uncertainty imposes significant challenges in assessing the outlook ahead. It is uncertain how long the virus will linger around for, or whether there will be a second or third wave. Risk, on the other hand, is when the potential outcome following a sudden shock can be conceptualised using probabilities. Probabilities are based on one's best guess of future events transpiring in light of unfolding developments. As economies gradually resume their operations under a 'new normal', an assessment of the underlying risks ahead will be crucial in determining the macroeconomic prospects over the short and medium term.

The risks going forward are multi-dimensional ranging from socio-economical to geopolitical. Also, while risks to date have been mostly systemic in nature, some idiosyncrasies are emerging. The pandemic was a common shock however its impact on health system and the economic was very much country-specific. Consequently, governments face a trade-off between extending economic repression and the risk of a renewed strain on the health care system.

It is uncertain whether people will resume their previous spending patterns once lockdowns are alleviated. One persons' spending is another persons' income and therefore the speed of economic recovery is a function of the duration of the virus and the behavioural response of economic agents. The revival of consumer demand in turn determines firms' surviving prospects. While Governments were instrumental in rapidly ensuring that firms met their liquidity needs, it is balance sheet health which ultimately determines an entity's ability to survive. Firms with weak balance sheets are likely to respond by downsizing their workforce and liquidating idle capital. Job lay-offs reduce the consumer base and cause a negative demand shock via a lower income multiplier, while magnifying social tensions. This shock adversely affects the supply side through lower potential productive capacity of firms, which leads to further rounds depressed profits and aggregate demand, generating a doom-loop which is beyond the capacity of economic models to capture. From a microeconomic standpoint, just as banks' profit margins tightened following the significant regulatory constraints imposed following the

Great Financial Crisis (GFC), there is risk that firms may be inclined to increase their rainy-day buffers following COVID. This would mean lower investment spending and lower productivity by firms, lowering the present value of expected returns and dampening investor risk appetite.

Another risk affecting the recovery reflects that possibility that a substantial amount of liquidity being injected by Central Banks fails to stimulate the real economy as intended. In the aftermath of the Great Financial Crisis (GFC), the economic recovery lagged the rate of growth of asset prices. Financial institutions used the proceeds to repair their damaged balance sheets, buy their own shares, and prop-up dividends and management pay cheques. This time round, aside from Quantitative easing(QE), some Central Banks are also directly monetizing Governments' deficits which increases the likelihood that the money gets injected into the real economy. But still, the actual real economic impact depends on the actual budgetary priorities of Governments and there is no guarantee that government will prioritise productive spending rather than dropping 'helicopter money' with no strings attached.

The virus obscured the global economy from several unfinished business which dominated the best part of 2019. While the US-China 'power-centric' tensions have recently been reignited, other geopolitical disputes have been side-lined, including military tensions in the Middle East, the US-Europe trade tensions, and Brexit. Should these tensions re-escalate, there will be material implications on major currency-pairs and oil prices which are challenging to incorporate in projections. Moreover, there is risk of retrenchment of the globalist model which dictated most of last decade's success. While segmenting the production process around the globe yields substantial cost-savings, this strategy is not insulated from such black swan events. The business environment is becoming increasingly hostile to global supply chains, encouraging re-shoring of activity with pressure on tax optimisation behaviour heightening. This may lead global firms to rethink the structure of their production process and deglobalize. To preserve margins, firms may increase capital intensity and automate their production process at the cost of labour. This will imply that the escalating number of unemployed persons will become even more challenging to lower and this will aggravate social tensions. Besides, labour market inefficiencies may arise as migratory flows are disrupted by travel restrictions. All in all, this deglobalisation risk translates into a medium-term negative supply side shock which, combined with the massive liquidity injection being provided by Central Banks, may ignite inflationary pressures. While deflationary pressures are unavoidable in the short-term, the risk of a medium-term inflationary outlook could have undesirable implications on currency valuations, real wages and credit. Moreover, if inflation expectations come through, lenders will be inclined to sell their low yielding fixed-income assets, causing upward pressure on interest rates. Firms will then be confronted with higher real debt-servicing costs at a time when firms will still be repairing their balance sheets, and when investment spending will be crucial to revive economies.

Furthermore, political risks blur the trajectory ahead. In the US, the outcome of the upcoming election will have significant implications on business environment, social welfare and international policy. In Europe, a heightened risk of a divided Eurozone emerges from the conflicting desires of the frugal north and the debt-ridden south, could precipitate investors in losing confidence in the bloc and repatriate capital, causing a currency crisis as the euro dwindles. Also, in view of the projected post-COVID elevated public debt ratios, Member States risk finding themselves pressured by markets and institutional rules to bring public debt ratios to a sustainable level, suggesting a prolonged period of austerity and the postponement of recovery.

These multi-dimensional risks are overlooked by traditional economic models which

exploit historical data, assume rational economic behaviour and eventually converge to a Utopian equilibrium. Historical relationships break down during black swan events, decision making in such situations is unpredictable, and economies are in a constant state of flux. The best way to gauge the implications of these risks materialising is to view the economy as a complex system of networks with probabilistic interactions between various nodes. The interconnections can be visualised in a tree-diagram and hypothetical Bayesian “what-if” analysis can facilitate understanding of the macro framework. It is imperative that policymakers acknowledge the risks ahead and appreciate the policy implications so that decision making may be optimised in these challenging circumstances. In the meantime, projections derived from econometric models by even the most reputable institutions should be treated with caution. As Nobel Prize Winner Nils Bohr once put it, “Prediction is very difficult, especially if it’s about the future.”

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