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Evaluating and Mitigating the Effects of the Covid 19 Pandemic

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Abstract

The exact dates of the first COVID-19 outbreaks may remain an unresolved mystery. Unless reliable sources and records can be traced and retained, efforts to trace when initial infections took place, may even constitute a greater task than the other question relating to how it was instigated – the latter having (it appears) to have been partially resolved.

The uncertainty and lack of knowledge about the nature of the transmitting organism, as well as the manner of transmission, still constitutes a puzzle and it is even possible that many patients might have died long before the prominence of infections became known to authorities.

It is also now acknowledged that humans may have contracted the virus unknowingly without manifesting the usual symptoms. How is it then possible to verify whether many deaths prior to the official reporting outbreak timing of the 12th December 2019, were not linked to asymptomatic patients?

Furthermore, does the transmitting agent bear similarities to the flu virus – in which case, it becomes a seasonal problem? This underlines how vital it is to secure vaccines and antibodies which can combat its spread.

Amongst several other objectives, this paper not only aims to highlight why global coordination and certainty of information is so vital, but also highlight measures which have been, and could be undertaken, to address and mitigate the COVID-19 outbreak

Keywords: bond markets, exchange rates, spill over effects, asset buying programme, monetary policy, Bayesian Vector Autoregression model, multiplier effect, continuous monitoring

Evaluating and Mitigating the Effects of the Covid 19 Pandemic

Introduction

In illustrating the measures taken by certain jurisdictions as a means of addressing the recent COVID 19 pandemic, primary reference is made to the Sveriges Riksbank's recently implemented measures to mitigate its effects .

The importance of continuous monitoring which should serve to review and evaluate whether currently implemented measures are adequate, is also highlighted (2020:4). This would embrace a short term approach which would also seek to identify additional indicators that could be incorporated to facilitate the decision making process. At present, indicators reflecting how the real economy is developing in the very short term, are being used.

Seven Measures Implemented by Sveriges Riksbank are as follows (page 3 of 5) (Ingves, 2020:3):

- 1) Launching a programme of corporate lending through monetary policy counterparties – which aims to support credit supply to Swedish companies.
- 2) Making it possible on a temporary basis, for more banks and credit institutions to gain access to its money.
- 3) Relaxing the requirements relating to the collateral which banks can pledge when they borrow from the Riksbank
- 4) Reducing the lending rate for Riksbank loans overnight to banks from 0.75 to 0.20 percent
- 5) Offering banks the opportunity to borrow an unlimited amount of money each week against collateral at three months' maturity at an interest rate of 0.20 percentage points above repo rate (which is at zero percent)
- 6) Extending its purchases of securities by up to SEK 300 billion up until December
- 7) Usually, the Riksbank would purchase government bonds – however under the present “exceptional” circumstances, under which it is further highlighted that it was important to ensure that all major banks continued to function, the Riksbank also indicated that it would purchase municipal bonds – with the inclusion of corporate bonds – as well as commercial paper issued by Swedish non financial corporations recently, in the asset buying programme.

Additional points which were highlighted as corroborating the afore mentioned measures, are namely: The importance of the bond purchases increasing access to credit in the economy – both generally and in respect of future purchases of corporate bonds. Further, the importance of ensuring that there was access to US dollars in the Swedish financial system, given the global nature of the

crisis, was also accentuated. In light of this, and as a means of facilitating greater access to the currency, it announced that it would lend up to USD 60 billion.

This paper is structured as follows. The ensuing and second section considers the Bayesian Vector Autoregression Model – as well as its strengths and limitations. In light of the discrepancies obtained in results and outcomes for various jurisdictions incorporated in the model, certain deductions are presented to account for such differences. The importance of communicating reports and information between jurisdictions as a means of mitigating possible occurrences and effects of a second wave thereby becomes more important. The third section then considers the need for monitoring – as well as effective coordination between authorities.

Having highlighted monetary policy measures which have been undertaken in the selected jurisdiction, some of which have been adopted and considered in other jurisdictions, it is vital that a collaborative approach is undertaken on a global level if such measures are to achieve their intended effects. The conclusive section highlights the importance of global coordination.

The Bayesian Vector Autoregression Model

In simulating the propagation of the Covid 19 induced slowdown with a “simple model of the global economy”, the model being referred to as a global Bayesian Vector Autoregression (BVAR) model, Kohlscheen et al further add that the model would be comprised of five major economic blocs: the United States, China, the Euro area, “other advanced economies”(OAE); and other EMEs (OEM). These economies would also be assumed to interact with each of them causing spillovers to, as well as responding to spillbacks from, the other four blocs (2020:1), (page 3 of 9).

As well as highlighting those factors on which economic consequences of the virus will depend, namely (2020:1): the direct effects of confinement measures to limit its spread; the required duration of such measures, the extent to which the direct economic effects persist and magnify, and the size of the spillovers and spill backs across regions,

The possibility that a second wave of confinement will follow is also incorporated through a “double wave pandemic, W type shock scenario” whereby it is assumed that such a wave would follow two quarters after the first wave, that is in the second half of 2020.

It is furthermore assumed that the exogenous effects of the second wave will not be as severe as the first round – thereby impacting to about just half the extent of the first round through the incorporation of a “learn” and “calibrate” containment procedures (2020:2).

The impact and effects of multipliers and spillovers in the economies is illustrated through the following observations (2020:3):

In both cases, the decline in GDP is reflected as being around twice as large as the initial impulse

- Based on the assumptions that containment measures are relaxed in the second half of 2020, the output for V type scenarios are considered to be protracted – with all regions having lower output in Q4 2020 below their Q1 2020 levels.

The V type shocks are considered to embrace the first and second quarters of 2020 (Q1 and Q2)

- The W type shocks are considered to embrace all four quarters of 2020
- Two scenarios apply to both types of shocks (the less severe and more severe scenarios)

It is however to be added that the bloc impact most based on the model, in Q2, is the United States – with recent GDP and growth estimations for eurozone countries corresponding with the reflected results. Further worth noting the discrepancy between Q1 and Q2 results – particularly between the United States and EMEs. An inverse relationship is reflected across the scenarios presented.

As rightly commented by the authors, the level of GDP in all regions would still be below what it would have been had the pandemic not occurred, given the already slowed global growth rate – further impacted by trade wars and the pace of economic growth in regions like China, prior to the pandemic.

Further, as the second quarter of 2020 has only just commenced, it may yet be premature to conclude that a second wave of pandemic will not occur before the end of the second quarter – particularly based on recent evidence received from countries whose economies have already reopened – following partial shut down in response to the first wave. As much information about the virus is yet unknown, it cannot conclusively be said or assumed that a second wave is possible only in the second half of 2020 – even though it is hoped that there will not be one.

In supporting the observations and accounting for why EMEs are not as severely impacted in the second quarter Q2 as other blocs, this could be attributed to the success of timely lockdowns and partial closures of some of the affected economies. Further, cultural and social differences, lifestyles, along with relatively lower death rates have also contributed to the afore mentioned economic consequences of the virus. How quickly were these countries able to provide bed spaces, medical equipment, face masks etc to affected and unaffected individuals? Economic consequences of the virus being namely (see Kohlscheen et al, 2020:1) the direct effects of confinement measures to limit its spread; the required duration of such measures, the extent to which the direct economic effects persist and magnify, and the size of the spillovers and spill backs across regions.

The Importance of Continuous Monitoring and Tracking Facilities

Without doubt, the extent to which direct economic effects persist and magnify – as well as the size of spillovers and spill backs across regions, is not only impacted by the effectiveness of confinement measures, but also the availability of medical supplies, facilities, staff and technologies to deal with, track, monitor and contain those identified as having contracted it.

Hoffman et al (2020:1) also state that “ EMEs with monetary policy frameworks that are equipped to address the feedback loop between exchange rate depreciation and capital outflows stand a better chance of weathering the financial fallout from the Covid-19 pandemic.”

However, further observations are also highlighted:

- That borrowing through domestic currency bonds has not insulated emerging market economies from the financial shock unleashed by Covid-19; EME local currency bond spreads spiking amid sharp currency depreciations and capital flows;
- That portfolio investors face amplified losses as local currency spreads and exchange rates move in lockstep – their revised portfolio allocations in turn strengthening such correlation;
- In order to counter large stock adjustments in domestic bond markets, EME central banks may need to expand their toolkit to take on a “dealer of last resort” role – with many of them already moving in such a direction.

Uncertainty, lack of transparency, disclosure and the level of information about the virus, its mode of transmission, are amongst other factors which constitute and present ongoing concerns for models which have been designed as a means of predicting likely effects, outcomes – as well as in engaging monetary institutions to better address the risks of possible subsequent waves of pandemic.

It is therefore imperative that a model which represents the global community can be incorporated – given time and more reliable results, based on observations of at least two quarters.

As of now, ongoing or recently concluded research which contribute to the literature on this still relatively undiscussed and under investigated topic and area provide valuable sources of contribution for which future research can consolidated upon.

Conclusion

Coordination – and more importantly, global and federal coordination has been a commonly recurring theme through this pandemic. Efforts already undertaken and successfully implemented programs and lockdowns, would derive less than optimal benefits if neighboring jurisdictions or even states within a federal system were to relax or remove containment procedures and lock down restrictions prematurely.

In a jurisdiction with many states, such as the United States, what is adjudged to be the best means of implementing a gradual phased based procedure in restarting the economy? There have been recommendations for a state by state opening /return to work approach based on the all clear being given in terms of new infections, hospitalizations or the progress made after having attained the peak levels of the pandemic. What sense would it make for other states to resume without the/those state/states considered to be economic engines and would restrictions still need to be in place in other states to ensure that travel is restricted in respect of states still detrimentally being impacted by the pandemic? Which is why it is vital that economic engines or regions which are simultaneously (and principally) impacted by the pandemic are accorded greater attention both in terms of medical treatment, as well as consultation in respect of when to resume economic activities. Some advanced economies have been fortunate to avert devastating consequences – in respect of their economic capitals. Unfortunately this has not been the case for countries within Europe particularly – those whose capitals by virtue of social interactions, may have had greater exposure because of sporting interests and the timing of such events.

However, it is also understandable that many jurisdictions may wish to resume economic activities or relax lock down restrictions based on monetary policy arrangements and programs which were instigated as a means of addressing the pandemic. This being illustrated through the Sveriges Riksbank programs – to name but a few of jurisdictional examples. In such scenarios, it would be irrational for one jurisdiction to be tied down to another jurisdiction's restriction approaches or mode of implementation.

Hence transparency, disclosure and information sharing and gathering procedures become all the more important as a means of facilitating continuous monitoring on the progress of implementation of programmes and measures designed to combat the ongoing pandemic and facilitating a return to full economic recovery.

References

Auer, R., Cornelli, G., and Frost, J. (2020). “Covid 19, Cash, and the Future of Payments”

No 3 April 2020 Bank for International Settlements Publications

www.bis.org/publ/bisbull04.pdf

Avdjiev, S., Eren, E. and McGuire, P. “Dollar Funding Costs During the Covid-19 Crisis Through the Lens of the FX Swap Market” No 1 1 April 2020

Hoffman, B., Shim, I., Shin, H. (2020). “Emerging Market Economy Exchange Rates and Local Currency Bond Markets Amid the Covid-19 Pandemic” Bulletin No 5 7 April 2020

Ingves, S. (2020).” The Riksbank’s Measures to Mitigate the Effects of the Corona Crisis on the Economy” 3 April 2020 Speech by Mr Stefan Ingves, Governor of the Sveriges Riksbank, at the Sveriges Riksbank, Stockholm, April 2020.

Kohlscheen, E., Mojon, B. and Rees, D. (2020). “The Macro Economic Spill Over Effects of the Pandemic on the Global Economy” BIS Bulletin No 4, Bank for International Settlements Publications

Schrimpf, A., Shin, H. and Sushko.V. (2020). “Leverage and Margin Spirals in Fixed Income Markets During the Covid-19 Crisis