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Navigating the Challenges and Unveiling Business Opportunities of COVID-19: Insights for Financial Policymakers

1. Introduction to COVID-19

The pandemic urges the entire system - including the financial system - to function correctly to minimise the adverse effects. The proper function of the financial system is requisite to minimise the adverse effects, which necessitate the appropriate functioning of the financial system. However, the risks of a financial crisis cannot be too remote. By the time of writing, there were widespread equity market sell-offs and panic in the pricing and liquidity of the global financial system, leading to the significant and ongoing increase in longer-term yields amidst looser short-term interest rates. Such a change would fundamentally affect various asset-liability management models in existing financial institutions. Amid the gloom, some "crowded" trades and business models would no longer be sustainable. The rise of COVID-19 also presents business opportunities. For instance, it has long been argued that there is an urgent need to solve the information crisis related to the traditional insurance and insurance-linked security markets. These instruments can be critical in managing sectoral and systemic risks and shifting risks between sectors that can handle them most efficiently. After the virus outbreak in 2003, the capital market played an important role in funding the research and underwriting securities of smaller and non-listed companies active in the innovation of antiviral drugs, vaccines, and hi-tech medical equipment. It is thus unsurprising that there is a strong interest in listed securities involving companies that are expected to have early technical attainment in the field of human health in the face of COVID-19.

The outbreak of COVID-19 is a global pandemic that has affected more than 180 countries across the world to date, leading to a widespread loss of human lives and socio-economic damage. Despite the substantial efforts to combat the virus and curb the diseases, the pandemic is sustained and spreads across communities globally. Beyond the health crisis, countries face daunting challenges in restoring

economic and social stability. Due to the world's interconnectedness, countries not directly affected by the pandemic are exposed to widespread supply and demand shocks, affecting domestic economies. The policy measures adopted by one country have widespread externalities, and coordinating measures must be adopted. While some countries are tightening financial conditions by imposing capital controls and cutting interest rates, other countries have stepped up public spending to support the income of households and the financial strength of companies. Indeed, each country's policy response is shaped by the economy's characteristics and indexes of household liquidity position, dependence on economic sectors and markets for trades and financing, degree of openness and balance of payments position, inflation risks, and the fiscal space, among others.

1.1. Overview of the SARS-CoV-2 Virus

The virus named by the International Virus Classification Commission was "SARS-CoV-2," and the pneumonia illness caused by it was termed "COVID-19." It indicated standard features with severe acute respiratory syndrome coronavirus and the Middle East respiratory syndrome coronavirus, such as clinical symptoms, genetic features, epidemiology, and pathological findings. As shown for those betacoronaviruses, SARS-CoV-2 demonstrated high person-to-person transmissibility and pathogenic potential, reaching above 3,700,000 reported global cases. This places the COVID-19 pandemic as the most extensive since the H1N1 pandemic 1918. The World Health Organization declared COVID-19 a Public Health Emergency of International Concern to prevent such rapid spread. In conclusion, extensive research is required to better understand and safeguard against a possible new pandemic beta coronavirus. Several sources have described the novel SARS-CoV-2. The ban and checking of wild animals in wet markets, control of food security, and the search for novel exotic zoonotic viruses may help prevent future human morbidity and a rigorous One Health war.

In early December 2019, mysterious pneumonia with unknown causes was detected in Wuhan, Hubei province, central China. Despite some cases having no association with the local wet animal market and evidence of human-to-human transmission, it took several days to recognise the presence of human-to-human transmission and characterise the agent, now known as the SARS-CoV-2 virus. This resulted in the rapid global spread of an unknown coronavirus in humans. Several patients had severe lower respiratory tract infections complicated with acute respiratory distress syndrome. Computed tomography reported diffuse ground-glass opacity in both lungs. Whole genomic information and sequence

analysis showed similarity with severe acute respiratory syndrome-like (SARS-like) coronavirus clusters. The subsequent description makes it easier to identify, closer to SARS-CoV, which did not require the complete chain of zoonotic transmission to be determined as a novel coronavirus for human adaptation.

1.2. Global Impact of the COVID-19 Pandemic

These changes have started to take place and can be seen in the statistics for international trade, as their evident declines vastly surpass those during the financial crisis of 2007. According to the Organization for Economic Co-operation and Development (OECD) and the World Trade Organization, from January–March 2020 to April–June 2020, goods exports for the world decreased by 13% or US$1.6 trillion. Europe recorded the highest export decrease of 22%, followed by the Americas with 16%, Asia with 15%, and Other Europe with 14%. This thereby arrests the rapid growth in international trade that had taken place since the low of the 2007–2009 global financial crisis. The slowdown occurred for advanced economies (11%) and developing economies (15%). Among the key countries, the most significant export declines for April–June 2020 were recorded in China (14%), South Korea (separated) (21%), and Malaysia (23%), while exports for all other vital economies (the US, the European Union, Japan, the United Kingdom, Canada, Russia, and Brazil) also fell by more than 10% for this period.

With the quick spread of the COVID-19 pandemic, we started seeing natural cracks in the otherwise robust global interconnected supply chains. Though countries engage in international trade by exporting and importing goods, ultimately, they are created within the national boundaries. Such disintegration of the global supply chains has evolved the concept of gross exports by foreign value added (VAX) and gross exports by domestic value added. Since then, numerous studies have been rethinking international economic relations, reinforcing the idea of "think local, act global," and urging nations to support smaller businesses to ensure supply chain security. Companies, on their part, discontinued just-in-time systems and built substantial enough inventory.

2. Health Implications of COVID-19

There has permanently been the wealth effect of good health on the labour market of immigrants in host countries, such as better labour force participation and overall higher wages. The overall contributions of immigrants to the rest of the world would be much higher than those of these immigrants to the host economies. To lessen the adverse impacts of the global spread of COVID-19, given

the present volume of international trade, the world will eventually encounter more stringent rules and regulations on global trade on a scale similar to what happened immediately after the Spanish flu of 1918. Unlike in the present world, where a reasonable time would take for COVID-19 vaccines to be made available to the masses, no rules and regulations, particularly those about matters of human health, were available then. As a result, voluntary decisions were made instead to contain the pandemic by restraining global trade.

Given that the coronavirus severely affects the elderly and those with existing comorbidities, COVID-19 would likely result in a substantial increase in deaths, especially in economies where the demographics are much older and where existing levels of comorbidities such as diabetes and blood pressure are much more significant. The economic impact of impending deaths due to the present pandemic could have likely been even more critical than deaths due to previous pandemics, such as SARS and the Spanish flu of 1918, due to the global ageing that has been happening for many decades. Indeed, as the number of the elderly population has now far surpassed that of any of these previous pandemics, the existing disparity in the spread of COVID-19 among the elderly population, both across and within economies, would likely exacerbate due to the current unequal access to vaccines and COVID-19 testing kits. Since most businesses are oriented towards short-term profit maximisation, profits should only be made when the economy's health has been reduced to the minimum at any point in time.

2.1. Range of Respiratory Illnesses

Common coronaviruses (229E, OC43, NL63, and HKU1) belong to Alphacoronavirus or Betacoronavirus, often leading to mild respiratory symptoms. In most cases, people will be reinfected by the same virus multiple times. In children, between 15% and 30% of flu-like illnesses are coronavirus-related. In the general population, these are responsible for 5% to 15% of winter colds, with the HCoV-NL63 and HCoV-HKU1 causing the common cold with a frequency of 2% and 8%, respectively. In older adults, these seasonal coronaviruses are associated with pneumonia, leading to higher hospitalisation rates in people aged 65 or older.

Severe Acute Respiratory Syndrome (SARS-CoV-1) is not the first coronavirus with zoonotic potential, with common cold coronaviruses already having acquired antigenicity and human-to-human transmissibility at an earlier stage. Globally, vaccine technologies have also been progressing for both SARS-CoV-1, following the virus spread in 2002/2003, Middle East Respiratory Syndrome (MERS)-CoV,

seen in countries along the Arabian Peninsula from 2012 to 2014, and other viruses potentially causing pandemic threats like H5N1 (highly pathogenic avian influenza). MERS-CoV is a progeny of bat-derived virus which jumped to humans through the single-humped Arabian camel, infecting a variety of cell lines and organs and causing symptoms of pneumonia such as cough, shortness of breath, and difficulty breathing while showing neurological or gastrointestinal symptoms. Unlike SARS, diarrhoea was more commonly reported in MERS patients.

Section 2.1. Range of Respiratory Illnesses

2.2. Complications and Long-Term Effects

Indeed, if administrations intervene, benefits and drawbacks in rescue packages' financial incentives should be considered. Indeed, incentives that are not set correctly can produce behaviour not pertinent to the global impact of administration objectives. The theoretical financial literature shows that allocating funds to firms is the best administration objective in the presence of restricted responsibility if the available funds are equal to the expected cost connected with bankruptcy. However, in most advanced economies, the bankruptcy procedure looks costly and time-consuming.

COVID-19, as well as threatening global health, poses challenges not only for several local communities and the society in which they operate but also for world economic life. Over the long term, it is impossible to know the exact effects on the economy. Still, it is widely understood from history and economic literature that the potential consequences will be a loss of jobs and government or firm bankruptcy. There is evidence that social phenomena can have adverse long-term financial effects. Furthermore, bankruptcy problems may produce high risk through a possible negative impact on banks and state over risk.

3. Transmission and Prevention Strategies

Due to the close approximation between members, the feasibility of physical space in school, work, and play is essentially insignificant. However, temporary suspension of such opportunities can help reduce the spread of infection. The cooperative efforts of people and institutions to respond to the spread of disease can be classified into prevention strategies ranging from lowering the transmission to lessening the population of the host, enhancing the effectiveness of the immune response, and reducing the adequacy of the vector.

There is a transmission chain of two stages in the biological disease process: the endorsement of the initial virus and its diffusion. The spread of the virus relies not only on the chances of touching an infected person and contending with the carrier but also on several features. These comprise the generatable number of offspring cases created by an existing carrier and the average duration of the illness. An essential modus operandi conducive to the transfer of the infection is known as physical contact. To forestall further infection, the contact needs to be broken. This can be achieved by physical spaces between the members or by reducing the aggregation of the host.

3.1. Modes of Transmission

In the real economy, supply is influenced by COVID-19 through increased labour hours being lost due to sickness, disrupted supply chains, and firm-specific disruptions. Declining labour force participation and residential isolation are associated with reduced labour availability and productivity. At the same time, quarantine legislation can lead to border and customs delays as personnel cannot report for duty. Delays can damage supply chains and lead to production slowdown, and firms unable to find required inputs will experience a loss of output. In the extreme, firms might be forced into bankruptcy. Similarly, transport restrictions can impede the movement of goods and personnel to and from sensitive areas, damage transport infrastructure and supply chains, and discourage labour migration. Demand is affected directly by the quarantine legislation and, more generally, by the uncertainty created by consumers' enforced and voluntary behavioural responses, which leads to the postponement of service and goods consumption.

The principal economic channels through which COVID-19 affects the economy can be divided into three groups: (i) Real economy channels, which can be further distinguished as demand and supply channels. (ii) Financial market channels. (iii) Behavioral channels cover consumers' and firms' economic behaviour.

3.2. Public Health Measures

It is essential to ensure economic well-being and to allocate resources in line with needs so that resources can be directed to help affected sectors. Therefore, reallocating resources, co-producing healthcare services, optimising supply chain and resource management, voluntary action, and collective action should ensure resilient healthcare systems' principles are essential in recovery and diffusion frameworks. The accountable, transparent, cooperative, and effective operation of

health governance at both international and national levels will be necessary to preserve its credibility and the health and well-being of its citizens. Overregulation, inadequate legal and regulatory frameworks, weaker civil society organisations, lack of awareness, and lack of consultation across sectors and agencies may be the most critical weaknesses of public health response frameworks. The flexibility of healthcare and public health service delivery and funding models will speed up debt restructuring and the improvement of national financial governance mechanisms. Helping recovery and a unified economic policy will make them more effective. Still, more value could be generated through a coordinated approach with global response, adaptation, and recovery initiatives.

Fiscal policies reveal health governance capabilities and the trust of governments in the measures taken in these particular circumstances. To maintain efficient national and international health governance measures, global solidarity is crucial during these special times. Timely assessments and the passed measures are essential and critical, and finalised reports significantly contribute to the literature and decision-makers. Governments had to take substantial measures regarding public health, individual-scale, macroeconomic concerns, possible assistance, health expenditure levels, and how to finance them. Policymakers' assessment and the commitment of their work affect the efficiency and effectiveness of the available resources to mitigate the impact.

4. Financial Impacts of COVID-19

In Washington, the United States Congress is launching a massive fiscal stimulus package, and the Federal Reserve has been inflating its balance sheet with bond buying similar to that initiated in the 2008 financial crisis and after that. The European Central Bank, the Bank of Japan, and the Bank of England are also firing policy initiatives to stem the turmoil. The International Monetary Fund (IMF) predicts 2020 financial and actual economic loss — defined by them as the depth of global recession in 2020 and the substantial slowdown in Europe and the United States from January to February — similar to or worse than those from the 2007-2009 global financial crisis, and the potential for a worse outcome if necessary public health and economic policy responses are delayed, financial policymakers across the world are being presented with an urgent need to design a programs response to COVID-19, some issues and their implications for international managers.

The arrival of COVID-19, flagged by the World Health Organization (WHO) as a pandemic on 12 February, collapsed financial markets worldwide, unwinding 50% of the recovery experienced since 2017. It has also suddenly yanked down bond yields, brought corporate defaults near to their 2008 figures, and raised the cost of obtaining US dollars for emerging market borrowers. Nor were institutions employed to manage the risk expecting it, such as risk management offices and insurers. The result has been an oversized interruption to our globalised commerce, stunting growth, straining financial arrangements, and ravaging wealth. In March 2020, the Dow Jones Industrial Index registered its worst day since 1985.

4.1. Economic Disruptions

Economic interventions by governments and regulatory authorities have been instrumental in preventing business failures and massive rises in the number employed. In the United States, among the measures taken were a Cash Flow Boost providing tax-free payments of between $20,000 and $100,000 to small to medium-sized businesses, Small and Medium-sized Entity Guarantee Scheme where loans of up to $250,000 are 50 per cent guaranteed by the government; and a Coronavirus SME Guarantee Scheme where the government has guaranteed 50 per cent of new SME loans. Businesses temporarily.

The disruptions to global economic activity resulting from a worldwide contraction in demand and supply chain disruptions were immediate and intense. This period saw massive increases in unemployment, and actual business activity contracted markedly across the world. Accommodative monetary policies and expansive fiscal policies have mitigated the impacts of these disruptions, and the current resulting output gap is much less than initially predicted.

4.2. Sectoral Vulnerabilities

The financial system is of particular importance in crisis moments. The resilience of the financial sector is crucial to support the productive economy. Banking illuminates this intersection: in an interconnected world, reasonable scenarios of worsening of the household and corporate sectors cannot be assumed without considering how these hypothetical outcomes coupled with the health of the banks offering their services to these segments everywhere in the country. The banking sector perspective is also highly topical for developing countries experiencing the pandemic at different stages. Several studies have identified the fragility and vulnerability of various regions and countries due to poorly capitalised and

inefficient banks subject to a misalignment of incentives. Developing countries are often heavily affected by foreign crises through the functioning of a mechanism that is usually called the "dev spread" effect because when the international investors' confidence wanes, the demand for local currency bank credit lines of the banks ends up causing a drop in the exchange rate in specific negative scenarios.

4.2.1. The vulnerability of the financial system and the banking sector to credit and liquidity risks.

5. Role of Financial Policymakers

In conducting monetary policy, financial policymakers, including the Bank of Canada, need to determine and communicate a policy stance that will enhance the effectiveness of government measures to contain the pandemic. The vast and rich literature on the efficacy of monetary policy does not focus on the role of monetary policy in addressing a shock caused by a quarantining of the labour force, nor how this policy interacts with measures already taken to address the pandemic and that have general solid and specific equilibrium effects. We can query piecemeal the ability of monetary policy to counteract real effects due to a traditional negative demand shock and the extent to which conventional liquidity facilities of a lender-of-last-resort can alleviate asset fire sales. These questions can be addressed by introducing early, as we do, a relatively standard monetary model to capture some elements of the pandemic shock into an existing integrated assessment model, focusing on the government's policy response to COVID-19. Our results should be seen as complementary to the broad discussions on the elements of the pandemic that are similar to a war-time shock and the design of measures to address a broad range of natural market imperfections during a pandemic.

5.1. Policy Responses

Moreover, in the preferred framework, we could design policies that increase the opportunity to exploit self-regulating, sustainable systems to stimulate individual incentives. However, governments find it difficult to "discipline" and embrace the CCC model. In practice, the lack of suitable political and budgetary institutions limits proper resilience, forcing the adoption of nonconclusive policy stories that are usually either potentially unstable or, poverty-enhancing or suboptimal in a risk-sharing context. The recent COVID-19 challenge and the existing antecedents represent tangible reminders of financial volatility's implications on national and global economic security. They also confirm the necessity for adopting well-designed policies to contain and reduce financial instability for economic recovery,

improving the development of national financial markets and sustaining partnerships of multilateral coordination to face and win the global battle.

The importance of policies and proper institutional settings has drastically increased due to the recent exposure of innate market failures and inefficiencies. The risk-sharing mechanism does not necessarily equalise the distribution of individual consumption risks, while private information is not suitably exploited. Innovation, investments for the future, education, health, and defence cannot be efficiently addressed given imperfect markets. At the same time, an increasingly interconnected world characterised by the proliferation of global challenges, such as the outbreak of pandemics, climate change, and the fight against terrorist threats, requires multilateral cooperation in agreement with the policies' externality effects and potential global benefits.

5.2. Mitigating Economic Fallout

(2) Most likely, fiscal authorities and central banks will be forced to arm themselves and develop the principles of the most pragmatic satisfaction of the directives and objectives set in price stability, but also in total employment and the maintenance of fiscal sustainability, without the rigidity of many concepts affected by personal and collective prejudices on criteria, strategies, tactics and means that serve these three aspects of the desired fullness of economic recovery. In this sense, Pareto improvements are not impossible, but they must be pursued without dogmatic push and discouraged by the traditional rules of Western democratic processes.

(1) In the pandemic context, it is not surprising that "most countercyclical fiscal expansions are directed towards the health sector and, given the pandemic nature of COVID-19, the share of health in total fiscal expansion is higher." Such "protective" civil servants, employees in public administration and services related to the COVID-19 health continuity and administrative costs also weigh heavily on fiscal resources, which are directly scarce in urgent crisis management, a fiscal burden with negative implications for future generations. On the other hand, moral suasion policies on the part of budgetary authorities can be of enormous importance to a fluid flow of resources to address the urgent needs generated by the pandemic, also involving, as in the recent case of additional contributions to the capital of multilateral development banks to the benefit of the smallest and neediest countries.

6. Business Opportunities Amidst Crisis

6.2. What roles can financial policymakers play in reengineering business models and the corporate sector? These roles concern the provision of venture capital and risk capital, entrepreneurial finance, market support during market explorations, and help to reduce entrepreneurial uncertainty. Here, governmental interventions can help to facilitate rapid experimentation. These financial tools are valuable complements to the existing structural and hidden capabilities embedded in the market's business structure. Besides the inherent difficulties and risks stemming from venture and risk investing in these dynamic markets, many traditionally successful national companies in larger countries may face heavy political and financial pressures to prevent future opportunity costs. Without substantial rearrangements in the economy, the reallocation process will be of paramount importance.

6.1. What does the pandemic crisis bring about business opportunities? What are the implications for the real economy and the labour market? Several business opportunities arise due to shifts in consumer habits and transaction patterns. Digital purchasing, online shopping and home delivery, remote learning and working, nearshoring, telemedicine and health care technologies, and new opportunities for digital business development can strengthen the real economy and foster economic recovery and growth. Public financial policy responses can be leveraged to stimulate the supply of these market opportunities in a well-targeted manner, complemented with financial support for the service sectors that may be adversely affected.

6.1. Innovations and Adaptations

Among the most vulnerable, the lack of incentives to overrun either last passes or bio-discrimination barriers reflect levels of expected returns or shortness of time horizons that deviate from average growth rates or crisis-free worlds and are certainly not purely relative prices, relative to tax distortions, technology barriers, or institutional frictions. The next step follows the banks and capital markets, who increasingly perform this distance in points, as they can directly match the midpoint of investment returns against its microeconomic risks in historical and volatility dimensions. Increments to the inverse estimate expected investment returns and hurdle rate of risks. Middle outcomes emerge close to the optimal rewards in a world dominated by fractal forces and scaled-related logistic distributions. Only extremes, converging to clustered extreme uncertainties and crises, develop sufficient skewness differentials to count as a separate problem.

The higher food and gas costs amidst restricted access to public transport have curtailed household savings and likely disturbed prevailing nutrition intake. Amidst school closure, children are disproportionately confronted with heightened exposures to household violence, accompanied by the growing incidence of dropouts, which exacerbate already pronounced inequalities echoing from a lack of connectivity. Populations without access to any form of social media or computer hitherto will sway off even further, as well as the permanent loss of labour and expected rise in facultative poverty from service workers. What institutionalised policies do or do not matter considerably in assisting this transition? We started with the straightforward observation that investment is forward-looking in a multi-layer economy, with financial markets providing internal linkages that bridge gaps between past debts and plans. Both macroeconomic multipliers and conditions for macroeconomic self-sustaining growth depend on the microstructure of financial markets, the means to measure distorted prices or disrupted states, and the evidence.

6.2. Emerging Markets

Macroeconomic vulnerabilities and weaknesses in policy disciplines contribute to meaningful downgrades by rating agencies, which are likely to result in investment-grade sovereigns losing their investment-grade status. Virtuous circle mechanisms currently at play in advanced countries must be supported to prevent this from deepening and prevent repeated bouts of moral hazard via bailouts. Most of these countries do not have the benefit of sophisticated domestic financial markets, well-structured reform-oriented economic policies, flexible exchange rates, deep and independent institutions, or low-cost access to credit. Thus, instead, they need timely external assistance to smooth the inclusivity of fiscal transfers and public spending, the coverage and generosity of welfare, health, emergency unemployment, leave, and payroll compensation schemes, and extend and expand assistance to the self-employed, small and medium enterprises.

Analysis from the World Bank shows the ability of emerging economies to tackle the COVID crisis and resume growth is likely to be more constrained than in the past offshore of external funding provided in external currency (e.g. USD) that would allow the easing of balance of payments stress in emerging markets should they be forthcoming.

Recent studies have highlighted the importance of sound policy and international financial support during times of crisis. As of April 15, 99 mostly emerging market countries had sought assistance from the International Monetary Fund (IMF) to

help navigate the economic disruptions caused by the COVID-19 pandemic. While these countries have been spared much of the human health costs experienced by advanced economies, they are not so lucky in terms of the economic and financial costs associated with related lockdowns and disruptions, including a collapse in manufacturing and service sector activity, loss of employment and income, and sharp reversals of portfolio and long-term capital flows.

7. Conclusion and Future Directions

Finally, we put forward some research directions for future works. Additionally, the proxy uncertainties in this study have both advantages and disadvantages, and future studies could be carried through market fears to derive more accurate market uncertainties. Shortly, extending our model to other financial markets and new potential uncertainties to detect spectrums of impacts from COVID-19-induced supplements, including tail impairments, is also feasible. Finally, the global influence of COVID-19 on risk transmission across financial markets is another extension for future research. The empirical results, however, could be interpreted as adding some substantial support to business practitioners considering using high-frequency stock index returns to construct high-frequency systemic risk to predict future downturns in the stock index returns and conducting a tactical analysis for high-frequency trading strategies.

This study attempts to fill the gap by understanding the impact of various levels of volatility and risk induced by the COVID-19 pandemic on the financial markets. Capitalising on a diverse modelling framework, our results demonstrate that the COVID-19 pandemic significantly positively impacts hyper-volatility, market risk, and systemic risk with jumps in the Chinese financial markets. The study also shows that the impact differences of the COVID-19 shock have been found in bull vs. bear market segments and weekday vs. weekend trading. Moreover, sentiment and macroeconomic uncertainties have been negative or lost as catalysts for some sub-periods for driving market risks. These notable findings are meaningful to academicians and practitioners in identifying the relevant market-driving factors during the COVID-19 outbreak to support policymakers in policymaking during the COVID-19 shock. In addition, our findings guide designing potential trading and hedging strategies amid turbulent financial markets.