Why the COVID-19 Recession is Different and More Dangerous than the Great Recession

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> The path of the economy will depend significantly on the course of the virus. The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term.
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> **Quote from a Federal Open Market Committee (FOMC) statement issued through a press release by the Board of Governors of the Federal Reserve System, published online July 29, 2020.[1]**

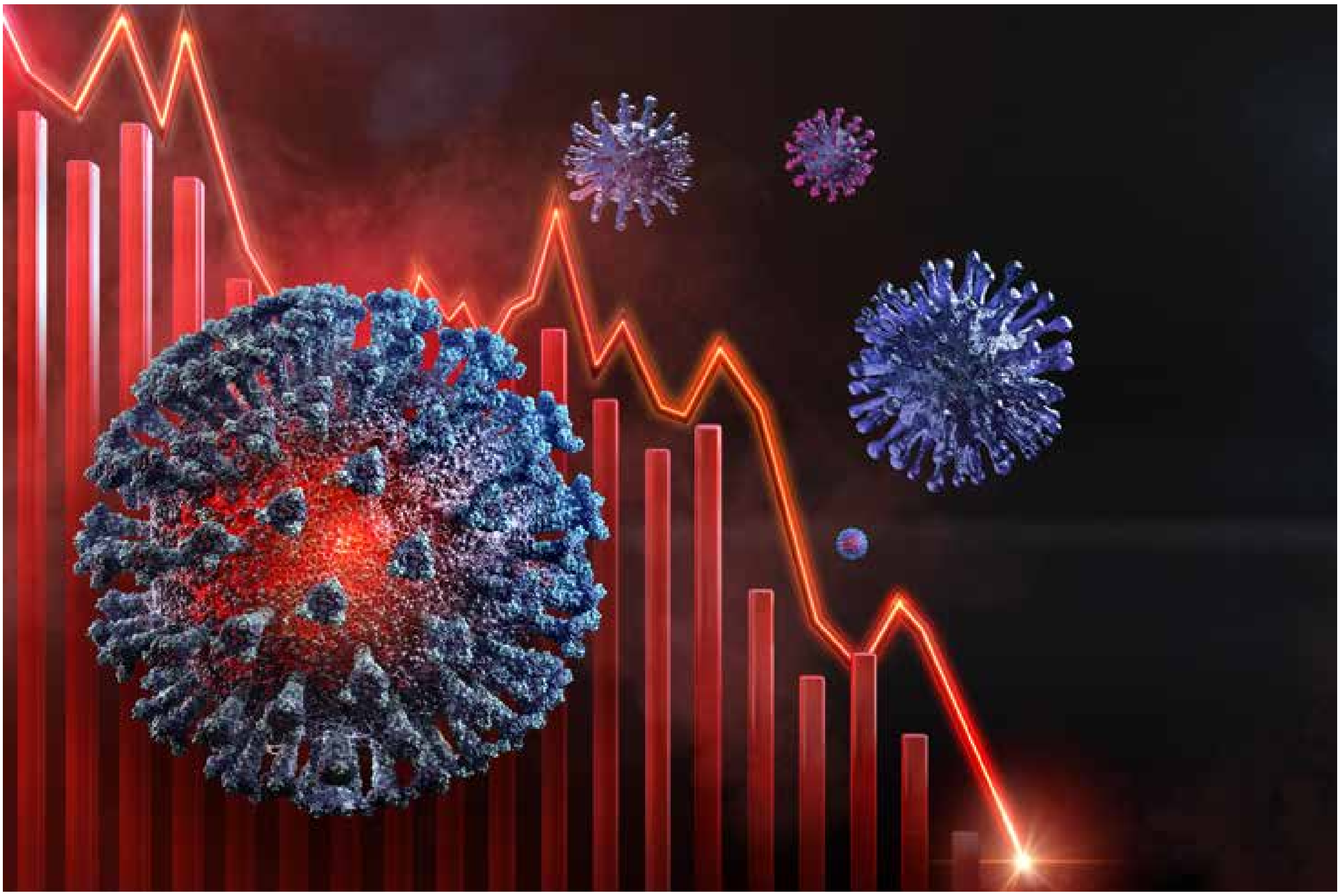
1. Why the COVID-19 Recession is Different and More Dangerous than the Great Recession

The U.S. and much of the global economy is experiencing the most severe recession since the Great Depression, as witnessed by the dramatic and historic downturn in Q2 2020 US GDP[2]. It would also be justified in saying this is the most unusual recession the U.S. has experienced, and maybe, the most difficult to resolve. Moreover, it is likely the most dangerous recession since the Great Depression. The future economic environment for the U.S. economy remains uncertain. Pharma executives need to take note and accordingly make plans to mitigate adverse effects on their business, and more importantly, for the patients they serve. It is these topics that are covered in this white paper.

The Great Recession from December 2007 to June 2009 had its origins rooted in economic events, such as the bursting of a housing asset bubble and subsequent global spreading of the resulting financial contagion. The Great Recession was the worst economic downturn at that time since the Great Depression. The recession was made worse through failures in financial regulation and corporate governance, excessive borrowing by households and Wall Street, and a general unpreparedness of key policymakers to understand fully the financial system, with breaches in accountability and ethics according to the subsequent commission inquiry report[3].

The economic recovery from the COVID-19 recession, however, seems more elusive with no clear end in sight. Unlike the Great Recession, the current recession is virus-based, as the opening quote notes. Thus, the implementation of traditional counter-cyclical policies will likely not work as we have seen. Massive stimulus government spending programs and central banking expansionary monetary policies, as was used to counter impacts from the Great Recession, while having some positive short-term effects as seen in the COVID-19 recession, seem unable to provide a long-term fix. Even worse, increases in deficit-spending may stifle future economic growth[4]. No quick V-shaped recovery is now being touted by economists as expressed earlier in the pandemic, but rather a W-shaped or “accordion effect” recovery, as documented in an earlier Axtria blog, is now holding the dominant view among economists[5].

Recent economic evidence suggests the economy is losing steam and even reversing on gains made earlier[6-7]. The U.S. base case economic outlook index from The Conference Board is projected to be 101.2 in December 2021, still 1% lower than the 102.3 index in January 2020, just before the pandemic struck and restrictive public health policies went into effect[8]. The Organization for Economic Cooperation and Development (OECD) released fresh data on August 26, 2020 that the developed economies, though slowly turning around, face a long recovery[9]. While the drop in U.S. GDP in Q2 2020 of -9.5% was historic, the fall in the Eurozone was even worse at 12.1%[10]. The economic well-being of emerging market countries is even worse, making for a tougher and longer global economic recovery[11]. These economic trends in other countries will make for a longer recovery in the U.S.. Health and economic researchers are now measuring the significant long-term damage of lockdown policies imposed by government officials, one estimate being 400 million jobs lost worldwide and 13 million in the U.S.[12]. Millions of jobs in the U.S. will likely never return[13], and where delays in back-to-office plans by employers will cause long-term negative spillover effects to those service businesses that cater to office workers[14]. Further, the reaction by state and local governments in not only laying off workers, but also having to raise taxes to make up for budget deficits due to a decline in revenues (unlike the federal government, state and local governments generally must run balanced budgets), will combine for negative financial drag effects on the national recovery and stunt future economic growth[15]. Lastly, the adverse economic effects from this recession are creating dire social consequences that are clearly distinguishing it from the Great Recession (and echo the social costs not seen since the Great Depression). The Census Bureau reported that 30 million people did not have enough food to eat in



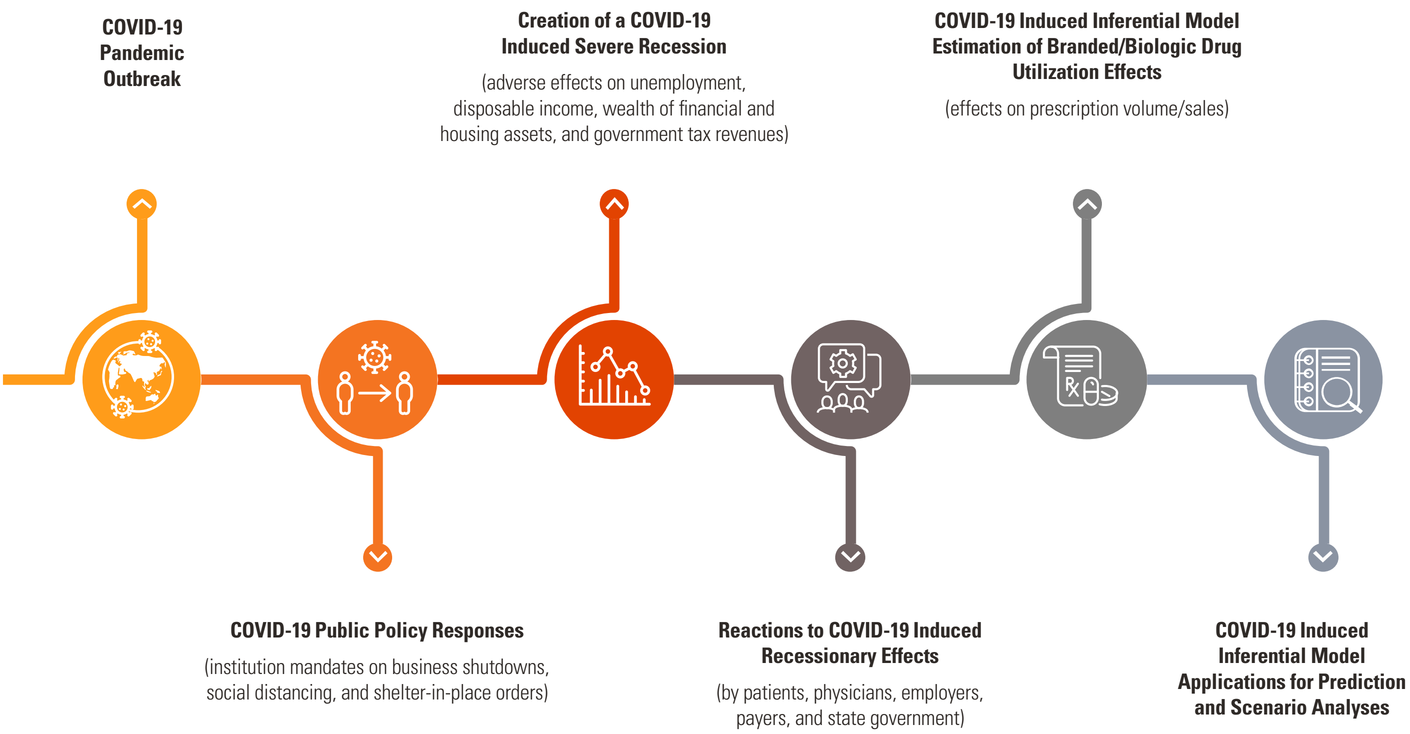
the week when the survey was taken during July 2020[16]. Further, analysis of Census Bureau survey results indicated that somewhere between 30-40 million people are at risk of being evicted due to their inability to pay rent[17]. These adverse social consequences from the COVID-19 recession mean people have to choose potentially between necessities: food vs. rent vs. pharmaceuticals. Drug affordability problems will rise in prominence among people.

The U.S. passed the 6 million confirmed coronavirus case mark on August 31, 2020, about three weeks after 5 million cases were reached[18]. The U.S. death toll is now over 183,000, according to the late August 2020 data from Johns Hopkins University[18]. The increase in U.S. cases appears to be slowing, and states like California and Florida, that saw earlier spikes in cases, are also experiencing an easing of cases[18]. This does not mean, however, COVID-19 is going away any time soon. Experts note the existence of COVID-19 will be in the environment for quite some time. Americans will have to contend indefinitely with this situation until there is the wide availability of a vaccine, generation of herd immunity, and/or the development of quick and effective treatments that minimize any serious health effects and hospitalization. This means Americans will likely have to continue adjusting their behavior to account for lowering their risk of contracting COVID-19.

2. Importance of Applying Economic Analysis to Understand, Measure, and Forecast COVID-19 Recession Effects

What then should pharma executives do? The current situation means the pathway of effects of COVID-19, as illustrated in **Figure 1**, and specifically how this recession impacts drug utilization, as noted in **Figure 2**, are still very important for pharma executives to understand, measure, and forecast. The use of economic analysis and econometric modeling will be crucial to develop useful insights for business decision-making.

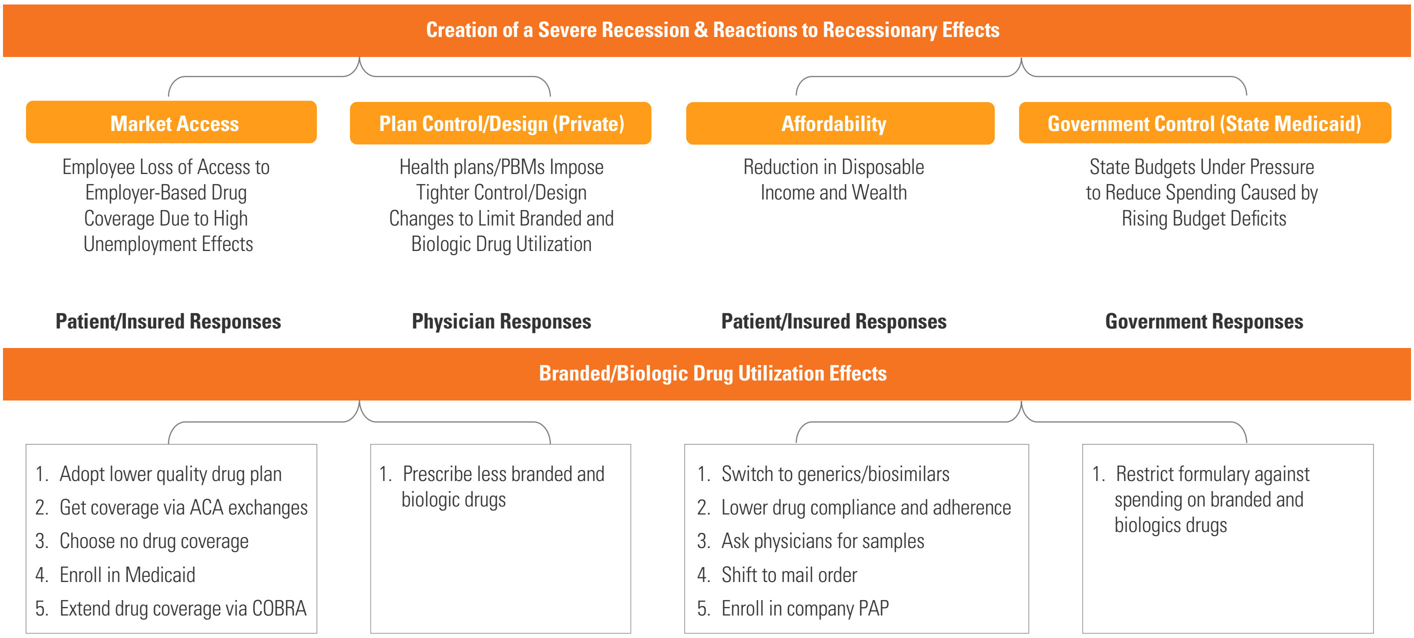
Figure 1. High-Level Pathway Analysis to Measure and Predict COVID-19 Severe Recession and Related Effects on Brand Utilization



Source: Axtria Inc.

Figure 2. COVID-19 Induced Recession Causes Four Pathways of Effects that Impact Brand Utilization

Market Access, Plan Control/Design, Affordability and Government Control Reactions to Recessionary Effects on Drug Utilization



Source: Axtria Inc.

COVID-19 will indefinitely remain in the environment, and thus, the resulting continued economic uncertainty it generates. The preceding descriptions of the extent, uncertain length, and severity of the COVID-19 recession strongly suggest that pharma executives need to plan to continue conducting economic analysis to understand, measure, and forecast effects on brand utilization. **Figure 2** outlines the pathways in which the COVID-19 recession affects brand utilization. The strongest effects on brand utilization will likely be through decreases in Market Access and Affordability. Economic analysis and econometric modeling are available to unlock these effects and provide executives with insights for decision-making.

In addition, just as the status of COVID-19 significantly varies around the country, so too are the geographic-specific, sub-national economic effects. The good news is that the pathway of effects outlined in **Figure 1** and **Figure 2** are ripe for economic analysis and econometric modeling to gain valuable insights for business decision-making at the sub-national level (e.g., county, metropolitan statistical area).

Axtria's think tank in Decision Science has developed innovative solutions and useful insights to help pharma clients with the preceding key business issues generated by the COVID-19 recession that require understanding economic dynamics. Axtria has trained advanced-degree economists with pharma industry experience to assist clients in finding actionable solutions from adapted commercial analytics incorporating these important economic dynamics. Furthermore, Axtria is using local market economics data from a top-tier econometrics forecasting firm, coupled with nano-level data from anonymized phone data tracking firm (see **Figure 3**). This combination of data creates truly innovative metrics reflecting human social behavior coupled with economic effects as a powerful tool for life sciences to make informed decisions on healthcare activity, patient flow, and impact on diagnosis and treatment. The results are innovative measurement and forecasting of effects at the local level for valuable business insights.

Figure 3. Axtria's COVID-19 Task Force has Developed Innovative Solutions to Help Clients Navigate The "Accordion Effect"

Moody's Economic Data Partnership

- Data needed to capture varying economic impact at local level
- Moody's provides high quality econometric forecasts of future economic conditions

SafeGraph Mobility Data Partnership

- Accordion Effect will continue, with geographies opening and closing
- Mobility data can be used to track access to providers and impact on healthcare utilization

Short-Term Capabilities and Solutions	Long-Term Capabilities and Solutions
Key-drivers analysis	Customer data platform
Real time traffic recovery analysis	Omnichannel capability
Short-term sub-national forecasting	Commercial model for the new normal
Access and affordability analytics	Market access strategy & processes in the new normal
Marketing-mix curve updates	Analytics productization and industrialization
End-to-end resource allocation and deployment	

Source: Axtria Inc.

Finally, while the focus of the preceding proposed analyses is on COVID-19 recession effects on brand utilization, there is a clear potential that reductions in drug adherence due to market access and affordability problems will ultimately affect health and economic outcomes. The same methodological approach used to measure adverse effects on brand utilization can estimate negative impacts on patient drug adherence as the dependent variable. In turn, reductions in patient drug adherence can be empirically tied to decreases in health outcomes. More evidence has been revealed since the Great Recession on the subsequent creation of negative health outcome effects due to adverse changes in economic dynamics[19]. The greater severity of the COVID-19 recession will undoubtedly produce even larger negative effects on patient health outcomes.

3. Closing Remarks

The COVID-19 recession is the most severe economic event since the Great Depression. Contrary to signals from financial markets approaching or reaching all-time highs that may suggest an improving economic picture, significant evidence is building that full recovery back to pre-pandemic levels is still far off. Significant economic uncertainty remains. Economic effects from this recession on pharmaceutical utilization and potentially on health outcomes are real and should still be of concern to executives. This recession illustrates the growing importance of understanding, measuring, and forecasting how changes in economic dynamics affect pharma business decision-making. The need for empirical analysis of these dynamics is critical to the successful operation of pharma companies and for the patients they serve.

If you are interested in how economic dynamics are affecting the development and application of commercial analytics, please contact us (directly below). Axtria would be delighted to help and ensure that your commercial analytics team is prepared for the challenges brought about by changing economic dynamics, while allowing us to ensure that potentially life-saving medications continue to get to the appropriate patients.

Given the dynamic nature of this pandemic, please read articles on the *Axtria Research Hub* (https://www.axtria.com/axtria-research-hub-pharmaceutical-industry/) and *Axtria Blogs* (https://insights.axtria.com/blog) for updates.

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