
Stabilization Characteristics of the Pandemic

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I have been tinkering with the GEM Project's rational-behavior model of extreme instability, looking at whether it can be usefully adapted to the COVID-19 pandemic. (See Annable and Schechter, "Modeling Extreme Instability," summarized earlier on this Blog.) Originally constructed during the Great Recession, the analysis incorporates generalized-exchange innovations into the Early Keynesian business-cycle framework, which identifies relevant macro shocks and focuses on their propagation. The Annable-Schechter theory provided helpful guidance for the design of stabilization policy in both the 2008-09 crisis and the ensuing sluggish recovery. This post reports on some sensible implications of that still incomplete tinkering. They are divided into two parts. First is an overview of central characteristics of pandemic instability, provided below. Second is an assessment of real-time policy priorities, which will be provided in a subsequent post.

Projecting the Virus

The fundamental difficulty in modeling this pandemic is the need to inform the analysis with useful assumptions about the future course of the novel coronavirus. I posit that, in response to the extraordinarily speeded-up research effort, effective vaccines will be available within 18 months. That assumption especially constrains a critical parameter in the original GEM model – the credibility of government efforts to avoid a depression (denoted by C .) Halting the virus's capacity to spread eliminates its direct influence on economic activity, such as people being afraid to shop in stores, dine in restaurants, take a trip, or go to work. Indeed, advance word of vaccines' progress will strengthen investor/lender perceptions of the government's capacity to manage the COVID-19 pandemic. The GEM extreme-instability model features the criticality of asset-price divergence from economic fundamentals in depression macrodynamics.

Macro Shock

Pandemics obviously differ from the 2008-09 Great Recession. The core problem in the earlier disruption was collapsing effective demand while this one begins with collapsing effective supply. Efforts to mitigate the powerfully contagious coronavirus induced shutting down a great deal of the economy.

In the interim before the production of effective vaccines, the central public policy question is how governments globally manage the trade-off between COVID-19 deaths and economic damage from mitigation efforts. That question is beyond the writ of the GEM Project. The answer will reveal a great deal about society, especially its core values and leaders capacity to defend those values. Especially important here is how information is disseminated as well as our collective tolerance for inaccurate information.

Shock Propagation

Barriers to effective supply. Three interrelated components here are most significant. First is the absence of effective virus-infection protection of workers and customers. As already noted, full opening of the economy awaits vaccines or some other mitigation, such as herd immunity, of the capacity of the novel coronavirus to spread. Second are breakdowns and the time needed to reconstruct global supply chains. Third is the incidence of bankruptcy that diverts the macro recovery to the deliberate justice system, producing serious delays in restoration dynamics.

Barriers to effective demand. Permitting widespread bankruptcy to result from the mandated shutdown is a double whammy, also badly damage the capacity of aggregate demand to recover sufficiently to prevent a prolonged weak recovery in employment and production. Moreover, the uncertain future, rooted in doubt about the prospects for effective therapies or vaccines, discourage consumers' propensity to spend and business propensity to invest.

Difficulties in restoring normal economic activity will be especially aggravated by the reluctance of the most vulnerable to emerge from isolation. Also important are powerful multiplier effects from initial shock. Shock propagation is where GEM modeling contributed to our understanding 2008-09 crisis and where it most contributes today. We know that aggressive monetary policy was the key to preventing depression in 2009. We also know that, due to Congressional inability to rise to the challenge, fiscal policy provided relatively little help.

The debilitating power of debt needs emphasis. The resumption of growth will be hindered, like it was in the aftermath of the Great Recession, by the extent to which the private debt overhang is extensive and slow to be resolved.

What is today's greatest economic policy risk to sufficient demand? If the 2008-09 crisis is any guide, the most damaging problem will be the reluctance of Congress to spend enough, getting bogged down in its quest for partisan advantage. Meanwhile, the Fed is demonstrating that it learned the lessons from 2008-09 well.

Model Implications

Flooding the economy with money is the most effective, as well as a remarkably low-cost, stabilization policy in this pandemic. Bernanke's approach in 2008-09 still holds. There is no spending program too big or too quick.

The analysis indicates that the greatest threat to the strength of the recovery from the shutdown is the degree to which the extreme mitigation translates into personal and business bankruptcies.

The original GEM extreme-instability model made it clear that financial asset valuations will have a rough ride in this pandemic. The extended model indicates that valuations will begin shifting back to being determined largely by macroeconomic fundamentals as reports of effective vaccines culminate in successful formulations. The stock market rebound will be ahead of the recovery in production and employment. Meanwhile, economic fundamentals will be more affected by the pandemic than they were by the 2008-09 financial crisis.

Consumer reluctance to emerge from isolation prior to being effectively vaccinated will relatively quickly become concentrated in most at-risk groups, lessening the effectiveness of broad-based social distancing and reducing pandemic barriers to reopening the economy.

Product price deflation will be confined to commodity markets. As modeled in the GEM Project, general price deflation requires broad nominal wage reductions which in turn requires broad sustained job loss, i.e., a depression. Deflation substantially lags, does not lead, collapsing nominal demand.

The most important conclusion, of course, is that the quest for effective vaccines trumps everything else in the current extreme instability. It is commonplace to hear that vaccines are uncertain and necessary testing protocol and large scale-manufacture take substantial time. That is true. But, provided sufficient funding, that time can be significantly reduced. Consider an obvious example. In a pandemic, public funds could be used to jump start the manufacture of the most promising vaccines before the human testing phase. Such production would include failed formulations and therefore needs to be government funded. The function should be understood as similar to the huge outlays on national defense undertaken to manage outsized contingent risks. In another example, bio-medical technological advance better equip researchers to design effective vaccines. It is a rational function of government to aggressively fund such research.

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