

A Pandemic Trust Fund¹

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The 2020 COVID-20 pandemic was widely predicted by scientists not just in vague, general terms but in specific warnings about the source, location, and type of virus.

...genetic diversity exists among zoonotic viruses in bats, increasing the possibility of variants crossing the species barrier and causing outbreaks of disease in human populations. It is therefore essential that we enhance our knowledge and understanding of reservoir host distribution, animal-animal and human-animal interaction (particularly within the wet-market system), and the genetic diversity of bat-borne viruses to prevent future outbreaks.²

Given the massive number of coronaviruses carried by different bat species, the high plasticity in receptor usage and other features such as adaptive mutation and recombination, frequent interspecies transmission from bats to animals and humans is expected...Currently, no clinical treatments or prevention strategies are available for any human coronavirus.³

Nor were the warnings limited to “obscure” scientific publications filled with technical jargon that was difficult for the public to understand. In 2011 a realistic scenario for a pandemic was laid out in the movie *Contagion* featuring superstars Matt Damon, Gwyneth Paltrow, and Laurence Fishburne. The movie was well-reviewed and earned over a hundred million dollars at the box office. Similarly, in 2015, Bill Gates gave a TED talk on pandemics titled “The Next Outbreak? We’re not ready”. Gates’s TED Talk has been watched over 32 million times.

We were warned. Indeed, the great pandemic may be the most warned about disaster in human history. Even more surprisingly the warnings were **not** ignored. Inspired by John Barry’s *The Great Influenza*, George Bush launched a national pandemic preparation plan in 2005.⁴

Thus was born the nation’s most comprehensive pandemic plan—a playbook that included diagrams for a global early warning system, funding to develop new, rapid vaccine technology, and a robust national stockpile of critical supplies, such as face masks and ventilators...⁵

A similar preparation process was started in California:

In 2006, citing the threat of avian flu, then-Gov. Arnold Schwarzenegger announced the state would invest hundreds of millions of dollars in a powerful set of medical weapons to deploy in the case of large-scale emergencies and natural disasters such as earthquakes, fires and pandemics.

But when no pandemic happened, priorities changed, and both Federal and state programs languished and died.

The effort was intense over the ensuing three years, including exercises where cabinet officials gamed out their responses, but it was not sustained. Large swaths of the ambitious plan were either not fully realized or entirely shelved as other priorities and crises took hold...as time passed, it became increasingly difficult to justify the continued funding, staffing and attention...⁶

...But the ambitious effort, which would have been vital as the state confronts the new coronavirus today, hit a wall: a brutal recession, a free fall in state revenues—and in 2011, the administration of a fiscally minded Democratic governor, Jerry Brown, who came into office facing a \$26-billion deficit.

And so, that year, the state cut off the money to store and maintain the stockpile of supplies and the mobile hospitals. The hospitals were defunded before they’d ever been used.⁷

It is evident that the US government finds it difficult to invest in long-term projects, perhaps especially in preparing for small probability events with very large costs. Pandemic preparation is exactly one such project. How can we improve the chances that we are better prepared next time?

Small probability events by their nature happen infrequently and by human nature attract attention only when they do happen. The political attention span is limited. Thus when attention is available, we want to spend a lot on infrastructure that commits us to a future flow of benefits. In other words, it’s better for the government to spend a large amount at once in return for a committed flow of benefits than to budget for the flow annually.

To their credit, the Department of Defense has invested in private-public partnerships with the correct structure. Namely, in return for an up-front investment in capacity a vaccine manufacturer sells options to the DOD that can be exercised on that capacity in an emergency.⁸ Similar contracts have been entered into by The Coalition for Epidemic Preparedness Innovations (CEPI), a global public-private partnership. The advantage of these contracts is that the DOD spends now but the firm commits to maintain the capacity for a long period of time (e.g. 25 years). In future non-pandemic years, the DOD's contract doesn't cost the DOD very much, and so it is not subject to budgetary degradation.

The DOD contracts are well-specified because they are to some extent self-enforcing. The private firm, for example, has relatively strong profit incentives to use the capacity to make its own vaccines and biologicals, thus keeping the facility "warm" and ready for emergency use. Occasional inspections, perhaps even emergency drills, by the DOD are less costly to the DOD than having to continually requisition funds from other programs.

The main problem with these contracts is that the government needs to buy much more to protect the public. The key to protecting the public is to invest enough to increase total capacity in an emergency, not merely to delegate some of that total capacity to a relatively small number of military personnel, the main goal of the current DOD programs.⁹

More generally, we would like organizations tasked with protecting the public from low-probability, high cost events to be funded on a permanent basis that is not subject to budgetary discretion or degradation. Instead of yearly appropriations, it's preferable to have a one-time appropriation to finance a stream of investments. The financial means of doing this is to buy a bond with an earmarked revenue stream. That is, instead of selling bonds the government buys long-term safe bonds which pay out dividends that are earmarked to a program, in this case to pandemic preparation.

There is a well-known example of such a financing scheme, the social security trust fund. The social security trust fund was established in 1937. It buys long-term safe bonds that pay dividends that are used to finance social security payments. Unlike the pandemic trust fund I propose, the Social Security Trust Fund buys bonds on an ongoing basis but that is a relatively unimportant difference.

The Social Security Trust Fund buys the safest form of *government bonds*, which has given rise to a long-standing controversy over whether the trust fund is a "fiction."¹⁰ Of course, the trust fund is a kind of fiction but so are federalism, checks and balances, and the Constitution. Fictions can be powerful because they create shared understandings that govern behavior and determine equilibrium action. The trust fund does what it says—it increases trust by indicating that Social Security payments are higher in creditor priority than other spending. Just as Section 507 of the Bankruptcy Code increases trust by indicating that secured bondholders get paid before unsecured creditors such as a company's suppliers. Since 1937, the Social Security Trust Fund has always held net assets, and when it briefly ran deficits in the 1970s and early 1980s, the Greenspan commission was established to shore up

the system.¹¹ That is, the simple existence of the Trust Fund as an accounting entity created an awareness, which made it easier to act to maintain the Fund.

A Pandemic Trust Fund would begin with a \$250 billion investment in bonds earmarked to pandemic preparations. At current effective rates of interest of about 3%, this is enough to support spending of \$7.5 billion annually.¹² Note that \$7.5 billion is nowhere near enough to address the current pandemic, but that is because we did not invest enough in pandemic preparation. Had we invested \$7.5 billion in pandemic preparation every year for the last two decades, for example, we would be in much better shape today. The \$7.5 billion is for annual ongoing preparation.

Ideally, a Pandemic Trust Fund might invest in real assets with an expected rate of return greater than annual expenditures. In this way the fund would grow in real terms over time. The problem with such a fund, however, is that investing in private assets, aside from political control problems, has a significant cost today. A Pandemic Trust Fund invested in \$250 billion of government bonds is an accounting fiction that may be readily agreed upon today at the height of the crisis because it has few current costs. Yet, as we have discussed, accounting fictions can have real power in changing the future allocation of resources.

Trust Funds are a limited but important source of creating trust over multiple generations. The Social Security Trust Fund has worked to protect Social Security payments. The Pandemic Trust Fund would insulate and protect pandemic preparation from the political process and budgetary discretion and degradation.

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The Center for Growth and Opportunity at Utah State University is a university-based academic research center that explores the scientific foundations of the interaction between individuals, business, and government.

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The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Center for Growth and Opportunity at Utah State University or the views of Utah State University.

Endnotes

1. I thank Eli Dourado for comments.
2. Wendong Li, Zhengli Shi, Meng Yu, Wuze Ren, Craig Smith, Jonathan H. Epstein, Hanzhong Wang, et al. 2005. "Bats Are Natural Reservoirs of SARS-Like Coronaviruses." *Science* 310 (5748): 676–79. <https://doi.org/10.1126/science.1118391>.
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4. John M. Barry. 2005. *The Great Influenza: The Story of the Deadliest Pandemic in History*. Revised edition. New York: Penguin Books.
5. Matthew Mosk. 2020. "George W. Bush in 2005: 'If We Wait for a Pandemic to Appear, It Will Be Too Late to Prepare.'" ABC News. April 5, 2020. <https://abcnews.go.com/Politics/george-bush-2005-wait-pandemic-late-prepare/story?id=69979013>.
6. Ibid.
7. Lance Williams, Will Evans, and Will Carless. 2020. "California Once Had Mobile Hospitals and a Ventilator Stockpile. But It Dismantled Them." *Los Angeles Times*, March 27, 2020, sec. California. <https://www.latimes.com/california/story/2020-03-27/coronavirus-california-mobile-hospitals-ventilators>.

8. Tim Belski. 2017. "US DoD Opens Advanced Biologics Manufacturing Facility For Private Public Use." January 18, 2017. <https://www.pharmaceuticalonline.com/doc/u-s-dod-opens-advanced-biologics-manufacturing-facility-for-private-public-use-0001>. See also US GAO. 2017. "Biological Defense: Additional Information That Congress May Find Useful as It Considers DOD's Advanced Development and Manufacturing Capability," no. GAO-17-701. <https://www.gao.gov/products/GAO-17-701>.

9. Since the government wants more capacity than the firm needs this does make the contract potentially less self-enforcing. There are ways of aligning incentives, however. For example, the firms could be required to use scalable bioreactors or to maintain two different lines. The firm would profitably use the two lines to reduce costs when switching production while the government in an emergency would use both lines.

10. The trust fund invests in "special issues" of the United States Treasury. Such securities are available only to the trust funds and are guaranteed on face value at *any time*.

11. On the net asset position see <https://www.ssa.gov/history/tftable.html>. The Greenspan Commission report can be found at <https://www.ssa.gov/history/reports/gspan.html>.

12. On effective rates of interest in the social security trust funds, See <https://www.ssa.gov/OACT/ProgData/intRates.html>