# Contention 1: Biotech (2:35)

#### The biotech industry has and continues to succeed

**Booth ’21 –** Bruce Booth, I'm a partner at Atlas Venture, a biotech-focused early stage venture capital firm, where I focus on helping start and fund emerging therapeutics companies, “The Biotech Paradox Of 2020: A Year In Review”, Forbes, January 4, 2021, [https://www.forbes.com/sites/brucebooth/2021/01/04/the-biotech-paradox-of-2020-a-year-in-review/?sh=20e0551743b3] Accessed 08/18/21 AHS // AP

But herein lies the paradox: 2020 was also the greatest year ever for the biopharma industry, in particular for emerging biotech. Science won the day in 2020. To quote Matt Damon in [The Martian](https://www.youtube.com/watch?v=BABM3EUo990), “In the face of overwhelming odds, I’m left with only one option… I’m going to have to science the shit out of this.” Indeed that’s what the industry did. Science is leading us out of the pandemic. The COVID vaccines being developed and now deployed by multiple companies brought a constellation of biotechnologies together, evaluated them in enormous clinical trials, all in record time. Regulators helped facilitate their rapid development, while maintaining a high bar for efficacy and safety. Same goes for a number of new anti-viral antibodies and medicines. Despite the hype about whacky treatments, data from well-designed front line trials ultimately seems to have won – proving those things that worked, as well as proving that other candidate medicines didn’t work (and allowing us to cast aside ineffectual therapies). The positive sentiment for biotech out of the COVID response has been overwhelming, from society and investors alike. We obviously need to preserve that positive momentum. But scientific progress wasn’t just about COVID. Despite some of the R&D delays that occurred, particularly in the clinic, the R&D engine of the biopharma industry continued with amazing productivity and resilience. We are very fortunate to be in an industry that adapted quickly to the new environment, embracing the remote WFH and limited lab presence model. In many ways, it’s an extension of the [virtual business model we’ve been establishing in drug R&D for the past decade](https://lifescivc.com/2014/06/biotechs-virtual-reality/) or so. This more remote environment hasn’t diminished the productivity of the industry in a meaningful way, as evidenced by the pace of new drug approvals and exciting clinical progress. The FDA’s [CDER approved 53 new medicines in 2020](https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2020), sharing 2nd place of all time with 1996 and a few approvals behind record-breaking 2018. This during a year when the FDA was massively strapped for the COVID response. Some great new medicines are now available for patients: Trodelvy for triple negative breast cancer, Danyelza for pediatric neuroblastoma, Risdiplam for SMA, and Tepezza for thyroid eye disease, to name a few. Many new medicines were approved for rare diseases again this year, like Duchenne, progeria, other others. Including rare cancers, more than two-thirds of recent approvals fit the rare disease definition. We even saw at least two infectious disease medicines for Ebola and Chagas. Beyond these newly approved medicines, 2020 was full of other breakthrough clinical updates from the industry pipeline. Five of the most impressive later-stage outcomes include: CRISPR Therapeutics and Vertex’s CTX001 demonstrated exciting [proof of concept data](https://www.genengnews.com/news/crispr-therapeutics-vertex-report-more-positive-data-for-gene-editing-treatment-ctx001/) in sickle cell disease and transfusion-dependent beta thalassemia with CRISPR gene editing; Myokardia’s mavacamten delivered [improved heart function in a Phase 3 study](https://www.fiercebiotech.com/biotech/esc-myokardia-delivers-positive-phase-3-mavacamten-data-showing-effects-thickening-heart), leading to its acquisition by BMS; [VelosBio’s VLS-101](https://www.cancernetwork.com/view/novel-adc-shows-clinical-activity-in-mcl-and-dlbcl-first-in-human-trial-finds) showed impressive activity in heavily pretreated lymphomas, triggering Merck to engage; Novartis’ [Iptacopan (LNP023)](https://www.novartis.com/news/media-releases/novartis-presents-promising-interim-phase-ii-data-potential-first-class-oral-therapy-iptacopan-lnp023-rare-renal-disease-c3-glomerulopathy-c3g) showed stellar Phase 2 activity in regulating complement in both C3 glomerulopathy and paroxysmal nocturnal hemoglobinuria; and, Acceleron’s sotatercept showed [great promise in Pulmonary Arterial Hypertension](https://www.healio.com/news/pulmonology/20200626/sotatercept-decreases-pulmonary-vascular-resistance-in-pah-pulsar). Continuing their progress from 2019 (when I called them out initially in last year’s review), I’d also flag that Tyk2 continues to shine in psoriasis, SGLT2 continues to deliver in kidney and heart disease, and KRAS-directed programs in cancer continue to impress, all three of which revealed additional Phase 3 data in 2020. These are just a few of the exciting R&D pipeline across the industry, but highlight the modality explosion that continues, as they represent gene editing and cell therapy, both active site and allosteric small molecules, antibody-drug conjugates, and next gen Fc-fusion biologics. With this impressive scientific backdrop, it’s not a surprise that the biotech capital markets boomed in 2020. After collapsing like all of the equity markets in March 2020 as the reality of the pandemic hit hard, the biotech capital markets went on a tear for the next nine months. In short, the biotech equity markets had their best year ever, bolstered in part by robust M&A activity. Here are the summary stats, with data courtesy of my good friends at Cowen & Company: Every major biotech stock index hit its All Time High in 2020, and closed the year near the top. The equal-weighted SPDR Biotech ETF $XBI was up nearly 50% during the year, and up well over 110% since March, while the larger-cap biased NASDAQ Biotech Index was up ~25% and ~60% over those periods, respectively. These metrics outperformed nearly every other sector in the markets. Biotech IPOs hit their All Time High for both volume and deal activity, raking in proceeds of over $14B across 74 deals. Median proceeds per deal doubled last year (up to $180M), with median market values approaching ~$500M. This level of IPO activity is nearly 2.5x more than in 2019, which was also a strong year for IPOs. The IPO market was simply on fire – a product of 2020’s unique context but also of [a decade of evolution in the IPO marketplace itself](https://lifescivc.com/2020/09/evolution-of-the-biotech-ipo-markets-from-busted-to-booming/). And this doesn’t even include all the SPAC IPOs that have been raised this year to acquire emerging biotech firms. Post-IPO performance of the 2020 class with regard to first day and first month stock reactions also hit All Time Highs, with median performance up over 25-40% from the offer price – beating every year in at least two decades. Many of these new offerings have held onto those gains in the months and quarters after their IPOs. More than 80% remain above their IPO offer prices ([here](https://twitter.com/bradloncar/status/1336407968221376513/photo/1)); for historical comparison, that’s usually much closer to 50-60% for an annual IPO cohort ([related chart here](https://1zz10747jh9x3auhkivc05o5-wpengine.netdna-ssl.com/wp-content/uploads/2020/04/Post-IPO-Performance-By-Annual-Cohort-vs-XBI.jpg)). Follow-on equity financings in biotech hit their All Time High as well, with 217 deals raising over $37B. This implies a staggering 4 deals were priced on average each week in 2020! The balance sheets of many emerging small cap biotech companies look incredibly strong right now, which bodes well for robust R&D funding in 2021-2022. Venture capital funding in biotech not only hit an All Time High, but it blew the marker away. According to preliminary data from Pitchbook, over $26B of venture funding went into US-based biotech firms in 2020, with several quarters topping the charts for record-breaking funding ([the “tsunami” in the first half](https://lifescivc.com/2020/07/the-record-breaking-biotech-funding-tsunami-of-1h2020/) continued into the second half of the year). 2018 was the prior high, and only hit $19B. This implies US-based private biotech firms were raising $500M per week in 2020! This is about 5x bigger than what we had at the start of the biotech bull cycle in 2013, a year that felt very robust at the time compared to the prior decade. Further, while the equity markets were booming, the M&A market for both large and emerging biotech was also strong in 2020: AZ’s agreement to acquire Alexion for $39B, Gilead’s take out of Immunomedics for $21B, Myokardia’s acquisition by BMS for $13B, Momenta by J&J for $6.5B, just to name a few. Lots of smaller names in the early stage ecosystem were also acquired. As the equity markets soared, Pharma had to either step up and pay up, or miss out. This M&A activity is continued evidence of the resilience of the biopharma ecosystem, and created a “put” behind many small cap stock prices. This M&A support is clearly part of the equity market buoyancy. Reflecting on these markets more personally, Atlas Venture also experienced some of the excitement in the equity capital markets over 2020 with a front row seat: over $3.7B in new capital came into our portfolio companies in 2020. We raised $600M across eleven seed and Series A financings, another $500M in Series B and later, four IPOs/SPACs raised $800M, and a dozen firms raised $1.8B in public follow-on financings. We also had four M&A exits, including Cadent and Vedere both by Novartis, Disarm by Lilly, and LTI by Bial. Thanks to the resilient entrepreneurs we work with, it was one of our strongest years ever, [as summed up here in our Onward & Upward newsletter](https://atlasventure.com/emails/2020-year-in-review/index.html). Stepping back from the celebration of these euphoric equity markets, it’s hard not to be jarred by the disconnect of biotech from the Main Street economy, with millions out of work, storefront businesses shuttering, and immense economic challenges across the board. It’s a dumpster fire in 2020, but we’re hitting All Time Highs on every measure? Why is there this disconnect? First, biotech doesn’t follow conventional business metrics, and is therefore an odd part of the venture business ecosystem. Data is the ultimate currency of value in R&D-stage biotech, rather than traditional business metrics (e.g., MRR, CAC, etc…). While typical industries are often affected by acute changes in consumer demand (and spikes in unemployment), which alter their key performance metrics, this isn’t the case for biopharma in the short-term: we continue to push new medicines forward, as we did this year, generating the value-creating data that gives us confidence in progressing new medicines to market. Plus, with health insurance covering most medicines, the impact of acute economic changes on the actual sales of pharmaceuticals is relatively buffered. This creates a disconnect from conventional economic cycles, and is one of the reasons why biopharma tends to outperform other sectors during financial recessions ([here](https://twitter.com/LifeSciVC/status/1246095669103902725?s=20)). Second, all of the equity markets bounced from March due to the [flood of funds from the Federal Reserve.](https://www.brookings.edu/research/fed-response-to-covid19/) Massive monetary and fiscal support in the spring injected optimism into the equity markets, perhaps causing overbought situations in some sectors (like the WFH economy). With near zero interest rates today and for the foreseeable future, and investors seeking better returns, higher beta sectors like biotech often benefit in particular during these “risk on” periods. This has certainly been the case since the spring and continues today. Lastly, the aforementioned preeminence of science, and the hugely positive sentiment towards biotech during this pandemic, has been a very strong tailwind driving demand for the sector. COVID-associated names clearly outperformed more generally, but the whole sector is contributing to the solid performance ([here](https://twitter.com/bradloncar/status/1333882232423985154/photo/1)). Anecdotally, it’s also clear that retail interest has also flooded into the space, driving up demand for stocks across the board. So where does all this put the biotech sector at the start of 2021? All Time Highs are a tough place to start from a “high water mark” perspective, but there are plenty of reasons for optimism about the biotech markets as we head into the new year: science and biotech in particular continue to lead us out of the global COVID pandemic, strong R&D momentum around new medical innovations (including those with curative intent like gene and cell therapies), enormous dry powder on the balance sheets of emerging biotech companies, and an expectation of robust M&A as Big Pharma continues to leverage external R&D to add new biotech-discovered drugs to their pipelines.

#### IP protections spurs biotech innovation

**Maxmen ’12** – Amy Maxmen, “Biotech report says IP spurs innovation”, Nature, June 20th, 2012, [http://blogs.nature.com/news/2012/06/intellectual-property-spurs-innovation.html] Accessed 08/21/21 AHS // AP

Some people say that patents on intellectual property (IP) [stifle](http://en.wikipedia.org/wiki/Intellectual_property#Criticism) progress when they occur at early phases of research. However, **history suggests the opposite**, according to a report presented at the 2012 [BIO International Convention](http://convention.bio.org/) in Boston, Massachusetts. “There’s been active debate about whether stronger intellectual-property rights are a help or a hindrance to developing industries,” says Joseph Damond, vice-president for international affairs at the [Biotechnology Industry Organization](http://www.bio.org/)(BIO), which commissioned [the report](http://www.pugatch-consilium.com/wp-content/uploads/2012/06/Pugatch-Consilium-Taking-Stock-Final-Report.pdf)to add evidence to the argument. Questions about IP’s impact on research are particularly crucial to countries that are beginning to invest in biotechnology.  So that they could advise those countries on IP regulations, BIO asked for an assessment of IP trends in nations around the world. In response to their request, [Pugatch Consilium](http://www.pugatch-consilium.com/?page_id=19), a consultancy group based in Israel and the United Kingdom, combed through publications and databases for associations between IP rights (IPR) and measures of economic development and biotech health. “In the literature we found that no, patenting does not stand in the way of research,” says David Torstensson, a senior consultant at Pugatch and an author on the report presented 19 June. At the talk, which was comprised of biotech fans, the audience appeared to agree with his pro-IP conclusion.  Database evidence suggested the same. Specifically, Torstensson says that over the past decade, increases in patents have been matched by growth in the biotech and pharmaceutical sectors in India, Brazil, Singapore and other countries with emerging economies (see ‘Number of biotechnology patents filed under PCT, 1977–2009’). Patents, in general, are on the rise but the increase in biotech patents is most pronounced. For example, the rate of biotech patent applications to the European Patent Office grew by 14.3% annually in the past decade compared with 8.3% for all patent applications. Another measure of biotech health, called technology transfer, correlated with patent increases as well (see ‘Number of biotechnology alliances for research or technology transfer’). Tech transfer rates often reflect foreign investments in biotech. “If you want a lab in Taiwan to help with a private project, you’ll need to share your intellectual property, but you want to be sure that your secret is protected, and that’s where tech transfers come in,” Torstensson explains. The strength of patent rights can be quantified in an index ranging from 0 (no patent rights) to 5 (very strong). Over time, the countries that US biotech and pharmaceutical companies have invested in have moved up the IP barometer, indicating yet another correlation between economic improvement and IP (see ‘Patent rights index, 1960–2005’). For example, Korea’s score has nearly doubled since the 1990s.  The rising number of patents granted by IP-related laws is due in part to the boom in biotechnology firms. In 2006, there were ten times as many biotech companies in Korea as there were in 1999, according to the report. Similarly, after Taiwan instituted a rule about IP based on government-funded findings, [the Bayh-Dole Act,](http://en.wikipedia.org/wiki/Bayh%E2%80%93Dole_Act) university patenting increased by 354% between 2004 and 2009. **When it comes to stimulating innovation at early stages of research, the argument against the IP model is quite theoretical,** says Torstensson. “We asked, where is the data,” he says. “Intellectual property rights won’t be a silver bullet. Of course, countries also need to think about reforms in infrastructure, human resources and education,” says Torstensson. “But when you are investing in R&D and PhDs, and when you want companies to grow, then you should have IPs.”

#### Biotech is key to sustainably addressing our most pressing issues, like food security, climate change, national security, and medical care

**Eisenhower ’15** - The Dwight D. Eisenhower School for National Security and Resources Strategy at the National Defense University Spring 2015“Spring 2015 Industry Study Final Report Biotechnology” [http://es.ndu.edu/Portals/75/Documents/industry-study/reports/2015/es-is-report-biotechnology-2015.pdf] SAO

A strong, secure United Slates depends on a diverse, innovative, and growing economy. The U.S. biotechnology industry contributes substantially to our healthy economy and helps to establish an enduring national competitive advantage. Targeted adjustments to existing regulations, policies, and practices; increased investment in scientific education and research; and simplification of intellectual property and data protection regulations and practices can further spur development and marketization of new technologies in a segment of the economy that is critical to U.S. prosperity and national security. Only biotechnology can address some of the nation's most pressing challenges, including medical care, food security, and sustainable energy for a growing, aging population. Government actions and policies that protect, sustain, and grow the bioeconomy are nothing short of imperative, and will sustain the position of the United States as a responsible global leader while increasing American prosperity and security. The Great Recession of 2008 dealt a blow to U.S. prosperity and highlighted the importance of an innovative, resilient, science and knowledge-based economy. As the world grows more interdependent, increasing tension between human consumption and global sustainability creates pressing challenges. Arable land is decreasing, but the global population is growing, threatening the world's food supply.1 Medical advances allow us to live longer, healthier lives, compounding the effects of population growth and increasing the need for affordable healthcare and sustained investment in medical technologies, including biotechnology. The traditional U.S. reliance on fossil fuels exacerbates the complexities of political and diplomatic relationships with some foreign governments, and contributes to the carbon emissions that are rapidly changing our climate. These challenges threaten U.S. national security and global sustainability. Yet, innovative solutions are within reach and could be even more effective, sustainable, and affordable with the right mix of industry, academic, scientific, and government action. Biotechnology - the use of biological processes, organisms, or systems to manufacture products intended to improve the quality of human life - can play a strong role in addressing complex global problems while driving growth, innovation, and sustainability in a diverse and vibrant U.S. economy.2 The agricultural, industrial, medical, and defense segments of biotechnology all have roles to play in nourishing and growing an innovative economy, establishing an enduring national competitive advantage, and strengthening U.S. national security and the well-being of our population. Targeted adjustments to existing policies and practices in education, research, intellectual property and data protection, and regulator)' systems will go a long way toward helping U.S. scientists and industry rehabilitate biotechnology's "brand" from one that inspires fear, aversion, and misunderstanding to one that is widely accepted and understood as a force for good.

#### Food shortages collapse civilization --- causes disease spread, terrorism, and economic collapse- turns case

Brown ’09 - Lester Brown, founder of both the WorldWatch Institute and the Earth Policy Institute Scientific American May 2009 [“Could Food Shortages Bring Down Civilization?” <http://www.scientificamerican.com/article/civilization-food-shortages/>] JRB

**States fail when national governments can no longer provide** personal security, **food security** and basic social services such as education and health care. They often lose control of part or all of their territory. When governments lose their monopoly on power, law and order begin to disintegrate. **After a point, countries can become so dangerous that food relief workers are no longer safe and their programs are halted**; in Somalia and Afghanistan, deteriorating conditions have already put such programs in jeopardy. **Failing states are of international concern because they are a source of terrorists, drugs, weapons and refugees, threatening political stability everywhere.** Somalia, number one on the 2008 list of failing states, has become a base for piracy. Iraq, number five, is a hotbed for terrorist training. Afghanistan, number seven, is the world's leading supplier of heroin. Following the massive genocide of 1994 in Rwanda, refugees from that troubled state, thousands of armed soldiers among them, helped to destabilize neighboring Democratic Republic of the Congo (number six). **Our global civilization depends on a functioning network of politically healthy nation-states to control the spread of infectious disease, to manage the international monetary system, to control international terrorism and to reach scores of other common goals. If the system for controlling infectious diseases**--such as polio, SARS or avian flu--**breaks down**, **humanity will be in trouble.** Once states fail, no one assumes responsibility for their debt to outside lenders. **If enough states disintegrate, their fall will threaten the stability of global civilization itself.**

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# Contention 2: Drug Donations (2:16)

#### Uniqueness: Big Pharma leads all corporations in donations

Speights 18 - Keith Speights, The Motley Fool, Updated October 4th, 2018 “12 Big Pharma Stats That Will Blow You Away” [https://www.fool.com/investing/2016/07/31/12-big-pharma-stats-that-will-blow-you-away.aspx] Accessed 8/22/21 SAO

If you buy a dozen doughnuts, the doughnut shop usually throws in one for free. I like that baker's dozen approach (mainly because I like doughnuts), so here's an extra Big Pharma statistic that might make your jaw drop: In 2013, biopharmaceutical companies led all other industries in corporate giving by donating 19.4% of pre-tax profits to charitable organizations. You probably won't be surprised, though, that 90% of the contributions came in the form of in-kind product donations. High list prices for certain drugs can add up to some major bucks quickly. Still, it's nice to know that the frequently vilified Big Pharma companies aren't as heartless as they're sometimes portrayed.

#### Link: Reduced prices in rich countries trades off with price concessions and donations to low income ones.

Mello 18 - Michelle M. Mello, Professor of Law, Stanford Law School, and Professor of Health Research and Policy at Stanford University School of Medicine, Minnesota Law Review, 2018 “What Makes Ensuring Access to Affordable Prescription Drugs the Hardest Problem in Health Policy?” [https://scholarship.law.umn.edu/cgi/viewcontent.cgi?article=1127&context=mlr] Accessed 8/22/21 SAO

Another perplexing moral problem is that tradeoffs may exist between improving the affordability of prescription drugs for Americans and maintaining their affordability to patients in other countries.53 Branded drug prices in the United States are generally higher than in other countries because most foreign governments have adopted stronger mechanisms than the United States for controlling prices—for example, more consolidated price negotiations or direct price controls.54 Because we pay so much, pharmaceutical companies may be more willing or able to grant price concessions elsewhere, including outright donation of critical medications to low-income countries. Actions we take to restrict price, therefore, could have unintended, but real, effects on drug affordability in less wealthy countries. This prospect raises the question of what obligations, if any, Americans have to patients in the rest of the world. Some conceptions of global justice hold that members of relatively wealthy societies have a moral obligation to consider the welfare of individuals in poorer countries in making policy decisions.55 Other views challenge the notion that such duties exist.56 Some even assert that the status quo is unfair: Americans not only pay more for marketed drugs, they shoulder a disproportionate share of the cost of developing those drugs.57 Pharmaceutical R&D is underwritten both by the high prices Americans pay for medicines and the tax dollars we spend on basic-science research to identify promising new molecules.58 Americans have not openly confronted these clashing viewpoints as a polity, but strong measures to reduce the cost of prescription drugs here would make the global-justice dilemma hard to ignore. Further, as with the other moral dilemmas discussed above, the problem has greater salience in the context of prescription drugs than in other areas of health policy. It is true that other health policy decisions we make, such as how much of federal agencies’ budgets to devote to health system capacity building in low-income countries, also affect the healthcare costs that poor countries must bear. However, because the market for prescription drugs is global but is propped up by high prices in the United States, tamping down drug prices has a zero-sumgame quality that is unique. Squeezing one part of the drug-price balloon may cause it to bulge out in other areas.

#### Internal Link: Pharma donations are essential to capacity building and access globally

Mistry 17 - Neeraj Mistry, MD, MPH, is a Washington DC-based global health consultant, Global Alliance for Patient Access, August 2017 “THE ROLE OF DRUG DONATIONS IN EXPANDING ACCESS TO MEDICINES” [https://gafpa.org/wp-content/uploads/2021/06/GAFPA\_Drug\_Donations\_August-2017.pdf] Accessed 8/22/21 SAO

Drug donations can make treatment accessible for patients and communities in need. They also have a more far-reaching impact, such as strengthening health systems, securing sustainable supply chains, and fostering markets and public services that promote patient access. Drug donations to low- and middle-income countries in particular can free up funds that would otherwise have been spent purchasing drugs through third-party or local vendors at a higher price. These funds can instead support critical resources such as infrastructure, human resources, and capacity for health systems. Donations can also indirectly enhance governance and accountability. Accepting donations requires, for example, additional reporting by receiving governments and institutions. In many instances, donation programs can encourage improvements in technology, management, and monitoring and evaluation. In short, donation programs may directly help patients while also providing wide-ranging benefit to local programs and systems. Though drug donations are often seen as part of development aid or post-disasters response, they can also meet a specialized need, even in developed countries. A unique program in the United States, for example, accepts donated drugs from the public, and focuses on specialized, often costly, medications. Medicines to treat HIV/AIDS or cancer are typically donated through this program from patients or family members of patients who have succumbed to their illness.

#### Infrastructure investment is key to growth, climate resiliency, and pandemic response.

Anderson et al. ’19 [Stacy; Communications Manager @ Hamilton Project; Ryan Nunn; Assistant Vice President for Applied Research in Community Development @ Federal Reserve Bank of Minneapolis; Senior Fellow in Economic Studies @ Brookings; “Wise infrastructure investments can stabilize the economy and reduce climate risk”; 6/28/19; https://www.brookings.edu/opinions/wise-infrastructure-investments-can-stabilize-the-economy-and-reduce-climate-risk/; AS]

Physical infrastructure underlies all economic activity, allowing consumers, workers, and firms to coordinate to mutual advantage. Getting infrastructure decisions right is a core part of economic policy, and infrastructure has been a constant topic of conversation in Washington, D.C. for years. As policymakers consider new directions for infrastructure policy, they should have in mind the following questions: when infrastructure should be built, what type of infrastructure is needed, and how to choose and fund infrastructure projects. For example, if infrastructure investments were better timed, they could help to minimize the damage and duration of a recession by working as effective fiscal stimulus. In the new Hamilton Project book, Recession Ready: Fiscal Policies to Stabilize the American Economy, economist Andrew Haughwout proposes an automatic infrastructure investment program that would use federal funds and local expertise to increase transportation spending during an economic downturn. This proposal would also incentivize states to develop a catalog of construction projects that the federal government would fund as soon as a recession begins. These projects could include improvements to highways, bridges, ports, and bus and rail transit, among other projects. Regardless of the timing of infrastructure spending, efficient selection of infrastructure projects is vital. When local knowledge is brought to bear, interjurisdictional spillovers are taken into account, and cost-benefit analysis is applied, the likelihood of efficient selection is significantly increased. This, in turn, allows infrastructure projects to be as effective as possible in facilitating economic growth and other social objectives, from public health challenges to climate risk. The lifespan of infrastructure projects can extend across generations, and choices we make today will affect where people live, how they travel, and how resilient our economy is to a changing climate. Accordingly, as policymakers consider the nation’s infrastructure needs and how best to meet them, the economic costs of climate change must be a chief concern. In a Hamilton Project proposal, economist Matthew Kahn describes infrastructure investments that would protect urban places and populations by making them more resilient to climate change and environmental threats, from severe storms to extreme heat. Kahn explains that new investments in infrastructure will be most effective if they flow to areas that face the largest climate risks and have the most difficulty in funding their own investments in resiliency. Moreover, policies must be adjusted to encourage population and economic activity to gradually flow towards places with inherent climate resiliency advantages. Kahn proposes diagnosing the risks through the creation of a real-time database of infrastructure gaps related to climate resiliency. City governments would be encouraged to assess their risks, generating annual reports on climate challenges. Investing in the most valuable projects will promote long-run economic growth and climate resilience, but infrastructure spending matters in the short run as well as the long run. This is evident in the important contribution that infrastructure investment makes to GDP. The investment of state and local governments—who do the bulk of infrastructure spending, even if the federal government pays for much of it via grants—makes a sizable contribution to annual GDP growth. This matters especially during recessions, when state and local governments tend to reduce their expenditures, thereby amplifying economic downturns. Perversely, recessions are the times when infrastructure investments make the most sense: interest rates are typically low and substantial amounts of capital and labor are idle, meaning that public investments are less likely to displace private activity.