

## Conclusion

### *Reckoning with Pharmaceutical Value in Crisis Times*

“Talking to the companies, I don’t hear any of them say they think this [vaccine] is a money-maker,” Francis Collins, director of the National Institutes of Health, said in a May 2020 interview with the Economic Club.<sup>1</sup> “I think they want to recoup their costs and maybe make a tiny percentage of increase of profit over that. . . . Nobody sees this as a way to make billions of dollars.”

Yet billions of dollars were *already being made* as he was speaking, *well before* any COVID-19 vaccine had left a manufacturing plant. “Corporate Insiders Pocket \$1 Billion in Rush for Coronavirus Vaccine,” said a headline in the *New York Times* of July 25, 2020.<sup>2</sup> The story covered just a five-month span, in which company executives and investors in at least eleven companies with vaccine announcements had sold over \$1 billion in shares. About a third of those sales were from three companies—Moderna, Inovio, and Vaxart—that had never successfully brought any drug or vaccine to market.

Not only were these companies making billions for their shareholders, but these financial gains all had a common source: investments by the US government—including NIH. By August 2020, US government investments alone in vaccine development, from research and clinical trials all the way into manufacturing and deployment of approved products, had topped \$9 billion.<sup>3</sup> A risk-averse private sector, long eschewing vaccine research due to the absence of new and ongoing growth potential, was eagerly accepting billions in public finance in a race to capitalize on new patents on vaccine candidates. Though they were made possible by public investment, these vaccine candidates had become shiny new financial assets to showcase to Wall Street.

Collins’s prediction of a benign pharmaceutical industry strategy relied on an almost mythologized version of capitalism valorized in textbooks. In this romantic picture, vaccines are a widget, and pharmaceutical companies are widget-makers

trying to make just enough money to keep their business running. But the pharmaceutical companies in the vaccine chase, and particularly their executives and shareholders, were operating with a starkly different conception. Their pursuit of financial growth was tied to speculating on the future of their new vaccine “assets,” no matter their ultimate outcome.

While drug companies were making public pronouncements about not profiteering on vaccines amid the immediate crisis, they were already positioning their vaccines as financial assets with long-term growth potential. Pfizer’s chief financial officer, Frank D’Amelio, told investors, “As this shifts from pandemic to endemic, we think there’s an opportunity here for us.”<sup>4</sup> Speaking to Barclays, Moderna’s president, Stephen Hoge, predicted that “post-pandemic . . . we would expect more normal pricing based on value.”<sup>5</sup> Who would determine when the post-pandemic period would begin? Johnson & Johnson’s executive vice president, Joseph Wolk, told investors: “I think when we look at it, it’s not going to be something that’s dictated to us.”<sup>6</sup> By August 2021, even as the pandemic raged in many parts of the world, Pfizer and Moderna announced new price increases for COVID-19 vaccines in European countries.<sup>7</sup>

The anticipation of this “post-pandemic” period and the years of potential corporate control over vaccine patents were why Wall Street *did* expect companies to make billions in revenue. In fact, Pfizer and Moderna together were expected to make over \$90 billion from COVID-19 vaccines—in 2022 alone.<sup>8</sup>

And whether or not these companies would realize that gain, the projection of a new vehicle for financial growth had already meant billions for traders on Wall Street. As the pandemic progressed during 2020, for example, Moderna’s value had soared on the financial promise of a COVID-19 vaccine, with its share price more than quadrupling. Three of Moderna’s executives—CEO, chief medical officer, and president—had made stock sales totaling over \$100 million.<sup>9</sup>

Meanwhile, against the backdrop of massive financial accumulation, “global vaccine apartheid” became a grim outcome, as companies have acted as “gatekeepers” over vaccine assets, enforcing artificial scarcity, amid a pandemic.<sup>10</sup> In the first ten months that vaccines were available, over 80% of the 5.5 billion doses went to high- and upper-middle-income countries, and only 1% to low-income countries.<sup>11</sup> Only 2.5% of people in low-income countries on the African continent had been fully immunized.<sup>12</sup> And of the “donations” of two billion doses promised to poor countries, only 15% had materialized.<sup>13</sup> Multilateral efforts to open up access to vaccine patents through a WHO-led technology pool failed to gain momentum as companies hoarded their assets for lucrative futures and US and European governments declined to force them to share intellectual property and transfer technology to the manufacturers in low- and middle-income countries that stood ready to make mRNA vaccines.<sup>14</sup> Meanwhile, in an example of financialization *par excellence*, companies like Pfizer and Moderna sold highly profitable boosters to high-income territories—looking to secure immediate and ongoing growth—even

as they failed to deliver first doses to the countries housing most of the world's population.<sup>15</sup> Scientists and public health experts warned that such inequities risked new variants and waves of preventable mortality.<sup>16</sup>

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As these dynamics play out with terrible costs, a kind of blindness to financialization and its consequences for biomedical research and access to medicines persists. When the new sofosbuvir-based medicines for hepatitis C were launched, the crisis in treatment access was frequently billed as a result of industry price-gouging.<sup>17</sup> In the October 2020 hearings over rising drug prices led by the US House Committee on Oversight and Reform, the media coverage often focused on the extent to which individual companies had sought to “maximize their revenue.”<sup>18</sup> But as the present account demonstrates, the crises we face are not just about maximizing revenue but about the wider system of financialization. In this system, companies have been repeatedly incentivized by public policy to use collectively developed knowledge to maximize *growth* and thus *shareholder value*. The tale of the hepatitis C medicines and the broader debate over drug affordability are emblematic less of an isolated crisis of drug pricing and more of intersecting and structural crises in contemporary political economy.

COVID-19 has only served to further crystallize these connected maladies in our political and economic order: “shareholder value” ideology, political capture by corporate and financial interests, and governments failing to respond to accelerating precarity. Even amid a public health crisis, pharmaceutical companies continued to raise the prices of hundreds of medicines.<sup>19</sup> Even amid record unemployment and growing hunger, stock markets soared to new heights.<sup>20</sup> Increasingly, life and health seemed to be not just *uncoupled* from conventional stock market metrics, but *inversely related* to them.<sup>21</sup>

But as the pandemic exacerbated and exposed these pre-existing conditions for suffering and inequity, it also forced a reckoning. The *Financial Times*'s editorial board declared, “Virus lays bare the frailty of our social contract.”<sup>22</sup> In the *New York Times* of October 8, 2020, Mariana Mazzucato's opinion piece ran under the headline, “Capitalism is Broken. The Fix Begins with a Free Covid-19 Vaccine.”<sup>23</sup> And in a widely circulated piece, author Arundhati Roy challenged readers to think in radically new ways: “Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next.”<sup>24</sup> When it comes to making and deploying the fruits of modern science, might we indeed be at the gateway to a different kind of system?

In weighing this possibility, we can look to prior economic transitions for hopeful evidence. Through her seminal work in mapping the history of capitalism and technological change, the economist Carlota Perez has found patterns that may be instructive for our time. From the first Industrial Revolution, in the

eighteenth century, she argues, financial capital has played a dominant role in every technological “epoch,” which she defines as distinct “techno-economic” phases of capitalism (e.g., steam and railways, steel and heavy engineering, oil and automobiles, information and communication technologies). In the initial frenzy of a new technological paradigm (the “installation period”), financial speculation and laissez-faire markets push the economy to crisis. The railway boom, for example, was followed by financial panics in the mid-nineteenth century. The rise of the automobile, oil, and mass production in the 1900s into the 1920s was followed by the Great Depression.

But each period of crisis, Perez shows, provoked a societal response, whereby the technological possibilities of the time were rebalanced toward the concerns of the public rather than those of financial capital.<sup>25</sup> In this “deployment period,” as in the Progressive Era and the New Deal, governments took a leading role in creating the social and economic conditions for investment that expanded access to and use of new technologies to more broadly improve standards of living. To be sure, these periods were often built on the exclusion and exploitation of others, via colonialism and structural racism, globally and in the United States. And yet these periods marked a significant—though vastly incomplete—expansion in the rewards of new technologies flowing beyond financial capitalists and instead to workers and families.

These “golden ages” did not come about via some automatic circuit breaker for capitalism; they required concerted efforts by political leaders, citizens, and social movements to make new sociopolitical choices. This latest technological era, marked by major advances in digital and genomic technologies since the 1970s, has led to a burgeoning set of hopes and possibilities. Yet it has also had its paroxysms of financial frenzy and political crisis, from the dot-com boom and crash to the global financial meltdown of 2007–08, and now the COVID-19 pandemic. In the specific domain of health, financialized capitalism has pushed the hybrid public–private system of biomedical research to a point of popular discontent and distrust—a reaction to ever-higher drug prices and ever-greater wealth extraction.<sup>26</sup> Science promises a golden age for health; yet our economic system taints this promise, and at its worst, places it at grave risk.

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A transition to a public-purpose system is far from inevitable. Powerful people will try to protect and expand their interests. In a “status quo” scenario, a muddle of incremental reforms, with some perhaps aimed at bolstering public health systems’ ability to negotiate with drug companies, will struggle against the political sway of industry lobbying. The broader financialized system of drug development—including a reliance on short-term, extractive financial actors and broad patent protections—will remain dominant. Health systems, clinicians, and patients will struggle perpetually with drug companies for access to the occasional new

breakthrough, as escalating prices, justified in terms of “value,” force care providers and policymakers to decide who should get such therapies first.

In a world where biomedical research becomes further intertwined with the dynamics of financialization, yet another scenario lurks: the mortgage model. Payment for new breakthroughs, in this case, would not be limited by a health system’s finite budget but would be facilitated by access to loans, akin to buying a home. Through what a group of “financial engineers” at MIT have proposed as “health care loans” for curative medicines, patients—either through health insurance plans or individually—would gain access to treatments with a down payment, and then pay monthly or annual installments on the total cost (with interest) over some number of years.<sup>27</sup> The cost of cures, anticipated to be in the hundreds of thousands or even millions of dollars in this scenario, would be amortized over many years, with diversified pools of such loans “securitized” into financial products that can attract further capital—similar to the products that were at the heart of the 2008–2009 global financial crisis.

Yet literally mortgaging our future health in this way would represent a different form of rationing, with deeply unfair consequences. If the housing mortgage market is a troubling presage, patients’ access to medicines would depend on their ability to qualify for a loan and thus potentially place specific patient groups at systematic disadvantage due to racial and socioeconomic factors. These new healthcare loans would only add to the long list of debts that have increasingly placed families and patients in crisis. Even the authors of the piece admit that “a law mandating full coverage for curative therapies and allowing for price negotiation would likely be economically more efficient, more sustainable, and socially more acceptable than a purely private-sector solution.”<sup>28</sup>

In writing these words, they understand what has become increasingly apparent: the status quo—or worse, deepened financialization—will only trigger more widespread and popular momentum for alternative directions. Though no single law can be a silver bullet, a series of trials and changes—from large-scale public financing to laws underpinning a democratic reshaping of our economic systems—has the potential to produce a future that is more popular, more innovative, and more just. This final scenario of a public-purpose system, as detailed in chapter 4, is one within our reach. Just as in previous periods of crisis, it now falls to a new generation of scientists, business leaders, public officials, and civic entrepreneurs to forge this transition.

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Underlying whichever scenarios come to fruition will ultimately be a social struggle over what we value most. When health systems refused to pay the prices for sofosbuvir-based medicines, patients with hepatitis C reasonably wondered why their lives were not worth the price tag. The director of a hepatitis C patient group told me that public officials did not really value the lives of the patients he had

come to know. Though appalled by the scale of drug-company profits, he had become resigned to the idea that, with patients' lives at stake, society should be willing to pay the \$90,000 price tag for a cure.

His wish speaks to the palpable desire to do whatever it takes for our health and the health of those we love. Restricting access to essential treatment is certainly not the answer to high prices. Health is a fundamental need. Yet it is precisely this vulnerability that can be exploited. And this exploitation illuminates the moral crisis at the heart of ever-higher drug prices. The question we are too often forced to answer—What is the maximum price society should be willing to pay to drug companies?—is the wrong one. This question treats extractive prices as natural and inevitable—when instead they are products of human-made systems that can be changed.

Indeed, our vital and shared need for health should urge us to answer and act on a question focused on a different orientation to value. Instead of capitalizing our vulnerability in search of the upper bounds of drug prices, how might we value equitable and affordable care for everyone, ensuring access to the medicines we have, and the ones we need? A moral imagination in pursuit of this question might yet yield the kind of future we deserve.