Protecting Financial Stability:
Lessons from the Coronavirus Pandemic

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Abstract

The coronavirus pandemic has produced a public health debacle of the first-order. But, the virus has also propagated the kind of exogenous shock that can precipitate—and to a certain degree has precipitated—a systemic event for our financial system. This still unfolding systemic shock comes a little more than a decade after the last financial crisis. In the intervening years, much as been written about the global financial crisis of 2008 and its systemic dimensions. Considerable scholarly attention has focused on first devising and then critiquing the macroprudential reforms that ensued, both in the Dodd-Frank Act and the many regulations and policy guidelines that implemented its provisions. In this essay, we consider the coronavirus pandemic and its implications for the financial system through the lens of the frameworks we had developed for the analysis of systemic financial risks in the aftermath of the last financial crisis. While today's pandemic differs in many critical respects from the events of 2008, systemic events in the financial sector have a common structure relevant to both crises. Reflecting back on responses to the last financial crisis also affords us an opportunity both to understand how financial regulators are currently responding to the coronavirus pandemic and also to speculate how the pandemic might lead to further reforms of financial regulation and other areas of public policy in the years ahead.

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PREFACE

Though in the first instance a public health catastrophe, the COVID-19 pandemic also poses risks to financial stability in ways that are quite distinct from, but still reminiscent of, the causes of the last financial crisis that crested in the Fall of 2008. This essay contrasts the current pandemic with the last financial crisis and then examines the steps that financial authorities have taken to safeguard financial stability against the effects of COVID-19. The essay also explores the extent to which financial regulation might be reformed and supplemented in the future to address the emerging lessons of the pandemic crisis.

Quite understandably, given the pervasive and sudden emergence of COVID-19, recent regulatory measures have been largely ad hoc and reactive, drawing heavily on the regulatory toolkits devised in response to the last financial crisis. But this response has inherently been suboptimal, as government authorities have had to work to a considerable degree with the legal authorities and institutional structures already in place. Much of the analysis that follows consists of a review of those actions in comparison to regulatory responses to the last financial crisis. But our inquiry also offers preliminary thoughts with respect to prospective regulatory reforms that might more effectively deter or mitigate financial instability caused by pandemics or other unanticipated, but large-scale, economic disruptions in the future.

While there may be ways to expand upon the regulatory interventions designed to address the weaknesses exposed in the last financial crisis, the types of regulatory interventions needed to make the financial system robust enough to withstand ordinary systemic shocks may never be sufficient to withstand fully an extraordinary catastrophe, like COVID-19, which imposes such widespread economic disruptions of such an unpredictable duration. Although more rigorous regulatory interventions could and arguably should make the financial system more resilient in the face of this type of calamity, they might not be economically and politically feasible to fully insulate the financial system, especially as memories of past pandemics fade.

Our essay therefore also touches upon how other spheres of regulation could be reformed to try to prevent pandemics from occurring in the first place. To that end, we introduce the idea of using regulatory interventions designed to protect the financial system, as a "system," to inform the design of regulatory interventions to protect the healthcare system, as a system—thereby helping to control the spread of localized diseases into pandemics.

I. SYSTEMIC RISK AND THE LAST FINANCIAL CRISIS

It is in the nature of financial systems, and most especially modern financial systems, to organize themselves into legal entities and market arrangements that leave the financial system vulnerable to exogenous shocks. Left to their own devices, financial firms and market participants do not fully consider the effects of their actions on the rest of the economy and so organize their activities with, at times, excessive leverage, inappropriate complexity, susceptibility to runs, and other forms of financial contagion.[1]

Macroprudential regulation—that is regulation to protect the financial system, as a system, as opposed to microprudential regulation focused on specific components (such as individual financial firms or markets) of the financial system—can address the problem of "systemic" risk to the financial system in two ways. First, *ex ante* regulatory measures can be imposed in advance of exogenous shocks with the goals of preventing major shocks from occurring and of ensuring that the financial system is less vulnerable to the shocks that do occur and also less likely to amplify those shocks into a full-blown systemic crisis. These *ex ante* measures are put into place in advance of a crisis. A second and distinct category of regulatory responses to systemic risk is *ex post* intervention that operates during a financial crisis and is designed to slow down the transmission of systemic risk, mitigate its harm, and allow the financial system to maintain critical economic functions while recovering from the exogenous shock.

In the decade since the last financial crisis, a vast effort has gone into shoring up the ability of United States and other leading economies to reduce and mitigate the problem of systemic risk. On the *ex ante* side, experts have differed in their views as to whether stricter regulatory structures—like higher capital requirements or more demanding liquidity rules or

[1] For more complete descriptions of our views on systemic risk in financial regulation, *see* Steven L. Schwarcz, *Systematic Regulation of Systemic Risk*, 2019 WIS. L. REV. 1, 2–3 [hereinafter *Systematic Regulation of Systemic Risk*] (defining systemic risk as "the risk that instability in the financial system will cause a recession or otherwise significantly impair the real economy"); Howell E. Jackson, *Introduction: Thinking Hard about Systemic Risk*, *in* SYSTEMIC RISK IN THE FINANCIAL SECTOR: TEN YEARS AFTER THE GLOBAL FINANCIAL CRISIS 1, 8 (Douglas Arner, Emilios Avgouleas, Danny Busch & Steven L. Schwarcz, eds., Centre for International Governance Innovation, 2019). *See also* MICHAEL S. BARR, HOWELL E. JACKSON, & MARGARET E. TAYHAR, FINANCIAL REGULATION: LAW AND POLICY 738-46 (2d ed. 2018) (hereinafter BARR-JACKSON-TAHYAR). *Cf.* Steven L. Schwarcz, *Misalignment: Corporate Risk-Taking and Public Duty*, 92 NOTRE DAME L. REV. 1 (2016) (hereinafter "*Misalignment*") (observing that because much of the harm from a systemically important firm's failure would be externalized onto the public, such a firm can engage in risk-taking ventures with positive expected value to its investors, but negative expected value to the public—creating a critical misalignment between private and public interests). For an elaboration of our views on the topic, see Howell E. Jackson & Steven L. Schwarcz, *Pandemics and Systemic Risk* App. A (Apr. 21, 2020) (avail. at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3580425).

organizational reforms designed to facilitate resolution of distressed firms—were sufficient (heading into the 2020s) to protect the financial system from exogenous shocks or whether the post-crisis interventions had overshot the mark and stifled economic growth. With respect to *ex post* interventions, the principal policy debates have been over whether, on the one hand, the public interventions of the last crisis – such as the Troubled Asset Relief Program (TARP) and the extraordinary and unprecedented measures the Federal Reserve Board took in 2008 and the years that followed – created substantial moral hazard problems by implicitly signaling to market participants that similar interventions would be available in future financial crises or, on the other hand, whether restrictions that the Dodd-Frank Act imposed on the Federal Reserve Board and other government actors to constrain *ex post* interventions might dangerously constrain the capacity of public officials to mitigate future financial crises.[2] The coronavirus pandemic is providing policy analysts an unexpected and unwelcomed opportunity to reconsider these disagreements.

II. Today's Pandemic versus the Sources of the Last Financial Crisis

The last financial crisis is best remembered for the dramatic failures (or, but for government bailouts, near-failures) of major financial firms, starting with Bear Stearns in spring 2008 followed over the summer and fall by Fannie Mae and Freddie Mac and then, most spectacularly, by Lehman and AIG, and a number of other pillars of the global economy. In that sense, the last financial crisis presented as a top-down systemic catastrophe rather than the bottom-up feel of today's pandemic, where infections have spread out from a few isolated pockets into the broader population with stunning speed. In terms of public perceptions, the financial crisis began with the failures of these major firms, which occurred in the first nine months of 2008, although the Federal Reserve Board's liquidity facilities were rolled out over a number of months thereafter and its subsequent programs of quantitative easing lasted for many years, as did the economic consequences for the broader economy.

The immediate legislative responses to the Financial Crisis of 2008 were also primarily focused on the problems of large financial institutions. While a small portion of TARP funding was eventually directed to support individual loan modifications, the overwhelming majority of TARP funds were directed to support financial institutions and the U.S. automobile industry.[3] Early in the summer of 2008, Congress adopted legislation that lay

[2] *See, e.g.*, Hal S. Scott, Connectedness and Contagion: Protecting the Financial System from Panics (2016).

[3] *See* Congressional Budget Office, Report on the Troubled Asset Relief Program (Mar. 2020).

the foundation for putting Fannie Mae and Freddie Mac into conservatorships with substantial federal assistance. Only in the economic recovery packages of early 2009 was legislation adopted that provided substantial amounts of relief to individuals, and this was more in the nature of Keynesian demand-side stimulus, rather than federal aid specifically directed to households with losses directly tied to the financial crisis (such as those with underwater mortgages), as opposed to those suffering from the then deepening recession.[4]

Despite the prominence of big financial institution failures of 2008, the last financial crisis also can be conceptualized as having bottom-up origins. The root cause of the last financial crisis was a pattern of errors in prior market expectations about the capacity of individual borrowers to sustain mortgage payments and the sustainability of continuously rising housing prices. These expectations led to a dramatic rise in loans to finance and refinance home purchases, along with a dramatic increase in leverage, both at the level of households and financial firms. Similar thinking was also baked into default models of credit-rating agencies and the pricing behavior of global markets, not just for the underlying mortgage loans, but also the mortgage-backed securities (MBS) into which these loans were packaged and the derivatives that guaranteed their value by reference to MBS pricing.[5] Those prior market expectations shifted starting in 2007 and dramatically readjusted in 2008 as housing prices dropped precipitously and borrowers began defaulting on their loans, causing highly rated MBS to be downgraded in creditworthiness and impairing payment on some non-investment-grade MBS. The resulting uncertainty caused investors to lose confidence in the accuracy of credit ratings, not only for MBS but also for long-term corporate debt such as bonds and even short-term commercial paper. That, in turn, not only deprived businesses of capital market funding but also created profound uncertainty about the overall solvency of major financial institutions holding substantial MBS portfolios. The resulting illiquidity and uncertainty led to massive contagion effects, concerns about complexity, and ultimately a collapse of the financial system, resulting in a worldwide recession.[6]

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[4] As discussed below, some analysts were calling for more aggressive relief for households in the midst of the last financial crisis, but the official response focused on interventions and support at the institutional level, prompting subsequently political reactions, such as the Occupy Wall Street movement that emerged in the fall of 2011.

[5] *Cf.* CORELOGIC, EVALUATING THE HOUSING MARKET SINCE THE GREAT RECESSION 4 (2018) (finding that, prior to the last financial crisis, rating agency S&P modeled that housing prices could fall as much as 20%, whereas they actually fell around 33 %—more than during the Great Depression).

[6] Steven L. Schwarcz, *The Financial Crisis and Credit Unavailability: Cause or Effect?,* 72 BUS. LAW. 409, 410–11 (Spring 2017). Note that recent downgrades by credit-rating agencies have renewed concerns about the accuracy of credit ratings. Patrick Temple-West*, Rating agencies brace for backlash after rash of downgrades,* FINANCIAL TIMES (Apr. 2, 2020), https://www.ft.com/content/253210d5-4a2d-439f-a4a6-204a7f66d445.

Viewing today's pandemic through the lens of systemic risk to the financial system (as opposed to a public health crisis), we can also consider the events of the first quarter of 2020 as an exogenous shock in which prior expectations about borrower creditworthiness and overall economic activity have proven to be profoundly incorrect. The financial system failed to incorporate, or seriously discounted, pandemic risks into loan pricing and risk models, perhaps because a pandemic is—just as the 2008 financial collapse was thought to be—a so-called "black swan" event.[7] From that perspective, the COVID-19 pandemic parallels the last financial crisis or most other financial panics in that the precipitating event was the emergence of new information that disrupted prior expectations.[8] And the dramatic swings in capital market pricing and the evaporation of liquidity in certain markets in March of this year mirrored market disruptions of the fall of 2008, at least until the Federal Reserve Board sprang into action with a prompt rebooting of many financial crisis era programs.

Putting aside sudden market swings and flights to cash in the Spring of 2020, COVID-19 has the potential for imposing further disruptions on the financial system in a manner that differs from the spread of economic losses during the last financial crisis. It is not the direct effects of the coronavirus itself (through deaths or illness) that threaten systemic consequences to the financial system, but rather the behavioral responses of households and firms and governments that are having dramatic consequences on the economy on several levels. Early in 2020, we witnessed abrupt shifts in consumer demand for services associated with increased perceived risk of infections, like cruises, transportation, and entertainment.[9] Employee sickness and employer concern to avoid such sickness then started causing firms to minimize their in-person workforces. With few exceptions (e.g., delivery services such as Amazon[10] and firms supplying medical supplies), customer contagion and

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[7] The term "black swan" event has come to mean a very low-probability, but very high-risk event. *See generally* NASSIM NICHOLAS TALEB, THE BLACK SWAN: THE IMPACT OF THE HIGHLY IMPROBABLE (2nd ed. 2010). *See, e.g.*, *Black Swan*, INVESTOPEDIA, https://www.investopedia.com/terms/b/blackswan.asp (last visited Apr. 17, 2020) ("A black swan is an extremely rare event with severe consequences. It cannot be predicted beforehand, though many claim it should be predictable after the fact.").

[8] *Cf. supra* note **Error! Bookmark not defined.** (observing that, at the root of the 2008 failures, were errors in prior market expectations about the future and sustainability of housing price increases and the capacity of individual borrowers to sustain home mortgage payments).

[9] *Cf.* Claire Bushey, *US Airlines Seek to Delay Day of Reckoning with $50bn Bailout*, FINANCIAL TIMES (Mar. 24, 2020), https://www.ft.com/content/a3713e3e-6d74-11ea-89df-41bea055720b ("[S]hares of the four largest US airlines lost between 40 per cent and two-thirds of their value since February . . . .").

[10] Amazon, for example, has committed to hiring 250,000 temporary employees. However, margins for the largest online retailers, such as Target, have fallen as consumers prioritize low-cost staples over higher-margin goods. Sarah Nassauer, *Coronavirus Boosts Target's Sales but Squeezes Profits*, WALL ST. J. (Mar. 25, 2020), https://www.wsj.com/articles/coronavirus-boosts-targets-sales-but-squeezes-profits-11585132560?mod=itp_wsj&ru=yahoo.

fear of such contagion have been reducing the number of buyers—and thus impairing the demand side of the economy.[11]

Government edicts to implement social distancing and self-isolation further reduced business interactions, cancelling public events and large gatherings and effectively closing many non-essential businesses for lengthy time periods. As a consequence, we have seen wide-scale lay-offs, skyrocketing unemployment, and the grinding to a halt of many sectors of the economy.[12] The result is the beginning of an unprecedented economic collapse and a disruption of still unknown duration. At times, supply chains have broken down, but even with inventory, businesses are finding it difficult to continue to manufacture and to sell products—especially to retail customers. Small-to-medium-sized businesses are especially hurt.[13]

The accumulation of these bottom-up effects threatens further liquidity and perhaps even solvency effects on many sectors of the economy, distinct from, and in many respects more troubling than, capital market volatility in March of 2020. As is evidenced by the specific focus of congressional action earlier this year, airlines, the hospitality industry, and entertainment concerns have all faced acute difficulties. Many small business, especially those in retail or dining, face dramatic reductions in customer traffic and must scramble to devise online or remote distribution channels to maintain any cash flow. State and local governments are facing severe budget shortfalls with little capacity to engage in deficit financing. The resulting layoffs accelerated in the late Spring of 2020 with declining demand and consumer retrenchments.

To date, the financial services sector has not experienced top-down failures of the sort we saw with Lehman and AIG in 2008. To be sure, stock markets had fluctuated dramatically and continue to experience a high degree of volatility. Not surprisingly, credit markets—especially for small scale

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[11] *Cf.* Veronica Guerrier, et al., *Macroeconomic Implications of COVID-19: Can Negative Supply Shocks Cause Demand Shortages* (Apr. 2020) (NBER Working Paper 26918) (characterizing the shut-downs as generating in the first instance supply shocks leading to demand shortages). While the distinction between demand side and supply side effects may be important for macroeconomic policy, it seems that both are at work – and very much interacting with each other – in the current pandemic.

[12] *Cf.* Hiba Hafiz, Shu-Yi Oei, Diane Ring, & Natalya Shnitser, "*Regulating in Pandemic: Evaluating Economic and Financial Policy Responses to the Coronavirus*" 15 (Mar. 19, 2020 draft, on file with authors) (observing that it is "possible that a widespread wave of small business failures—even if they are not individually systemic actors—may ripple across other parts of the economy and eventually trigger contagion and collapse").

[13] *Cf.* Jim Tankersley, *Strategies to Restart an Economy on Ice*, N.Y. Times, Mar. 22, 2020, at B2. Tankersley discusses economists' concern of a possible "doom loop," in which an "even moderately protracted shutdown of economic activity permanently kills waves of small businesses . . . that cannot survive very long without customers. A typical small business in the United States does not have enough cash on hand to cover even a month of expenses if its revenues are completely disrupted, according to research by the JPMorgan Chase Institute. In minority communities, where profit margins are often narrower, the typical cash reserve is even smaller." *Id.*

enterprises most hard hit by pandemic induced declines in demand—have dried up, and liquidity in fixed income trading markets was disrupted for periods of time and remains heavily restricted for certain firms. Certain segments of financial markets, such as marketplace lending, may be suffering even more extreme reductions in intermediation. It is not clear that the solvency of any major financial firm is threatened, but the authorization of new guarantee facilities for money market funds and the expansion of FDIC support for bank liabilities suggests that federal authorities are concerned about the potential of runs. Especially in March and April of 2020, there have been surges towards cash and cash-equivalents, which can lead to a loss of liquidity for some financial firms and a challenge for those exposed to significant duration mismatches. Eventually, the abrupt decline in interest rates—including the possibility of negative rates for the indefinite future—will pose challenges for financial firms dependent on margins.

Depending how long the disruption of the real economy persists—which is inexorably linked to how long our current period of social isolation remains in effect—the erosion of the financial capabilities of innumerable borrowers, both household and corporate, could produce long-term challenges to solvency for many financial firms, large and small. The widespread interruption of rent payments and other contractual obligations (both mortgages and other forms of consumer debt servicing)[14] could have significant and far-reaching consequences as economic losses are passed upward and aggregated onto the balance sheets of major financial firms, including those sometimes denominated as too big to fail. Like many hospitals in the first half of 2020, the bankruptcy courts tomorrow may become overwhelmed, delaying and increasing the costs of debt restructurings and further impairing the health of the country's financial system.[15]

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[14] *See* Will Parker, *Nearly a Third of U.S. Apartment Renters Didn't Pay April Rent*, WALL ST. J. (Apr. 8, 2020) ("Nearly a third of U.S. apartment renters didn't pay any of their April rent during the first week of the month, according to new data to be released . . . by the National Multifamily Housing Council and a consortium of real-estate data providers."). Bank of America allowed 50,000 borrowers to defer mortgage payments for up to three months as of the beginning of April. *See* Prashat Gopal, *Bank of America Lets 50,000 Mortgage Borrowers Skip Payments*, BLOOMBERG (Apr. 1, 2020), https://www.bloomberg.com/news/articles/2020-04-01/bank-of-america-lets-50-000-mortgage-borrowers-delay-payments. Moody's Analytics estimates that as many as 15 million households may need mortgage forbearances and other home loan assistance. *See* Mark Zandi, Moody's Analytics, COVID-19: Top 10 Questions and Answers, Webinar Presentation (Apr. 2020), https://www.economy.com/getlocal?q=EBF5F2CD-1E1A-48D9-99A5-41EC7B1D5789&app=download. *See also* Jim Zarroli, *America's Largest Bank, JP Morgan Chase, Prepares for A Massive Round of Defaults*, NPR (Apr. 14, 2020) (reporting that JP Morgan Chase's profits fell 69% and the bank is preparing for increased defaults on mortgages, credit card debt, and business loans).

[15] *See* Kenneth Ayotte & David Skeel, *Bankruptcy Law Needs a Boost for Coronavirus*, WALL ST. J. (Mar. 30, 2020); David Skeel, Bankruptcy and the Coronavirus (Apr. 2020) (Brookings Economic Studies Paper). *See also* Benjamin Charles Iverson, Jared A. Elias & Mark. J. Roe, *Estimating the Need for Additional Bankruptcy Judges in Light of the COVID-19 Pandemic* (June 26, 2020), (*avail. at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3624529).

Whereas in the 2008 crisis the key financial uncertainty was the extent of losses to be incurred on home mortgage loans, the central financial uncertainty of the COVID-19 pandemic is the duration of the economic turndown. Whether the recession will be V-shaped, U-shaped, W-shaped, canoe-shaped, or some other yet unimagined configuration remains imponderable and depends on a host of complicated considerations, including the efficacy of safeguards as economies reopen, the development of more effective treatments, and (ultimately) the discovery and production of a safe and effective vaccine. Whether the pandemic also develops into a full-blown top-down financial catastrophe may well turn on how long these economic consequences endure. Just because major financial firms have not yet failed does not mean that they will not eventually fail. And if such failures are to occur, the pandemic of 2020 may well be remembered as a systemic financial event of the first-order. Even if a prolonged pandemic only weakens the balance sheets of many financial intermediaries, the resulting impact on the real economy could constitute a systemic event.

At the time of this writing—several months into the pandemic—it is too early to assess the long-term impact of the pandemic on the economy or the financial system. Our goal in this section has been simply to lay out some of the similarities and differences of the current crisis to the last financial crisis. Next, we consider regulatory responses for financial authorities, starting with measures taken to date and then speculating as to reforms that might follow in the future.

III. RECENT MEASURES TO ADDRESS FINANCIAL IMPLICATIONS OF TODAY'S PANDEMIC

We begin with ongoing responses to the coronavirus pandemic. Within our framework for categorizing macroprudential interventions, these responses are *ex post* in the sense that they are being implemented in the aftermath of an exogenous shock —here the coronavirus pandemic—with the goal of reducing the shock's disruption to the financial system and the economy more broadly. These measures are necessary, as is often the case with systemic events, because *ex ante* restraints have proven insufficient to insulate the financial system.[16] As noted below, these *ex post* measures may

[16] The *ex post* interventions discussed in this section differ in fundamental ways from the *ex post* legal regimes, such as orderly resolution procedures, that were incorporated into our macroprudential toolkit after the last crisis: the former are ad hoc and purely reactive. Ad hoc interventions of this sort may well be both suboptimal and ineffectual. *See* Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 231 (2008) (observing that ad hoc interventions sometimes "may be too late and the harm has been done or no longer can be prevented, and sometimes there may be insufficient time to fashion and implement an optimal solution"). In cases such as an unexpected pandemic, however, there may

also have a bearing on the future behavior of financial firms and households by influencing expectations about how governments will react to pandemics or other unexpected events. To that extent, these *ex post* measures will have some degree of *ex ante* effects.[17]

These responses to the current crisis fall into several broad categories, discussed below: the provision of liquidity and public guarantees of financial liabilities; other regulatory and supervisory accommodations; public relief to households; public relief to business enterprises; and official encouragement of private-sector relief.[18] Distilling the essence of these government responses poses expositional challenges because the precise content of the responses is still being defined, many key elements are vague or unresolved, and some of the responses are overlapping. For example, whether government payments are outright grants or loans that should be repaid is often unclear. In addition, many recent interventions contemplate novel collaborations both among government agencies and between public and private actors, with precise responsibilities and legal obligations not fully specified. Finally, with several initiatives, the government response consists primarily of encouraging action by private parties, a novel extension of the bully pulpit never before used on such a scale, at least not in modern times, and with uncertain effects. We touch upon a number of these issues in a final section outlining several overarching themes.

One final introductory point concerns the emergency measures being deployed in the current crisis compared to the emergency actions taken by financial regulators in response to the last financial crisis. In the Fall of 2008, public officials gearing up to address the collapse of global financial markets generally understood the Great Depression of the 1930s to be the most relevant policy precedent. Being a precedent that lay outside of the bounds of living memory or direct experience, senior government officials had to resort to the history books and the academic learning of Fed Chair and former

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be no other choices; to "deter a systemic meltdown, government should seek to prevent the meltdown or mitigate its impact by implementing whatever ad hoc approaches appear, at the time, to be appropriate." *Id*. at 243.

[17] *Cf.* Douglas G. Baird, *Bankruptcy's Uncontested Axioms*, 108 YALE LJ. 573, 578 (1998) (observing that "[s]ubstantive rules implemented exclusively in bankruptcy . . . may have [effects] on investment beforehand").

[18] In Appendix B to our earlier paper, our research assembled a list of government responses through early April and labelled them according to these categories. *See* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3580425. We have not attempted to update for current purposes, but have simply reproduced it below as Appendix A. For a current and comprehensive effort to track developments in this area see Program on Financial Stability, *COVID-19 Crisis*, YALE SCHOOL OF MANAGEMENT (visited June 30, 2020), https://som.yale.edu/faculty-research-centers/centers-initiatives/program-on-financial-stability/covid-19-crisis. *See also Davis Polk Opens FinReg Tracker to All*, DAVIS POLK & WARDWELL LLP (Mar. 25, 2020), https://www.davispolk.com/news/davis-polk-opens-finreg-tracker-all; *Financial Regulatory Response to COVID-19*, MAYER BROWN (Apr. 3, 2020), https://covid19.mayerbrown.com/financial-regulatory/; *US Financial Regulatory Action on COVID-19*, STEPTOE & JOHNSON LLP, https://www.steptoe.com/en/news-publications/us-financial-regulatory-agency-action-on-covid-19.html (last visited Apr. 6, 2020); Duane Wall et al., COVID-19 Response: US Financial Services Regulation, White & Case LLP (Apr. 6, 2020), https://www.whitecase.com/sites/default/files/2020-04/4-Federal-regulatory-response-060420-v2.pdf.

Professor Ben Bernanke. Today, in contrast, many top financial regulators have had direct experience in fighting the last financial crisis and a good number no doubt recently participated in 10-year retrospectives. Even junior regulatory staff will have had personal memories of the financial crisis or at least would have been exposed to extensive discussions of and debates over lessons learned from it. Accordingly, as we relate current government responses to those of the last financial crisis, we are undoubtedly touching upon issues of which public officials were fully cognizant as they formulated these actions. But the proximity of the last financial crisis also explains why current public responses are so closely related to and highly reminiscent of policy responses the last time round.

A. Provision of Liquidity through Emergency Lending Facilities and Potential Guarantees

As noted above, the current crisis has not yet been manifested as a top-down failure of major financial institutions. Still, the Federal Reserve Board early in the crisis promptly deployed its traditional tools for providing institutional liquidity in times of financial stress, including aggressively purchasing financial assets; establishing secured lending facilities designed to support commercial paper and money market funds; and in collaboration with the Treasury Department (whose consent is legally required), taking a host of other actions authorized for unusual and exigent circumstances under section 13(3) of the Federal Reserve Act.[19] Congress in the CARES Act has also backstopped Fed interventions by temporarily reversing Dodd-Frank Act restrictions on the ability of the Treasury to provide guarantees to money market funds and of the FDIC to enhance its guarantees of bank deposits.[20] While neither of these powers has been deployed, the presence of such support also addresses liquidity concerns in sectors of the financial system.

To a considerable degree, many of these Federal Reserve Board actions constitute classic lender-of-last-resort interventions, providing credit to solvent entities in order to avoid fire sales of assets and a downward spiral

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[19] For a helpful summary of these actions, see DavisPolk Webpage on Government Support for Business (visited June 30, 2020), avail. at https://www.davispolk.com/practices/corporate/government-support-business?utm_source=vuture&utm_medium=v_email&utm_campaign=vuture_emails. For a summary review of Federal Reserve of Federal Reserve Board actions in the last financial crisis, *see* MICHAEL S. BARR, HOWELL E. JACKSON, & MARGARET E. TAYHAR, FINANCIAL REGULATION: LAW AND POLICY 939-53 (2d ed. 2018) (hereinafter BARR-JACKSON-TAHYAR).

[20] For an excellent overview of the Federal Reserve Interventions and their relationship to the CARES Act, *see* Lev Menand, Unappropriated Dollars: The Fed's Ad Hoc Lending Facilities and the Rules That Govern Them (May 22, 2020), avail. at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3602740. *See also* Lev Menand, Fed to the Rescue: Unprescedent Scope, Stretched Authority (Apr. 27, 2020) (The CLS Blue Sky Blog, with comments), (*avail. at* https://clsbluesky.law.columbia.edu/author/lev-menand/).

imposing widespread losses on the financial system. [21] As such, the Fed may well have prevented immediate market responses to the pandemic from causing top-down institutional failures. In contrast to the last financial crisis, however, a much higher share of Federal Reserve interventions into the capital markets involved not simply the provision of credit to address liquidity shortages, but also directed support to the real economy, often through complicated lending vehicles involving joint operations with the Treasury Department, which has been providing various kinds of first-loss protection as authorized under the CARES Act. Indeed, it is sometimes difficult to distinguish the extent to which Federal Reserve Board actions are purely liquidity measures or also might (at least eventually) constitute some form of credit support, either to financial institutions or elements of the real economy, an ambiguity to which we will return at several points below.

While most of the Federal Reserve's initial interventions operate through the financial system, some reach directly into the real economy, such as the Main Street Lending Program. And, for the first time ever, the Federal Reserve Board has created a facility to provide liquidity for state and municipal bonds. All of these actions are reminiscent of actions taken over the course of the last financial crisis, although the timetable within which the policy instruments have been deployed has been dramatically compressed. In some cases, the programs actually bear the same acronyms as those used in the last financial crisis, updated with new model numbers (e.g., TALF 2.0), and in certain cases, such as haircut requirements for TALF 2.0 collateral, the new term sheets track those used in the last financial crisis.[22]

For those of us who have engaged in debates over the virtues of the Dodd-Frank Act of 2010, it is striking that these prompt Fed actions, in response to the pandemic, do not appear to be inhibited by that Act's limitations on Federal Reserve Board powers. Particularly as the White House and Treasury Department were focused on economic consequences of the coronavirus, political leadership did not hesitate to pull the triggers necessary to bypass

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[21] For an early endorsement of robust central bank intervention as well as immediate capital preservation measures and other governmental actions, *see* Systemic Risk Council Statement on Financial Systems Actions for Covid-19 (Mar 2020) (*avail. at* https://www.systemicriskcouncil.org/2020/03/src-statement-on-financial-system-actions-for-covid-19/). For a recent (and prescient) article both anticipating and endorsing (with caveats) wide-spread guarantees on the part of the federal government, *see* Kathryn Judge, *Guarantor of Last Resort*, 97 TEX. L. REV. 707 (2019).

[22] For an early endorsement of robust central bank intervention as well as immediate capital preservation measures and other governmental actions, *see* Systemic Risk Council Statement on Financial Systems Actions for Covid-19 (Mar 2020*) (avail. at* https://www.systemicriskcouncil.org/2020/03/src-statement-on-financial-system-actions-for-covid-19/). For a recent (and prescient) article both anticipating and endorsing (with caveats) wide-spread guarantees on the part of the federal government, *see* Kathryn Judge, *Guarantor of Last Resort*, 97 TEX. L. REV. 707 (2019).

those limitations.[23] And, as mentioned earlier, the CARES legislation includes a number of temporary reversals of Dodd-Frank Act limitations on uses of the Treasury Department's Exchange Fund and the FDIC's powers to increase bank guarantees.[24] So, fears that political inhibitions regarding emergency Fed actions appear not to have been borne out in the current crisis.

One open question, of course, is whether the Federal Reserve has exposed itself to substantial credit risks as a result of these liquidity/guarantee responses. In the last financial crisis, the Federal Reserve Board avoided credit losses on its emergency vehicles, and conceivably that experience is informing current actions by Board leadership. But the duration and intensity of the current economic crisis is unknowable and it is possible that the models and assumptions used to justify today's liquidity facilities will prove inaccurate. Were significant losses to accrue down the road, political backlash remains a possibility, as nominally many of these responses are formally limited to transactions where adequate collateral is provided. Even if the Fed does not suffer losses, it is conceivable that the consequences of its interventions could impose losses or gains (on creditors or shareholders or some other parties) that in retrospect seem inappropriate or improper. As such, the Fed has likely assumed a degree of political risk that may play out in uncertain ways down the road.

Another point to be emphasized about recent Federal Reserve Board actions is the extent to which they represent active collaboration with the Treasury Department. The CARES Act explicitly authorizes the use of public funds to support Fed liquidity facilities, and section 13(3) also requires signoff from the Secretary of the Treasury in most cases. So, what happened in practice and on an extremely accelerated schedule was that a task force of top Federal Reserve Board officials worked closely with the Treasury Department to roll out new liquidity facilities, often at a pace of more than one per week. Whereas prior academic writing of the post-Dodd Frank Act section 13(3) requirements conceptualized the Treasury as serving as a political check on Federal Reserve Board intervention, the two entities seem to be engaging in something that looks much more like a joint venture: no doubt expedient and well-intentioned, but also a novel way of doing crisis management in the United States.

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[23] For a case study outlining the considerations that the Federal Reserve Board would have had to undertake before invoking section 13(3), *see* Margaret Tahyar & Howell Jackson, The Future of Affiliate Transaction Restrictions for Banks and the Federal Reserve's Emergency Intervention Authority (2017) (HLS Case Study CSP035) (avail. at https://casestudies.law.harvard.edu/the-future-of-affiliate-transaction-restrictions-for-banks-and-the-federal-reserves-emergency-intervention-authority/).

[24] For a helpful summary of the CARES Act provisions, *see* Davis Polk, Congress Passes CARES Act Fiscal Stimulus Package to Combat the Coronavirus Pandemic's Economic Impact (Mar. 27, 2020) (avail. at https://www.davispolk.com/files/2020-03-26_senate_passes_cares_act_fiscal_stimulus_package.pdf).

B. Regulatory & Supervisory Accommodations

Beyond providing liquidity and guarantees, financial regulators have engaged in a wide range of regulatory and supervisory accommodations. On a number of different dimensions, banking regulators have signaled a willingness to relax standards to encourage loan modifications and forbearance. Similarly, the application of capital and liquidity rules is being adjusted to prevent pro-cyclical effects (that is, to prevent balance sheets from shrinking and credit lines from reducing in times of financial stress). The SEC has made a number of similarly spirited announcements, relaxing filing requirements, reducing the need for individuals to be in close proximity on exchange floors or board meetings, and offering accommodations from affiliated party rules in order to increase liquidity in money market and other mutual funds.[25]

Regulatory authorities in the current crisis appear to be mindful of the critique that many components of the regulatory regime in place at the time of the last financial crisis were pro-cyclical. While the loosening of underwriting standards and affiliated-party rules may be ill-advised in ordinary times—when preventing fraud and abuse are primary goals—temporary accommodations in periods of crisis may reflect an appropriate, albeit short-term, rebalancing of costs and benefits. To the extent these accommodations encourage the flow of credit, or at least reduce loan defaults, they effectively substitute for the provision of public liquidity and thereby reduce demands on the Federal Reserve Board's balance sheet.

These accommodations, however, also carry their own risks, potentially shifting losses onto (or retaining losses on) the balance sheets of financial institutions. More than a decade after the last financial crisis, some believe, many such losses are still carried on the balance sheets of European banks. What can be seen in the moment as well-advised counter-cyclical adjustments can be recharacterized in the future as ill-advised regulatory forbearance of the sort associated with regulatory practices throughout the savings and loan debacle of the 1980s.[26] In theory, counter-cyclical adjustments should be

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[25] Note that some regulatory pronouncements—e.g., early warnings that financial firms should review their pandemic contingency plans and SEC warnings about the need for corporate issuer to attend to disclosure obligations and insider trading oversight in the face of the pandemic—are probably not best understood as accommodations, but rather regulatory or supervisory adjustments in the face of the pandemic. Accordingly, in Appendix A, we have demarked these initiatives with the word "Adjustment."

[26] The line between the two characterizations is blurry, but in theory counter-cyclical buffers are designed to be worked down in the midst of a crises and ill-advised forbearance is regulatory accommodation beyond that point. But there exists no magic meter that turns red when this point is passed in the real world.

limited to those accommodations that relax buffers specifically designed for relaxation in times of financial distress, whereas inappropriate forbearances are motivated principally by a desire to avoid the embarrassment and costs of financial failures. But applying these distinctions in practice is difficult and contestable, if only because government authorities can plausibly support propping up marginal institutions in the hopes of sustaining market confidence and muddling through till the real economy recovers.[27] How these regulatory accommodations will be understood in the years ahead remains an open question.

C. Public Relief to Households

No doubt one of the most striking features of recent public interventions has been robust government efforts to provide relief for households. While limited payroll-tax holidays and extensions of federal support for unemployment insurance also figured into public responses to the last financial crisis, relatively little was done in a systematic way to help individuals shoulder their financial burdens. Although some consumer advocates lobbied during that crisis for wide-ranging loan forgiveness, and some proposed changes to federal bankruptcy laws to facilitate a reduction in mortgage debt, the public response was largely limited to only marginally successful loan modification efforts, administered through a complicated series of programs that largely relied on modest use of TARP funds to encourage loan servicers to facilitate the modification process. Most likely mindful of the limited success of these earlier efforts, the Trump Administration and Congress have been much more forceful in providing direct relief to individuals.

Most prominently with the $2.2 trillion CARES Act or Phase III legislation, this relief includes direct cash payments to households, an expansion of unemployment insurance, mandated sick leave for government workers and employees of large private employers (under Phase II legislation), and what are effectively interest-free loans through the delay of federal (and most state) tax payments. The CARES Act has already been supplemented once, and further congressional funding later in 2020 remains a possibility, notwithstanding of the complexities of election year politics. All of these efforts serve to reduce the financial stress of American households, especially those in which household members have lost employment as a result of the pandemic and mitigation efforts. This relief

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[27] This tension is starting to play out in public policy debates over Federal Reserve stress testing and whether the Fed should impose and report on stringent stress tests that reveal potential weaknesses in major institutions or adapt a more accommodative posture and refrain from criticisms of specific institutions in order to maintain market confidence. [Insert citations.]

supports the financial system by increasing the ability of households to service their financial obligations and reducing the need of some households for emergency credit – thereby adding liquidity to the financial system. As noted below, several other government interventions are also intended to improve the financial position of households and could have a similar, positive effect on the financial system.

The prompt adoption of support measures directly to individuals and households reflects, properly in our view, the absence of any sense of individual personal responsibility for the financial distress that the pandemic has produced. The prominence of this category of intervention again distinguishes the current crisis from the last financial crisis, where mismanagement of household finances was thought by some to be a contributing factor to excessive debt levels and inflated housing pricings, and only limited amounts of TARP funding and other public resources were allocated to household support. But even absent moral hazard concerns, the logistics of getting support to the right households in a timely manner poses considerable administrative challenges and there remains a possibility that households will conserve at least some portion of any relief payments rather than spend them to increase demand, as government officials intend.

Household relief also raises concerns over strategic behavior—that is, individuals not truly needing financial assistance may purport to be in financial distress in order, for example, to avoid making loan payments. In addition to forcing additional losses onto the financial system, this behavior would increase government costs and eventually weaken public support for relief efforts. Early reports on the mechanics of current relief efforts for households evidence some concerns on the part of government officials about balancing the trade-off between prompt distribution of resources and the desire to maintain fiscal discipline. How this balance will be assessed after the current crisis is over could well shape the structure of future reforms and our understanding of the success of these initiatives.

D. Public Relief to Business Enterprises

If anything, the pandemic-related public relief to business enterprises is even more extensive than the relief programs for households. In contrast to the last financial crisis, when only a small fraction of TARP funding was directed outside the financial services industry (with the Obama Administration supporting automobile industry loans only after much agonizing and internal debate), the CARES Act provides for extensive loans and guarantees to a wide range of distressed industries and most notably small businesses. (As discussed, the bulk of the Federal Reserve pandemic-related interventions supports the financial services industry.) In part, the allocation of resources to distressed industries and small businesses reflects differences in the location of losses in the current crisis. Even before the scale and scope of human consequences was clear, many sectors of the economy were showing weaknesses (like the hospitality industry and airlines), and as soon as widespread stay-at-home orders went into effect, those losses spread across the economy, including to retail and restaurants, where small business dominates. Direct public support for business enterprises in this environment can have long-term value by avoiding the transaction costs of wholesale bankruptcies and also by positioning the economy to recover once public health issues have been addressed.[28]

Household relief is, beyond a doubt, also an indirect goal of the support being provided to business enterprises, including (we suspect) some of the Federal Reserve Board's liquidity facilities. This dual mandate is evident in the terms of some of the programs, such as loan forgiveness for small businesses that keep employees on the payroll. But even if payrolls are not maintained during the height of the pandemic, the preservation of business enterprises and the human capital they contain can have positive effects on household welfare down the road. Again, there exists a risk that, in the aftermath of the crisis, critical voices will complain that businesses did not appropriately support employees or that government officials did not insist on such support with sufficient rigor. In addition—and to some degree related—backlashes can focus on the ways in which businesses utilized public support (or their own resources) during the pandemic. Mindful of complaints about executive bonuses and wage differentials, current reform efforts have included some measures to limit what may be perceived to be abuses. But these controls are no guarantee that later investigations—whether from congressional oversight committees or the press—will not reach other conclusions.[29] And the CARES Act itself includes substantially more oversight mechanisms than did TARP or other legislation adopted in the aftermath of the last financial crisis.

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[28] *Cf.* Mario Draghi, *We Face a War Against Coronavirus and must Mobilize Accordingly*, FIN. TIMES, Mar. 25, 2020, available at https://www.ft.com/content/c6d2de3a-6ec5-11ea-89df-41bea055720b (arguing that it is "the proper role of the state to deploy its balance sheet to protect citizens and the economy against shocks that the private sector is not responsible for and cannot absorb. States have always done so in the face of national emergencies," such as wars. If the government does not "protect people from losing their jobs in the first place," we will "emerge from this crisis with permanently lower employment and capacity.").

[29] For a prominently circulated letter from leading academics raising early questions about the appropriateness of some proposals to support large businesses, *see* Economics, Law and Finance Professors from Major Universities Write to Congress: "Bail Out People Before Large Corporations" (Mar. 24, 2020), (*avail. at* https://promarket.org/economics-and-finance-professors-from-major-universities-write-to-congress-barccil-out-people-before-large-corporations/).

A further point to be made about public relief of business enterprises is the extent to which these relief actions have been designed to interact with Federal Reserve Board actions discussed earlier. Some of the funds allocated under the CARES Act are intended to be used to support Federal Reserve Board programs, apparently to supply first-dollar loss protection for some of the Fed's lending facilities. Something akin to this happened back in the last financial crisis, when TARP funds were used to buy out Federal Reserve Board loans to AIG, but that transaction was done on a one-off basis after the TARP legislation passed.[30] Under the CARES Act, the Federal Reserve Board seems headed to maintain an ongoing programmatic arrangement with the Treasury Department, blurring the line between the central bank and the executive department in an unprecedented manner.[31] Over the long term—particularly if these interventions come under criticism— this collaboration might undermine the preservation of Fed independence. That is a risk, but perhaps one that is worth taking under the circumstances.

Finally, one cannot help be struck by the extent to which the CARES Act programs for supporting businesses— big and small—enlists the assistance of regulated financial entities to identify recipients and administer the disbursement of funds. In some instances, the Payroll Protection Program financial firms serve merely as the governments agent, receiving a fee for service but with credit exposure borne by the Small Business Administration. With some of the Federal Reserve Board vehicles, financial institutions are also required to bear some degree of credit exposure, although the preponderance of losses would be borne by the Treasury Department and Federal Reserve. Again, this enlistment of established channels for to distribution of credit was likely seen as an efficient mechanisms to get funds out of the door, but it also creates a complicated mixture of shared responsibilities, potentially subject to criticism down the road. And, it may be difficult for supervisory authorities to force financial firms to recognize losses on credits that the government encouraged the firms to undertake in the first place, another possible source of arguably inappropriate forbearance.

E. Official Encouragement of Private-Sector Relief

[30] A very limited amount of the Federal Reserve Board's 2008/2009 interventions (e.g., TALF) may also incorporated a limited degree of financial support from the Treasury Department.

[31] For an example of the kind of *ex post* scrutiny that may arise, consider a finding that Federal Reserve Board economists erred in concluding that the Fed's liquidity facilitates are protected by adequate collateral. Critics may challenge the assumptions on which those estimates were based. They might also subject the Fed's program to the kind of scoring that the Congressional Budget Office would provide for similar extensions of credit if extended through federal lending programs administered by an executive agency. As the CBO's estimates are probabilistic as opposed to the Fed's binary designation as good or bad collateral, this comparison would highlight the extent to which Fed facilities had exposed the federal fisc to losses and could pose further challenges to Fed independence.

A further feature that distinguishes the current pandemic from the last financial crisis is the outpouring of mutual support and private-sector relief efforts. Spontaneous efforts to produce masks for healthcare workers and neighborhood organizations emerging to share grocery shopping and to do errands for the elderly, are examples of this phenomenon. But a notable feature of the public-sector response to the pandemic has been official encouragement of these private-sector relief efforts. Though the mechanisms by which this encouragement has been voiced remain unclear (at least to us), the Trump Administration has apparently persuaded insurance companies to waive co-pays and deductibles not just for coronavirus testing, but for its treatment as well.[32] Perhaps motivated by the threat of the Defense Procurement Act, some manufacturers have agreed to produce medical devices and personal protective equipment even though doing so may not maximize shareholder returns. With respect to the financial services sector, the Administration has also harnessed some degree of voluntary participation, particularly in terms of helping to manage the distribution of public support to small businesses.

While one cannot help but be moved by the scale of generosity and solidarity that these private relief efforts represent, one need also acknowledge the complexity of harnessing private enterprise for public purposes in the absence of strict guidelines and effective oversight. The risks run in both directions. Public officials can face criticism if private relief is not administered as extensively and evenhandedly as initially envisioned, producing the same kind of political backlash discussed above with respect to public support for business enterprises. But the enterprises themselves also face risks.[33] As financial firms discovered after the last financial crisis, public authorities were initially grateful to institutions (such as Bank of America) that agreed to take over failing thrifts and banks, but in later years, other public officials were zealous in bringing enforcement actions against those same firms for violations of law or contractual breaches that had taken place before 2008 in the failed firms that were acquired.[34] Lawyers who lived through the last crisis are already (quietly) advising clients to be careful about the extent of their participation in current relief efforts so as to avoid liability

[32]For an example of state insurance authorities encouraging automobile insurance companies to give customer rebates in light of lower levels of driving during the crisis, *see* https://portal.ct.gov/CID/Public-Notices/Notice-April-6-of-2020-Covid-19 (statement of the Connecticut Insurance Department).

[33] For an example of the kinds of press coverage that may become common, *see* Aaron Gregg & Renae Merle, *Big banks took 'free money' in 2008. They're turning their backs now on small businesses, SBA official says*, WASH. POST (Apr. 8, 2020).

[34] *See also* BARR-JACKSON-TAHYAR, *supra* note 2, at 977 (discussing litigation related to JPMorgan Chase acquisition of Washington Mutual). *See also* Guhan Subramanian & Nithyasri Sharma, Bank of America-Merrill Lynch, HBS Case No. 910-026, Harvard Business School NOM Unit (2010) (avail. at https://ssrn.com/abstract=1486106)..

and recriminations down the road.[35] On yet another dimension, public authorities are facing a tradeoff between encouraging prompt and robust participation and minimizing the possibility of future criticism regarding abuse or misuse of public resources.

F. Overarching Themes and Potential Concerns

As the forgoing discussion illustrates, public *ex post* responses to the coronavirus pandemic have been multi-faceted, interconnected, and massive. Many address systemic risks to the financial system and rival in scale and ambition the responses we witnessed in the Fall of 2008. But the interventions proceed on numerous different levels, making it difficult to predict with confidence how they will interact with each other and likely complicating future efforts to determine with confidence which measures were effective and which were less useful or even possibly counterproductive. A particularly striking feature of these interventions is the degree of coordination across government actors, financial firms, and private firms.

While this all-hands-on-deck approach is understandable under the circumstances, it carries with it a number of risks to both public and private parties. In particular, the active collaboration between the Federal Reserve Board and the Treasury Department in the design and eventual implementation of liquidity facilities is novel and far-reaching. Especially if these facilities ultimately expose the Fed to credit losses, public and political reactions may be intense.[36] How exactly these coordinated responses will be judged in retrospect is an open question.

IV. Reforming Financial Regulation In Response to the Coronavirus Pandemic

While we are no doubt many months—or perhaps even years—away from a time when it will be possible to offer a serious assessment of plausible

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[35] *See, e.g.,* Wachtell Lipton Memo: Litigation and Enforcement Lessons from the Financial Crisis (Mar. 30, 2020) ("The creation of the new Special Inspector General under the CARES Act] parallels the creation of an inspector general for the Troubled Asset Relief Program ("TARP") following the 2008 financial crisis. A change in administration combined with retroactive changes to various rescue programs transformed the office into a highly aggressive law enforcement agency. In the decade following the financial crisis, investigations by the TARP inspector general led to significant civil or criminal penalties against hundreds of defendants. The duties and powers of the Special Inspector General for Pandemic Recovery generally mirror those of the inspector general for TARP. Although enforcement activities may be slow during the crisis itself, it is a truism that the creation of an investigative arm will eventually lead to investigations.").

[36] For an interesting exploring of the concerns that may arise when federal instrumentalities pool their resources and evade statutory mandates, *see* Daphna Renan, *Pooling Powers*, 115 COLUM. L. REV. 211 (2015).

reforms of financial regulation in light of the coronavirus pandemic, there may still be value to engage in the following thought experiment: Imagine, at some point down the road once the dust has settled, our Financial Stability Oversight Council (FSOC) or perhaps the Financial Stability Board (FBS) operating on a global level were to put together a report of recommendations of best practices with respect to pandemic risks for the financial system, a document designed to inform reform efforts of national governments as well as country evaluations that the International Monetary Fund (IMF) undertakes with its Financial Sector Assessment Program (FSAP) programs.[37] What topics might that document cover? To give this discussion a bit of coherence, we organize our speculative response to this question around the basic categories of recommendations that were floated and to a considerable degree implemented following the last financial crisis.

At the outset and as mentioned earlier, we readily acknowledge that the current pandemic and the last financial crisis differ in significant respects. Most obviously, the trigger for the current crisis was not, in the first stance, some failing in the financial system itself (like an asset bubble or a flawed clearing and payments system). The trigger was the spread of COVID-19. No doubt the responses will differ materially as well. The premise of our analysis, however, is that our framework for analyzing systemic financial risks is a helpful structure for considering and comparing reforms of financial regulation in both contexts. Our analysis thus focuses on macroprudential financial regulation, to protect against systemic financial risk as a result of pandemics in the future. As discussed earlier, this is risk to the financial system, as a system, as opposed to risk to individual components of the financial system that do not spread beyond those components to threaten the broader economy.[38]

A final caveat concerns the admitted uncertainty as to the full impact of the coronavirus pandemic on the financial system. Conceivably, if the economy recovers from the pandemic relatively promptly, the main financial effects of the pandemic could be market volatility in the Spring of 2020 followed by a sharp, but short, economic downturn that caused considerable suffering to many individuals and firms, but did not have a profound impact on financial firms or a long term distribution of financial markets. Even then,

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[37] *See e.g.,* INT'L MONETARY FUND, A FAIR AND SUBSTANTIAL CONTRIBUTION BY THE FINANCIAL SECTOR: FINAL REPORT FOR THE G-20 (2010), available at http://www.imf.org/external/np/g20/pdf/062710b.pdf, and FIN. STABILITY BD., GUIDANCE TO ASSESS THE SYSTEMIC IMPORTANCE OF FINANCIAL INSTITUTIONS, MARKETS AND INSTRUMENTS: INITIAL CONSIDERATIONS (Oct. 2009), https://www.bis.org/publ/othp07.pdf (visited Apr. 4, 2020), for examples of comparable reports. *See also Financial Sector Assessment Program (FSAP)*, INT'L MONETARY FUND (June 3, 2019), https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/14/Financial-Sector-Assessment-Program (describing the FSAP program).

[38] See supra __-__.

the pandemic will likely be remembered as a significant economic event, but the government interventions may well be understood as effective and well-designed, especially if the major Federal Reserve Board facilities and Treasury support efforts do not incur substantial credit losses. On the other hand, if the economic downturn persists into 2021 or beyond, if losses continue to accumulate throughout the financial system, or if major financial firms fail or suffer substantial challenges to solvency, then implications for the financial system could be profoundly different. However quickly the economy recovers, there also remains uncertainty as to how the very substantial fiscal expenditures to address the pandemic will be understood: whether as appropriately allocated across all sectors of the economy or inefficiently deployed on the basis of corporate favoritism and insufficient attention to the challenges of households and small firms. In short, uncertainty exists along many dimensions.

A. Improve Consumer Decisions

One group of recommended reforms following the 2008 financial crisis focused on improving consumer decision-making, on the theory that poor consumer choices—arguably exacerbated by aggressive sales practices—contributed to excessive borrowing and unsustainable loans in the years leading up to the financial crisis. The imposition on lenders of "ability-to-repay" assessments would be one illustration of such a reform as would limitations on compensation arrangements for mortgage originators likely to incentivize inappropriate loans. One could also put into this category mandated changes in loan servicing arrangements, designed to limit opportunistic behavior in contracts that consumers are unlikely to read or understand if they did. This category also includes various regulatory nudges of the sort written into the CARD Act to encourage households to pay down their credit card balances more rapidly.

Whether one could envision a similarly spirited set of rules for the financial services sector being adopted in the aftermath of the coronavirus pandemic is an open question. For the same reason that public health authorities face challenges in encouraging members of the public to protect themselves from pandemic risks before those risks become manifest, financial firms or regulatory authorities would face challenges in devising coherent and administrable underwriting standards that would encourage individuals to mitigate pandemic risks or that would allow financial firms to distinguish between those who adjusted their pandemic risk exposures from those that did not.[39] And if direct interventions to force mitigation of pandemic risks at the individual consumer level seem implausible, resort to nudges in this context seems, *a fortiori*, less promising.

Perhaps more practical might be mandated adoption of specific terms of consumer financial contracts—including mortgage loans, student loans, or other debt contracts— that would include force majeure provisions that would facilitate transitional relief in the case of pandemics or other specific national emergencies.[40] As discussed earlier, one of the current policy responses to the coronavirus pandemic has been official encouragement of such adjustments on a voluntary basis on the part of landlords and others, as well as some discussion, at least in policy circles, of changes in bankruptcy rules to facilitate a prompt resolution of individual and perhaps small business insolvency. While it is too soon to evaluate the effectiveness of these measures, voluntary programs are difficult to administer and prone to have uneven and unpredictable effects. Lessons learned from these adjustment efforts could well inform future proposals to require automatic adjustment mechanisms for important consumer (and potentially also commercial) financial contracts, such as the bankruptcy reforms that have recently been floated.[41]

Another potential focus for future policy reforms could address the profound lack of financial resiliency on the part of many American households, as the current pandemic is exposing. While experts in consumer finance have long known and decried that fact that many American families lack even modest levels of emergency savings,[42] that shortcoming has traditionally been understood to represent a problem of consumer financial

[39] Underwriting standards for pandemic risks might be slightly more plausible in the area of commercial lending as there may be some measures—such as vendor diversification or contingency planning—where commercial borrowers might creditably prepare to withstand pandemics with less disruptions and economic losses in the future.

[40] In the aftermath of the financial crisis, one of us recommended—but with a noticeable absence of public uptake —similarly spirited terms in mortgage loans to grant the government authority to modify loan terms in the event of future nationwide downturns of housing markets similar to what occurred in the late 2000's. Howell E. Jackson. Presentation on Embedding Call Options into Mortgages, FRBNY Conference on Mortgage Contract Design: Implications for Households, Monetary Policy, and Financial Stability (May 21,2015); Howell E. Jackson, Building a Better Bailout, CHRISTIAN SCIENCE MONITOR, Sept. 25, 2008. *See also* Vicki Been, Howell Jackson & Mark Willis, *Essay: Sticky Seconds - The Problems Second Liens Pose to the Resolution of Distressed Mortgages*, 9 N.Y.U. J.L. & BUS. 71, 118 (2012) (proposing that second liens on residences should be automatically stripped down under certain circumstances). Robert C. Hockett, *It Takes a Village*, 18 STAN. J. L. BUS. & FIN. 121 (2012) (exploring municipal condemnation procedures for subprime mortgages).

[41] Of course, one of the challenges of revising "emergency" bankruptcy procedures for future crises is the difficulty of defining the scope of eligible emergencies and preventing opportunistic (and inefficient) innovation of these procedures in ordinary times.

[42] BOARD OF THE FEDERAL RESERVE SYSTEM, REPORT ON ECONOMIC WELL-BEING OF U.S. HOUSEHOLDS IN 2017, 1–56, 2 (May 2018), https://www.federalreserve.gov/publications/files/2017-report-economic-well-being-us-households-201805.pdf. (four in ten adults self-reported that, if faced with an unexpected expense of $400, they either would be unable, or else would have to borrow money or sell something, to pay it).

protection, leaving many individuals vulnerable to abusive payday lenders and other usurious forms of short-term credit.[43] But the current pandemic is also revealing the widespread absence of emergency savings to pose systemic risks as well, and many current interventions can be understood as serving to mitigate the consequences of limited financial resiliency at the household level. Just as the last financial crisis led to increased focus on the financial resiliency of systemically important financial firms, perhaps the current crisis will lead to efforts to increase the financial resiliency of the country's households.

B. Reduce Risk-Taking/Increase Loss-Absorption Capacity of Financial Firms

Another line of regulatory reform could focus on reducing risk-taking efforts—or increasing loss-absorbing capacities—of financial firms.[44] Certainly this approach has been the dominant response to the last financial crisis as evidenced by upward recalibrations of requirements for asset classes that suffered losses in the last crisis, higher capital requirements for systemically important firms, and the introduction of new forms of liquidity requirements. Restrictions such as the Volcker Rule were intended, rightly or wrongly, to prohibit certain kinds of investments associated with excessive risk-taking in the years leading up to the last crisis.

The development of firm-level risk-mitigation strategies would be more difficult to devise in the pandemic context than they have been for mortgage and securitization products in the aftermath of the last financial crisis. As with underwriting standards for pandemic risks, reforms designed to limit exposures to asset classes associated with pandemic risks would face challenges in distinguishing between high and low pandemic risk profiles. In addition, pandemics are low-probability, high-consequence events with a substantial degree of correlation across asset classes.[45] Certainly, one could imagine an absolute increase in firm level capital and liquidity requirements in light of the current crisis; but capital buffers and liquidity reserves set at expected value levels for individual firms will still quite likely be insufficient

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[43] For an overview of the issue, *see* Employee Benefits—Emergency Savings Account, HLS Case Study No. CSP054 (Mar. 2020), https://casestudies.law.harvard.edu/employee-benefits-emergency-savings-account/.

[44] *Systematic Regulation of Systemic Risk*, *supra* note **Error! Bookmark not defined.**, at 5-6.

[45] Rather than analogizing pandemic risks to the kind of credit risk associated with diversified loan portfolios, it might be more apt to compare it to operational risk (such as losses imposed by rogue traders or major cyber security breaches). While modern capital requirements incorporate components related to operational risk, these components have received much less attention from the academic community and substantial questions have been raised about their theoretical coherence and efficacy. *See generally* Jeremy C. Kress, *Solving Banking's Too Big to Manage Problem*, 104 MINN. L. REV. 171, 176 (2019) (claiming to be "the first scholarly analysis of the [too big to manage] issue").

if another pandemic were to occur of roughly comparable magnitude of the coronavirus, at least without substantial changes in public health interventions, a topic to which we will revert below.[46] Furthermore, in a world still dominated by shareholder primacy,[47] strong incentives will likely exist to resist or minimize capital buffers for such low-probability events; and as years pass without re-occurrence, the political pressure to under-reserve for pandemics may become substantial.

In sum, once the current pandemic subsides, there will no doubt be heated debate over whether capital reserves and liquidity requirements of financial firms were set too low.[48] How that debate is resolved will to a considerable degree turn on how well those firms withstand the crisis, but even if much of the financial services industry survives unscathed, advocates of higher requirements will no doubt complain that unnecessarily generous public interventions made that survival possible.

C. Mandate Third-Party Monitoring & Loss Absorption

Another strategy employed in the aftermath of the last financial crisis was the imposition of third-party arrangements to assist financial firms in the monitoring of risks and to expand their loss-absorption capacity. The skin-in-the-game rules for securitization transactions fall into this category,[49] as do the requirement of centralized clearing for many derivatives transactions[50] and even the imposition of bail-in-able debt instruments to increase larger firms' total loss absorbing capital.[51]

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[46] *See* Part V, *infra*.

[47] *See infra* notes **Error! Bookmark not defined.-Error! Bookmark not defined.** and accompanying text.

[48] For a flavor of the different views articulated in the summer of 2019, *compare* Fed Vice Governor Randall K. Quarles, Stress Testing: A Decade of Continuity and Change (July 8, 2019) ("[O]ur financial system remains resilient and that capital planning by banks continues to improve. The largest and most complex banks were tested against a severe hypothetical recession and retained strong capital levels, well above their minimum requirements. They demonstrated the ability to withstand a severe and lasting economic downturn and still be able to lend to households and businesses. Additionally, most firms are now meeting the high expectations we have set to make sure capital planning takes into account their specific risks and vulnerabilities. This is an improvement from last year. Overall, these results are good news that confirm our financial system is significantly stronger than before the crisis."), *with* Letter from Professor Anat R. Admati to Secretariat to the Financial Stability Board (June 21, 2019) ("The current capital regulations are inadequate and poorly designed in general, and they do not 'solve' the [Too-Big-To-Fail] problem. Neither do resolution plans. In particular, the use of loss-absorbing debt instruments as a substitute of much higher (as well as properly defined and measured) equity buffers is unlikely to work as planned and, moreover, is entirely unnecessary and unjustified from a policy perspective. The debate over these issues continues to be mired in flawed arguments and excuses.").

[49] *Systematic Regulation of Systemic Risk*, *supra* note **Error! Bookmark not defined.**, at 10.

[50] *Id*. at 11.

[51] *Id*. at 9.

One could imagine future reform proposals of a similar nature, such as a requirement that regulated entities, and perhaps also certain individual and corporate borrowers, obtain some sort of pandemic insurance. Like bonding requirements used in other contexts or other kinds of gatekeeper strategies, the premise would presumably be that expert third parties could then set underwriting standards and rate tables reflecting the appropriate level of pandemic risks of each firm or borrower. Unfortunately, as the foregoing discussion suggests, this approach would likely run into similar problems, not only in distinguishing among insured parties, but also in maintaining a viable insurance market with respect to such a low-probability category of risk that would likely be highly correlated among the insureds.

Indeed, pandemic risks might well be located into the class of risks that are sometimes defined as "uninsurable," at least by private markets.[52] This category includes the risk of nuclear accidents, the risks of war and terrorism, and various other extraordinary catastrophes such as meteorite strikes and sudden shifts in the gulf stream caused by climate change. There are a number of customary ways to address uninsurable risks. One, to which we alluded earlier, is the force majeure clause or other exceptions from contractual obligations in the face of "Acts of God." Another is some form of mandatory insurance markets, underwritten to some degree by a public authority but potentially pre-funded or post-funded by parties that benefit from the coverage. FDIC-insurance for deposit-taking banks in the United States and state-administered guaranty funds for insurance companies would both be examples of this approach. One could imagine, we suppose, a similar arrangement for economic consequences of pandemic risks for either the financial services industry or the economy more broadly.

To a degree, recent legislation providing federal resources to many sectors of the economy could be understood as variants of public insurance, perhaps with more of the costs borne by taxpayers rather than beneficiaries.[53] The scale of taxpayer support in the current crisis may well prompt calls for prospective reforms with different sources of funding. There would be a critical difference, though. FDIC-insurance and state-administered guaranty funds operate in areas where there are at least some ways, albeit imperfect, of statistically predicting losses. Mandatory pandemic insurance would be protecting against losses that are largely sui generis and unmeasurable.

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[52] *See* Dwight M. Jaffee & Thomas Russell, *Catastrophe Insurance, Capital Markets, and Uninsurable Risks*, 64 J. RISK & INS. 205, 206 (1997) (explaining that private insurers are reluctant to insure "low-probability high-consequence" catastrophic events, known by insurance textbook writers as "uninsurable risk"); Daniel Schwarcz & Steven L. Schwarcz, *Regulating Systemic Risk in Insurance*, 81 U. CHI. L. REV. 1569, 1611–12 (2014) (describing the risk of global pandemic as a catastrophic risk).

[53] For an additional view on justifications for government relief in the face of large risks, *see* Steven Shavell, *A General Rationale for a Government Role in the Relief of Large Risks*, 49 J. RISK & UNCERTAIN. 213 (2014).

Realistically, therefore, the cost of publicly underwriting the insurance, or the cost of privately pre- or post-funding the insurance, would be huge.[54]

Another way to address uninsurable risks is through so-called risk securitization, which in this context refers to the issuance of long-term debt securities known as catastrophe bonds (often abbreviated as "CAT bonds").[55] For example, an insurance company or other entity that wishes to hedge the catastrophic risks of an extreme event, such as an earthquake, a hurricane, or (in our essay's context) a pandemic, could create a special purpose vehicle ("SPV") to issue CAT bonds to capital market investors.[56] The SPV would invest the proceeds of its bond issuance in liquid and highly-rated debt securities, including U.S. Treasury money-market instruments.[57] The SPV would then guarantee certain payments to the hedged entity should the extreme event—i.e., a pandemic—of specified magnitude occur.[58] Because the SPV is pre-funded with the CAT-bond proceeds, its guarantee should be creditworthy, at least up to the amount of the SPV's assets.[59]

Risk securitization increasingly is being used to cover extreme risks that insurance and reinsurance markets may be incapable or unwilling to bear alone.[60] Risk securitization utilizes the "deep pockets" of the global capital markets, which have a far greater capacity than the global insurance and reinsurance markets to absorb these risks.[61] Capital market investors have

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[54] *Cf.* Steven L. Schwarcz, *Regulating Financial Guarantors*, forthcoming 11 HARV. BUS. L. REV. issue no. 1 (examining how abstraction bias can distort the assessment of risks that lack rigorous statistical and actuarial data).

[55] *See generally* Paul U. Ali, *Risk Securitization*, in STEVEN L. SCHWARCZ, STRUCTURED FINANCE, A GUIDE TO THE PRINCIPLES OF ASSET SECURITIZATION & SUPPS. (3d. ed. 2002). Portions of this discussion of risk securitization is based on Ali, *supra*. For further analysis of risk securitization, *see* Steven L. Schwarcz, "Catastrophe Bonds, Pandemics, and Risk Securitization," June 30, 2020 draft on file with authors.

[56] CAT bonds were developed as a response to the natural disasters that occurred in the early to mid-1990s—including Hurricane Andrew and the Northbridge Earthquake— which placed considerable stress on the insurance and reinsurance markets to cope with the losses to life and property that resulted from those disasters. *See* JAN JOB DE VRIES ROBBE ET AL., INNOVATIONS IN SECURITISATION 36 (2006). More recently, the even greater losses caused by Hurricane Katrina have led to fresh interest in risk securitization, on the part of insurance companies as well as governments, as a means of protecting businesses against catastrophic risk. *Id*. at 35.

[57] Andy Polacek, Senior Research Analyst, Fed. Res. Bk. Chicago, *Catastrophe Bonds: A Primer and Retrospective*, Chicago Fed Letter No. 405, 2018 (available at https://www.chicagofed.org/publications/chicago-fed-letter/2018/405).

[58] *Id*.

[59] *Id*.

[60] *See* Neil A. Doherty & Harris Schlesinger, *Insurance Contracts and Securitization* J. RISK & INS. 69 (2002) 45, at 45-46; J. David Cummins, Neil A. Doherty, & Anita Lo, *Can Insurers pay for the 'Big One'? Measuring the Capacity of the Insurance Market to respond to Catastrophic Losses* J. BANKING & FIN. 26 (2002) 557, at 557-55 (the foregoing sources observing that a series of catastrophes on the scale of Hurricane Katrina or the 9/11 terrorist attack occurring in quick succession could overwhelm the insurance and reinsurance markets, leading to the insolvency of some insurers and reinsurers and placing considerable stress on the market survivors and governments to cover the losses from those disasters).

[61] *See* Neil A. Doherty, *Financial Innovation in the Management of Catastrophic Risk* J. APP. CORP. FIN. 10 (1997) 84, at 84; Johannes S. Tynes, *Catastrophe Risk Securitization* J. INS. REG. 19 (2000) 3, at 7-8. *Cf.* Polacek, *supra* note 57 (observing that "By attracting alternative sources of capital (e.g., hedge funds, sovereign wealth funds,

significant interest in CAT bonds because of their diversified return. Pandemics and other natural catastrophes occur randomly and are not directly correlated with other economic risks[62]; therefore, CAT-bond returns are largely uncorrelated to the returns of equity securities and conventional bonds.[63]

Furthermore, CAT bonds have "provided strong returns" to investors.[64] The returns are based not only on the yield passed through from the SPV's invested securities but also on the guarantee fee paid by the entity whose risks are being hedged.[65] This combination of diversified and strong returns appears to more than offset investor perception of the risk, if the covered catastrophe occurs, that the hedged entity's claim under its guarantee would have priority over the investors' claim under their CAT bonds—in that case, subjecting the investors to a potential loss of principal and/or interest under those bonds. Notwithstanding that risk, the investor demand for CAT bonds is robust.[66] $9.1 billion of CAT bonds were issued in 2018, and $10.3 billion (a record high) were issued in 2017.[67] The risk-capital outstanding under CAT bonds increased during that same period from $25.2 billion to $28.7 billion.[68]

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pension funds, and mutual funds) to compete with traditional reinsurance . . . , CAT bonds exert downward pressure on reinsurance prices (and price volatility) while increasing the total capital available for the transfer of insurance risks."). For instance, the global capital markets (with approximately $65 trillion debt securities outstanding as at 30 September 2006) are many times larger than the global reinsurance market (with capital of approximately $400 billion as at 31 December 2005): BANK FOR INTERNATIONAL SETTLEMENTS, BIS QUARTERLY REVIEW A85-A100 (DECEMBER 2006); GUY CARPENTER, THE WORLD CATASTROPHE REINSURANCE MARKET 6 (2006).

[62] Although a pandemic might, as with COVID-19, lead to an economic decline, during the normal life of CAT bonds there is no correlation if there is no pandemic.

[63] *See* Christopher M. Lewis & Peter O. Davis, *Capital Market Instruments for Financing Catastrophe Risk: New Directions?* 17 J. INS. REG. 110, 114 (1998); Angelika Schochlin, *Where's the Cat going? Some Observations on Catastrophe Bonds*, 14 J. APP. CORP. FIN. 100, 102-103 (2002). In principle, therefore, catastrophe bonds follow modern portfolio theory, which focuses on optimizing investment returns through portfolio diversification. See PAUL U. ALI ET AL., CORPORATE GOVERNANCE AND INVESTMENT FIDUCIARIES 87-88 (2003). According to that theory, the extent to which an investor can optimize its returns (that is, maximize overall portfolio returns for a given level of risk or minimize the risk borne by the portfolio for a given level of returns) depends upon the extent to which the returns of the different portfolio constituents are correlated to one another. *Id.* at 87-88. In general, the addition to a portfolio of securities whose returns are negatively or weakly correlated, or uncorrelated, to the existing constituents of the portfolio should increase overall portfolio returns (while leaving the riskiness of the portfolio unchanged) or lower the portfolio's riskiness (while leaving the portfolio's overall returns unchanged). *Id*. at 88. See generally MORTON LANE, ALTERNATIVE RISK STRATEGIES 549-552 (2002).

[64] Polacek, *supra* note 57.

[65] *Id*.

[66] *Cf. id*. (observing that the "CAT bond market has seen strong growth during the post-crisis years. For instance, the amount of outstanding CAT bonds more than doubled between 2010 and 2017.").

[67] Insurance Information Institute, "Facts + Statistics: Catastrophe Bonds," available at https://www.iii.org/fact-statistic/facts-statistics-catastrophe-bonds (visited May 28,2020) (reporting data from GC Securities, a division of MMC Securities Corp.).

[68] *Id*. The "majority" of CAT bonds issued in 2018 covered U.S.-based catastrophe risks. *Id*.

To date, risk securitizations have primarily been used by insurance companies, reinsurers, and state catastrophe funds (such as the California Earthquake Authority and the Florida Hurricane Catastrophe Fund) to hedge against the catastrophic risk of natural disasters.[69] As a response to coronavirus pandemic, governments might promote the socialization of pandemic risks through the creation of similar catastrophe funds and using risk-securitization to allocate those risks to global investors who choose to purchase the associated CAT bonds. Or perhaps there are other ways in which modern financial engineering might be deployed to mitigate future pandemics and other wholly unanticipated shocks to the financial system.

D. Restructuring the Organization & Management of Financial Firms

Yet another element of regulatory response to the last financial crisis has been reforms to help resolve the operations, management, and capital structure of major financial firms that become troubled.[70] Many of these reforms have been implemented through the oversight of living wills (that is institution-drafted resolution plans) for major firms[71] and through the creation of legal structures to facilitate the much debated Single Point of Entry (SPOE) system of resolution.[72] The pandemic crisis could provide regulatory authorities the first opportunity to evaluate how well many aspects of these reforms perform under battlefield conditions. To the extent that systemically important financial firms or even a large number of smaller financial institutions ultimately fail, resolution planning and the SPOE approach will quite likely be subject to re-assessment and reform. Whether or not there are institutional failures, there will certainly be considerable focus on the operation of business continuity plans, which have been triggered across the financial services sector as large numbers of employees have been relocated to work from home.[73]

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[69] In 2005, for example, a total of $1.99 billion debt securities were issued worldwide in securitizations of catastrophic risk, covering risk events such as European windstorms, Japanese earthquakes, US earthquakes and US hurricanes. The originators included insurance companies, such as USAA and Zurich American, and reinsurance companies, such as Munich Re and Swiss Re. *See* MMC SECURITIES, THE CATASTROPHE BOND MARKET AT YEAR-END 2005: RIPPLE EFFECTS FROM RECORD STORMS 17-19 (2006).

[70] *Systematic Regulation of Systemic Risk*, *supra* note **Error! Bookmark not defined.**, at 9.

[71] *Id*.

[72] *Id*. For one view on the SPOE approach and potential limitations, see Howell E. Jackson & Stephanie Massman, *The Resolution of Distressed Financial Conglomerates* in FINANCIAL REFORM: PREVENTING THE NEXT CRISIS (Russell Sage Foundation Journal of Social Sciences 2017) (Michael S. Barr, ed.)

[73] Whether a planning mechanism designed initially to address 9/11 style risks and later expanded upon to address natural disasters, British Petroleum style industrial accidents, and cyber security issues proves adaptable to pandemic risks will be an interesting and important issue for supervisory officials. For an early indication that this issue is likely to receive supervisory attention, see Jill Gregorie, SEC Probing Shops' Disaster Responses, Ignites (Apr. 9, 2020) (discussing reports of SEC inquiries into mutual fund groups).

E. Reconsidering the Role of the Fed and Treasury in Future Crises

Another reform from the last financial crisis—and one that has been decried in some certain circles—is an effort to constrain the flexibility of the Federal Reserve Board and other government officials from providing public support in the event of future financial crisis.[74] Due both to public outrage over the apparent cost of TARP funding (and its tilt towards financial interests) as well as moral hazard concerns that public interventions might incentivize excessive future risk-taking, the Dodd-Frank Act restricted the scope of the Federal Reserve Board's powers under Section 13(3) of the Federal Reserve Act and also imposed other restrictions on federal actions in the face of future financial crises.[75] As described above, these restrictions did not inhibit aggressive actions by both the Fed and the Treasury in the face of the coronavirus pandemic. But whether the pandemic will generate similar public dissatisfaction with Fed actions remains to be seen.[76] At a minimum, the close collaboration between the Fed and the Treasury in recent months adds support for claims that the central bank's role is inherently political and should be subject to more direct political control.

While the Federal Reserve Board's robust response to date belies prior concerns that its section 13(3) powers were irreparably constrained, that fact might prompt some critics of the Fed to push for even further restrictions on

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[74] *Systematic Regulation of Systemic Risk*, *supra* note **Error! Bookmark not defined.**, at 17.

[75] Within policy and academic circles, there is a longstanding debate over the extent to which systemic risk should be largely (or even entirely) addressed through costly *ex ante* measures or whether the government should also provide a limited set of *ex post* measures, such as the central banks' traditional lender-of-last-resort functions or perhaps even Mario Draghi-style "whatever it takes" functions. Some experts (privately) favor time-inconsistent policies, denying any intention of provide *ex post* interventions in normal times but then being open to *ex post* intervention when crisis arise. Our own view is that some degree of *ex post* capability is the sounder policy, both because a fully effective *ex ante* system is extraordinarily costly to impose and politically difficult to maintain. *See, e.g.,* Iman Anabtawi & Steven L. Schwarcz, *Regulating* Ex Post*: How Law Can Address the Inevitability of Financial Failure*, 92 TEX. L. REV. 75 (2013). But whatever one's personal views of the merits of *ex post* interventions, the use of substantial public resources in the face of a financial crisis – even one prompted by pandemic risks – may create subsequent political pressure to scale back the structure of *ex post* support. Admittedly, this assessment is speculative on our part (along with much of this essay), and it is conceivable that the lesson of the current crisis will be to increase public support of *ex post* interventions in the case systemic risks, thereby reducing political resistance to Section13(3).

[76] The optimal level of public *ex post* interventions could well vary with policy choices made on other dimension. In particular, if some sort of public insurance arrangement for pandemic risks were imposed along the lines outlined above, the existence of that fund could influence the perceived need for other forms of public support, especially if the financing of public support were on a broad taxpayer base that differed from the funding mechanism for the mandatory insurance program. In Europe, finance ministers agreed to use the European Stability Mechanism (ESM), a bailout fund created after the last financial crisis, to provide loans to countries for healthcare costs associated with COVID-19. *See* H.J. Mai, *EU Finance Ministers Reach $590 Billion Coronavirus Rescue Deal*, NPR (Apr. 9, 2020), https://www.npr.org/sections/coronavirus-live-updates/2020/04/09/831395411/eu-finance-ministers-reach-590-billion-coronavirus-rescue-deal. Debates over the terms of the ESM loans were contentious, due to calls from the Netherlands for more oversight of the funds. *Id*. *See also Explainer on the ESM's Role in there European Response*, EUROPEAN STABILITY MECHANISM, https://www.esm.europa.eu/content/europe-response-corona-crisis (last visited Apr. 17, 2020).

the Fed's Section 13(3) powers in the aftermath of this pandemic.[77] On the other hand—at least at this stage of the coronavirus crisis—it seems unlikely that public interventions to date will raise compelling moral hazard concerns. After all, it seems farfetched to suggest that firms or private parties increased their exposure to pandemic risks in anticipation of federal support in a pandemic-driven crisis. Still, as discussed above in connection with our discussion of on-going interventions to combat the systemic financial effects of the pandemic, many well-intentioned government actions undertaken today could trigger political backlash in the future, especially if the measures prove ineffective, have unforeseen distributional effects, or come to be seen as reflecting political favoritism or other illegitimate considerations. Conceivably—and this sentiment has already gained voice in some quarters[78]—there may be efforts to disentangle prospectively the appropriate assignment of responsibilities between the Fed and the Treasury in emergency interventions of the sort we have seen in responses to COVID-19. Presumably, the goal here would be to restrict the Fed to the provision of liquidity to solvent firms, with the Treasury clearly taking on all credit risks associated with emergency vehicles. Of course, for those sensitive to moral hazard concerns, articulating this division of authority—or worse authorizing it in advance of the next crisis—could be seen as having perverse incentive effects in terms of private market risk-taking.

F. Exporting a Systemic Risk Perspective to the Field of Public Health

As this essay is primarily concerned with systemic risk in the financial system, we have focused our attention almost exclusively on issues of financial regulation and its reform. It is possible, however, also to think in terms of exporting the lessons of systemic risk regulation in the financial sector to the field of public health.[79] Conceptually, there are two distinct systems of systemic transmission with respect to a pandemic. The first, which has been the focus of this essay so far, is the transmission of a pandemic into systemic risks within the financial system. The second, which we now touch

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[77] For an interesting suggestion that Congress inoculate the Fed by endorsing the Fed's use of its section13(3) powers in the current crisis, *see* Kathryn Judge, Congress Should Endorse the Federal Reserve's Extraordinary Measures, The CLS Blue Sky Blog (Mar 24, 2020). At least at this stage of the coronavirus crisis, it seems unlikely that public interventions to date will raise compelling moral hazard concerns. After all, it seems farfetched to suggest that firms or private parties increased their exposure to pandemic risks in anticipation of federal support in a pandemic-driven crisis.

[78] *See* Hal S. Scott, An Essay on the Fed and the U.S. Treasury: Lender of Last Resort and Fiscal Policy (May 21, 2020), avail. at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3607192.

[79] Another, more modest path for combining the two disciplines would be to incorporate the financial costs of pandemics into cost-benefit analyses used to determine, ex ante, the appropriate levels of public health safeguards to prevent pandemics. We touched upon this issue in the earlier version of this essay, *see* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3580425, and have reproduced that analysis here in Appendix B.

on, is the transmission of an infection that is confined within a small number of individuals or a single community to the broader population: that is, the transmission of localized disease into the pandemic itself.

There is a strong theoretical basis to hypothesize that the macroprudential interventions that financial regulators have devised to police systemic financial risks might help, to some extent, to inform public health measures to control the spread of diseases within human populations. The last financial crisis demanded an expansion of financial regulation from the microprudential, which focuses on specific components of the financial system (such as banks individually), to macroprudential financial regulation that addresses the stability of the financial system *as a system*. Although the medical and healthcare system is also a system, much of its current regulation is micro-prudential, focusing only on specific components such as individual hospitals and other healthcare providers.

We believe it is important to broaden that regulatory focus, as has been done for the financial system, to address the stability of the medical and healthcare system, *as a system*—a system that pandemics, for example, can destabilize. We refer to that macro-prudential regulation as "macromedical" regulation. In a separate article, one of us is working with a healthcare regulation expert to explore the design and implementation of macromedical regulation.[80]

For example, certain channels of transmitting systemic risk in the financial system—interconnectedness, size, and lack of substitutability—and related market failures may also be associated with the transmission of disease risk. Interconnectedness of people and of healthcare providers can spread a localized infection into a pandemic disease just as interconnectedness of financial institutions can spread a localized default into a systemic economic collapse.[81] Certain macroprudential regulatory approaches that are applicable to reducing the financial system's interconnectedness could also inform public health regulation.[82]

Similarly, just as the failure of an essential financial institution or infrastructure can act as a channel to transmit systemic risk, the lack of substitutability can make the consequences of an infection much worse if hospitals and other essential medical-care providers are insufficient to treat

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[80] *See* Barak D. Richman & Steven L. Schwarcz, "Macromedical Regulation" (draft on file with authors).

[81] *Id*.

[82] *Id*. (showing, for example, how macroprudential regulation can reduce tight coupling and interactive complexity of the healthcare system, and thus its interconnectedness).

ill patients. Regulation could protect against the lack of substitutability by protecting the non-substitutable hospitals and other healthcare providers that provide these essential public services.[83] Macroprudential financial regulation does this for essential financial service providers, for example, through ring-fencing.[84]

Macroprudential regulatory approaches also could help to address market failures that increase the transmission of infections among interconnected people.[85] These market failures include not only collective action problems[86] but also problems of limited human rationality that can exacerbate the transmission of disease, including herd behavior, cognitive biases, overreliance on heuristics, and the tendency to panic.[87]

Additionally, macroprudential regulatory approaches could help to address what might be characterized as a legally created market failure: the fact that the shareholder-primacy rule requires most private healthcare providers to be managed for the primary benefit of their shareholders.[88] This means that these providers engage in activities that sometimes have positive expected value to their investors, but negative expected value to the public.[89] This conflict between private and public interests calls into question, for example, whether managers of critical healthcare providers should have some type of a public governance duty, including an obligation to consider not only profits but also protecting public health.[90]

G. Creating Greater Resilience Across the Board

Another potential public reaction to the pandemic crisis may arise out of its fiscal implications.[91] While additional and expensive stimulus measures are quite likely to follow, the CARES Act with its $2.2 trillion price tag along with inevitable declines in federal revenues are already expected to push public debt-to-GDP ratios about 100 percent for the first time since the

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[83] *Id*.

[84] *Id*.

[85] *Id*.

[86] *See id*. (discussing collective action problems not only among people but also among nations).

[87] *See id*. (discussing behavioral limitations including those discussed in *Systematic Regulation of Systemic Risk*, *supra* note **Error! Bookmark not defined.**, at 29).

[88] *Id*.

[89] *See id.* and *supra* note 1 and accompanying text.

[90] "Macromedical Regulation," *supra* note **Error! Bookmark not defined.**.

[91] See, e.g., Carl Hulse, No Fight Over Red Ink Now, but Virus Spending Will Force Tough Choices, N.Y. TIMES (Apr. 18, 2020).

Second World War.[92] Coming into 2020, public debt was not projected to hit that level until the end of the decade. This increase in public debt coupled with annual deficits at an unprecedented peace-time level will likely encourage deficit hawks to push for budgetary stringency in coming years, putting them in conflict with those more focused on Keynesian stimulus packages for the next few years. Beyond these familiar disputes, the current crisis may spark public debate over whether the federal government has not also exposed itself to a degree of national fragility by failing to reserve more fiscal capacity during the sustained economic expansion of the last decade so as to be better prepared to pump up deficit spending when inevitably unforeseen crises arise. To the extent the current crisis is revealing it has become the reinsurer-of-last-resort in times of crisis, the federal government should modify its long-range financial plans accordingly, going forward. In effect, one potential response to the pandemic crisis is that we should attempt to improve our national resiliency to withstand pandemics and other unanticipated exogenous shocks.

Indeed, much of our speculation in this part of the essay has been exploring ways in which the resiliency of our financial system might be enhanced in the aftermath of the coronavirus pandemics. Households could be encouraged to increase their emergency savings accounts, financial firms could be required to expand their capital and liquidity buffers beyond those imposed in the aftermath of the last financial crisis, other mechanisms for third party loss absorption (whether catastrophe bonds or some other mechanism) could be promoted, or the public health system itself could be strengthened through judicious incorporation of lessons learned in insulating the financial system from systemic risks.[93] The coronavirus pandemic has, if nothing else, exposed a previously underappreciated degree of fragility in our financial system and economic infrastructure. Quite plausibly, future regulatory responses will focus on improving resiliency across the board.

CONCLUSION

Because we continue to be affected by the COVID-19 pandemic, our views in this essay must be tentative and subject to revision. With the benefit of further hindsight, future analysis might reveal, for example, a more comprehensive view of the extent to which *ex ante* regulation might profitably reduce systemic financial risk. We might also be able to offer a

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[92] *See* http://www.crfb.org/blogs/new-projections-debt-will-exceed-size-economy-year.

[93] Although beyond the scope of this essay with its focus on the financial system, future reform efforts might focus on the increasingly high amounts of leverage in private firms—arguably exacerbated by the expanding role of private equity investors—as a further source of economic fragility that might possibly be addressed through tax reform See Mark J. Roe & Michael Troege, *Containing Systemic Risk by Taking Banks Properly*, 35 YALE J. REG. 181 (2018).

more complete analysis of the *ex post* interventions that are currently being deployed to safeguard the financial system. Nonetheless, we hope this essay will help to foster an ongoing dialogue about protecting financial stability against future possible pandemics.

Note to 9/8/20 L&E Workshop Participants:

For a more current and complete review of government actions, see Barr, Jackson & Tahyar, The Financial Response to the COVID-19 Pandemic (draft of Aug. 1, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3666461) (attached)

APPENDIX A

SUMMARY OF GOVERNMENT RESPONSES TO COVID-19[***]

To try to contain the COVID-19 pandemic's threat to the financial system, the federal government and state regulators have been intervening through a variety of measures. Below, we have listed chronologically the most important interventions to date, focusing on federal regulation of the financial system. We acknowledge but omit important responses by state and local governments. This appendix is illustrative, not comprehensive, and it supplements similar, thoughtful efforts underway at the Yale School of Management and Davis Polk and Wardwell LLP.[94] It is current through April 10, 2020. Further drafts of this essay will further update this Appendix.

To some extent, these government responses reflect the "top-down"/"bottom-up" dichotomy discussed in the text of this essay. For example, the Federal Reserve's March 15, 2020 rate cut and its March 19, 2020 establishment of swap lines for international central banks exemplify "top-down" responses. The CARES Act's provisions for stimulus checks to individual Americans and Small Business Administration loans are more in the nature of "bottom-up" responses. Some responses combine top-down and bottom-up approaches, such as the efforts of the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation to guide banks to prudently accommodate consumer and business borrowers.

Additionally, we have classified these *ex post* measures according to the categories in Part IV of this essay. As we acknowledged,[95] some measures may overlap across categories, and the content of other measures remains unresolved. Nonetheless, we hope these categories can provide a helpful heuristic. To contextualize the pandemic-related financial regulatory efforts,

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[***] This appendix was prepared by Emma Wheeler and Theodore L. Leonhardt, then JD candidates at Duke Law School (and now recipients of that degree).

[94] *See* Program on Financial Stability, *COVID-19 Crisis*, YALE SCHOOL OF MANAGEMENT (Apr. 2, 2020), https://som.yale.edu/faculty-research-centers/centers-initiatives/program-on-financial-stability/covid-19-crisis; *Davis Polk Opens FinReg Tracker to All*, DAVIS POLK & WARDWELL LLP (Mar. 25, 2020), https://www.davispolk.com/news/davis-polk-opens-finreg-tracker-all. Other law firms have undertaken similar efforts. *See, e.g.*, *Financial Regulatory Response to COVID-19*, MAYER BROWN (Apr. 3, 2020), https://covid19.mayerbrown.com/financial-regulatory/; *US Financial Regulatory Action on COVID-19*, STEPTOE & JOHNSON LLP, https://www.steptoe.com/en/news-publications/us-financial-regulatory-agency-action-on-covid-19.html (last visited Apr. 6, 2020); Duane Wall et al., *COVID-19 Response: US Financial Services Regulation*, WHITE & CASE LLP (Apr. 6, 2020), https://www.whitecase.com/sites/default/files/2020-04/4-Federal-regulatory-response-060420-v2.pdf.

[95] *See supra* Part IV.

we have also provided at the end of this Appendix a separate list of public health milestones and government interventions.

Financial Regulatory Interventions

- February 27, 2020: Vice President Mike Pence and Health and Human Services Secretary Azar expand the White House Coronavirus Task Force to include Treasury Secretary Steven Mnuchin and Director of the National Economic Council Larry Kudlow.[96] (**Official Encouragement of Private-Sector Relief)**.
- March 4, 2020: The Securities and Exchange Commission ("SEC") issues an order extending certain Securities Exchange Act of 1934 filing deadlines by forty-five days for filings due between March 1 and April 30.[97] **(Regulatory & Supervisory Accommodations)**.
- March 6, 2020: The Office of the Comptroller of the Currency ("OCC"), Board of Governors of the Federal Reserve System ("Federal Reserve"), and Federal Deposit Insurance Corporation ("FDIC") issue updated general pandemic preparedness guidance, following earlier pandemic preparedness guidance in December 2007.[98] **(Official Encouragement of Private-Sector Relief)**.
- March 6, 2020: The New York Department of Financial Services ("NYDFS") issues pandemic preparedness letters.[99] **(Official Encouragement of Private-Sector Relief)**.
- March 10, 2020: NYDFS issues a statement calling for customer contact to promote reasonable and prudent accommodations to customers such as loan modifications, waiving overdraft and late

[96] Press Release, The White House, Vice President Pence and Secretary Azar Add Key Administration Officials to the Coronavirus Task Force (Feb. 27, 2020), https://www.whitehouse.gov/briefings-statements/vice-president-pence-secretary-azar-add-key-administration-officials-coronavirus-task-force/.

[97] Press Release, U.S. Sec. & Exch. Comm'n, SEC Provides Conditional Regulatory Relief and Assistance for Companies Affected by the Coronavirus Disease 2019 (Mar. 4, 2020), https://www.sec.gov/news/press-release/2020-53.

[98] Press Release, Fed. Fin. Inst. Examination Council, FFIEC Highlights Pandemic Preparedness Guidance (Mar. 6, 2020), https://www.ffiec.gov/press/pr030620.htm.

[99] Industry Letter, N.Y. Dep't Fin. Servs., Guidance to New York State Regulated Institutions and Request for Assurance of Operational Preparedness Relating to the Outbreak of the Novel Coronavirus (Mar. 10, 2020), https://www.dfs.ny.gov/industry_guidance/industry_letters/il20200310_risk_coronavirus; Industry Letter, N.Y. Dep't Fin. Servs., Guidance to New York State Regulated Institutions and Request for Assurance Relating to Potential Financial Risk Arising from the Outbreak of the Novel Coronavirus (Mar. 10, 2020), https://www.dfs.ny.gov/industry_guidance/industry_letters/il20200310_financial_risk_coronavirus; Letter, N.Y. Dep't Fin. Servs., Guidance to Department of Financial Services ("DFS") Regulated Institutions Engaged in Virtual Currency Business Activity and Request for Assurance Relating to Operational and Financial Risk Arising from the Outbreak of the Novel Coronavirus (COVID-19) (Mar. 10, 2020), https://www.dfs.ny.gov/industry_guidance/industry_letters/il20200310_coronavirus_vc_business_oper_fin_risk.

fees, and reducing credit terms on new loans.[100] **(Official Encouragement of Private-Sector Relief)**.

- March 13, 2020: The OCC and FDIC release similar statements favoring prudently accommodating customers affected by COVID-19, with measures including 1) fee waivers, 2) increased withdrawal caps, 3) payment accommodations, 4) higher credit card limits, 5) flexibility for out-of-state and non-customer checks, and 6) flexibility for customers afflicted by illness or business interruptions.[101] **(Official Encouragement of Private-Sector Relief)**.
- March 13, 2020: The SEC "publishe[s] guidance to assist public companies, investment companies, shareholders, and other market participants affected by COVID-19 with their upcoming annual shareholder meetings . . . . to facilitate the ability of companies to hold these important meetings, including through the use of technology, and engage with shareholders while complying with the federal securities laws."[102] The SEC provides similar relief from in-person meeting requirements for investment funds and investment advisors.[103] **(Regulatory & Supervisory Accommodations)**.
- March 14, 2020: The SEC provides "notice for immediate effectiveness a proposed rule filing submitted by Cboe Exchange, Inc. to facilitate the continued operation of Cboe's options exchange in light of Cboe's decision to temporarily suspend open outcry trading on its Chicago trading floor."[104] **(Regulatory & Supervisory Accommodations)**.
- March 15, 2020: The Federal Reserve cuts the target range for the federal funds rate to 0–0.25% and announces plan to buy at least $500 billion in Treasury securities and $200 billion in mortgage-

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[100] Letter, N.Y. Dep't Fin. Servs., Guidance to New York State Regulated Financial Institutions Regarding Support for Consumers and Businesses Impacted by the Novel Coronavirus (COVID-19) (Mar. 10, 2020), https://www.dfs.ny.gov/industry_guidance/industry_letters/il20200319_consumer_support_coronavirus.

[101] Office of the Comptroller of the Currency, Bull. No. 2020-15, Pandemic Planning: Working with Customers Affected by Coronavirus and Regulatory Assistance (Mar. 13, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-15.html; Financial Institution Letter, FIL-17-2020, Fed. Deposit Ins. Corp., Regulatory Relief: Working with Customers Affected by the Coronavirus (Mar. 13, 2020), https://www.fdic.gov/news/news/financial/2020/fil20017.html.

[102] Press Release, U.S. Sec. & Exch. Comm'n, SEC Staff Provides Guidance to Promote Continued Shareholder Engagement, Including at Virtual Annual Meetings, for Companies and Funds Affected by the Coronavirus Disease 2019 (COVID-19) (Mar. 13, 2020), https://www.sec.gov/news/press-release/2020-62.

[103] Press Release, U.S. Sec. & Exch. Comm'n, SEC Takes Targeted Action to Assist Funds and Advisers, Permits Virtual Board Meetings and Provides Conditional Relief from Certain Filing Procedures (Mar. 13, 2020), https://www.sec.gov/news/press-release/2020-63.

[104] Press Release, U.S. Sec. & Exch. Comm'n, Cboe Options Exchange Temporarily Shifts to Fully Electronic Trading – SEC Enables Immediate Effectiveness of Proposed Rule Change to Facilitate Continued Operations in Light of Temporary Suspension of Cboe Physical Trading Floor (Mar. 14, 2020), https://www.sec.gov/news/press-release/2020-64.

backed debt.[105] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.

- March 17, 2020: Small Business Administration ("SBA") relaxes criteria for states accessing small business loan assistance.[106] **(Public Relief to Business Enterprises)**.
- March 17, 2020: The Federal Reserve establishes the Commercial Paper Funding Facility ("CPFF"), a funding facility to purchase commercial paper directly from eligible companies.[107] The Federal Reserve also establishes a Primary Dealer Credit Facility ("PDCF") to "offer overnight and term funding with maturities up to 90 days" to primary dealers.[108] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- March 17, 2020: The Commodity Futures Trading Commission ("CFTC") announces issuance of no-action letters for compliance challenges due to COVID-19.[109] **(Regulatory & Supervisory Accommodations)**.
- March 18, 2020: The Federal Reserve establishes the Money Market Mutual Fund Liquidity Facility.[110] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- March 19, 2020: FDIC, Federal Reserve, and OCC clarify that banks should "use their own capital and liquidity buffers as they respond to the challenges presented by the effects of the coronavirus."[111] The agencies also revise the definition of "eligible retained income" for bank capital requirements to prevent sudden limitations on capital

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[105] Jeanna Smialek & Neil Irwin, *Fed Cuts Rates to Near Zero; Virus Toll Soars*, N.Y. TIMES, Mar. 15, 2020, at A1.

[106] Press Release No. 20-26, U.S. Small Bus. Admin., SBA Updates Criteria on States for Requesting Disaster Assistance Loans for Small Businesses Impacted by Coronavirus (Mar. 17, 2020), https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/sba-updates-criteria-states-requesting-disaster-assistance-loans-small-businesses-impacted.

[107] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board Announces Establishment of a Commercial Paper Funding Facility (CPFF) to Support the Flow of Credit to Households and Businesses (Mar. 17, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317a.htm.

[108] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board Announces Establishment of a Primary Dealer Credit Facility (PDCF) to Support the Credit Needs of Households and Businesses (Mar. 17, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200317b.htm.

[109] Press Release, Commodity Futures Trading Comm'n, CFTC Provides Relief to Market Participants in Response to COVID-19, Release No. 8132-20 (Mar. 17, 2020), https://www.cftc.gov/PressRoom/PressReleases/8132-20.

[110] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board Broadens Program of Support for the Flow of Credit to Households and Businesses by Establishing a Money Market Mutual Fund Liquidity Facility (MMLF) (Mar. 18, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200318a.htm.

[111] Financial Institution Letter, FIL-20-2020, Fed. Deposit Ins. Corp., Regulatory Capital Rule: Clarification on the Use of Buffers (Mar. 19, 2020), https://www.fdic.gov/news/news/financial/2020/fil20020.html?source=govdelivery&utm_medium=email&utm_source=govdelivery.

distributions.[112] **(Regulatory & Supervisory Accommodations)** / **(Official Encouragement of Private-Sector Relief)**.

- March 19, 2020: The Federal Reserve establishes swap lines providing temporary liquidity in U.S. dollars to several international central banks.[113] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- March 19, 2020: The Federal Reserve, the FDIC, the National Credit Union Administration ("NCUA"), the OCC, Consumer Financial Protection Bureau ("CFPB"), and State Banking Regulators issue initial guidance on modified loan terms, expressing that modified loans would not be past due (requiring reporting) if the borrower complied with modified loan terms. **(Regulatory & Supervisory Accommodations)**.
- March 21, 2020: The SEC "notice[s] for immediate effectiveness a proposed rule filing submitted by New York Stock Exchange LLC ("NYSE") to facilitate electronic auctions in light of its decision to temporarily close its New York trading floor."[114] **(Regulatory & Supervisory Accommodations)**.
- March 22, 2020: The Federal Reserve, the FDIC, the NCUA, the OCC, CFPB, and State Banking Regulators update and expand their inter-agency guidance by relaxing accounting requirements to encourage short-term, good faith loan modifications.[115] **(Regulatory & Supervisory Accommodations)**.
- March 22, 2020: The SEC provides regulatory relief for transfer agents, who still must adequately safeguard securities and funds in their custody or possession according to Exchange Act Rule 17Ad-12.[116] **(Regulatory & Supervisory Accommodations)**.
- March 22, 2020: OCC promulgates an interim final rule extending maturity limits in short-term investment funds for national banks

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[112] Financial Institution Letter, FIL-21-2020, Fed. Deposit Ins. Corp., Regulatory Capital Rule: Eligible Retained Income (Mar. 19, 2020), https://www.fdic.gov/news/news/financial/2020/fil20021.html?source=govdelivery&utm_medium=email&utm_source=govdelivery.

[113] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Announces the Establishment of Temporary U.S. Dollar Liquidity Arrangements with Other Central Banks (Mar. 19, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200319b.htm.

[114] Press Release, U.S. Sec. & Exch. Comm'n, SEC Enables Immediate Effectiveness of Proposed Rule Change to Facilitate NYSE Electronic Auctions in Light of Temporary Closure of Physical Trading Floor (Mar. 21, 2020), https://www.sec.gov/news/press-release/2020-67.

[115] Financial Institution Letter, FIL-22-2020, Fed. Deposit Ins. Corp., Interagency Statement on Loan Modifications by Financial Institutions Working with Customers Affected by Coronavirus (Mar. 22, 2020), https://www.fdic.gov/news/news/financial/2020/fil20022.html.

[116] Press Release, U.S. Sec. & Exch. Comm'n, SEC Provides Conditional Regulatory Relief for Registered Transfer Agents and Certain Other Persons Affected by the Coronavirus Disease 2019 (COVID-19) (Mar. 22, 2020), https://www.sec.gov/news/press-release/2020-68.

acting as fiduciaries.[117] **(Regulatory & Supervisory Accommodations)**.

- March 23, 2020: The Federal Reserve announces several measures to address economic disruption, including a plan to purchase an unlimited amount of government-backed Treasury securities and mortgage-backed securities.[118] The Federal Reserve also commits to establishing up to $300 billion in financing for employers, consumers, and business, and to establishing three new credit facilities: a Primary Market Corporate Credit Facility ("PMCCF") for bond and loan issuance; a Secondary Market Corporate Credit Facility ("SMCCF") to buy corporate bonds and invest in debt; and a Term Asset-Backed Securities Loan Facility ("TALF") to support assets backed by certain consumer loans.[119] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- March 23, 2020: SEC issues a public statement emphasizing the importance of market integrity and of preventing misuse of material non-public information as related to COVID-19.[120] **(Official Encouragement of Private-Sector Relief)**. The SEC also allows lending arrangements between registered funds and their affiliates to provide support for funds and their investors during portfolio rebalancing.[121] **(Regulatory & Supervisory Accommodations)**.
- March 25, 2020: SEC offers a forty-five-day extension for certain covered filings under the Securities Exchange Act of 1934, the Investment Company Act of 1940, and the Investment Advisers Act of 1940 to businesses unable to meet deadlines due to COVID-19.[122] The SEC also issues guidance on disclosures and other securities law obligations with respect to COVID-19 business and market disruptions.[123] **(Regulatory & Supervisory Accommodations)**.

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[117] 85 Fed. Reg. 16,887 (Mar. 25, 2020) (amending 12 C.F.R. § 9.18).

[118] Jeanna Smialek, *Fed Flexes Muscle as Senate Battles Over Aid*, N.Y. TIMES, Mar. 24, 2020, at A1.

[119] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Announces Extensive New Measures to Support the Economy (Mar. 23, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm.

[120] U.S. Sec. & Exch. Comm'n, Statement from Stephanie Avakian and Steven Peikin, Co-Directors of the SEC's Division of Enforcement Regarding Market Integrity (Mar. 23, 2020), https://www.sec.gov/news/public-statement/statement-enforcement-co-directors-market-integrity.

[121] Press Release, U.S. Sec. & Exch. Comm'n, SEC Provides Temporary Additional Flexibility to Registered Investment Companies Affected by Coronavirus (Mar. 23, 2020), https://www.sec.gov/news/press-release/2020-70.

[122] U.S. Sec. & Exch. Comm'n, Release No. 34-88465, Order Under Section 36 of the Securities Exchange Act of 1934 Modifying Exemptions from the Reporting and Proxy Delivery Requirements for Public Companies (Mar. 25, 2020), https://www.sec.gov/rules/exorders/2020/34-88465.pdf.

[123] U.S. Sec. & Exch. Comm'n, CF Disclosure Guidance: Topic No. 9 (Mar. 25, 2020), https://www.sec.gov/corpfin/coronavirus-covid-19.

- March 26, 2020: CFPB revises reporting requirements for mortgage lenders and credit card providers.[124] **(Regulatory & Supervisory Accommodations)**.
- March 26, 2020: The SEC provides additional relief from the notarization requirement for its online EDGAR filing system, extends filing deadlines for Regulation A and Regulation Crowdfunding, and extends the Form MA filing deadline for municipal advisors.[125] **(Regulatory & Supervisory Accommodations)**.
- March 27, 2020: President Trump signs the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act" or "Phase II") into law, authorizing $2 trillion of relief through small business loans, cash payments to individuals, expanded unemployment insurance, $500 billion in loans and loan guarantees to eligible distressed businesses, and support for Federal Reserve programs.[126] Components of the CARES Act include:
    - SBA loans[127] **(Public Relief to Business Enterprises)**;
    - Infrastructure and transportation support[128] **(Public Relief to Business Enterprises)**;
    - Bank financing[129] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**;
    - Employee benefits policy[130] **(Public Relief to Households)**;

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[124] Consumer Fin. Prot. Bureau, CFPB Provides Flexibility During COVID-19 Pandemic (Mar. 26, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-provides-flexibility-during-covid-19-pandemic/.

[125] Press Release, U.S. Sec. & Exch. Comm'n, SEC Provides Additional Temporary Regulatory Relief and Assistance to Market Participants Affected by COVID-19 (Mar. 26, 2020), https://www.sec.gov/news/press-release/2020-74.

[126] Coronavirus Aid, Relief, and Economic Security Act, Pub. L. No. 116-136 (2020); *Congress Passes Largest Ever Economic Stimulus Package: Key Provisions of CARES Act*, SHEARMAN & STERLING (Mar. 27, 2020), https://www.shearman.com/perspectives/2020/03/congress-passes-largest-ever-economic-stimulus-package-key-provisions-of-cares-act-covid-19.

[127] Andrew T. Kugler, *Small Business Loans under the CARES Act*, MAYER BROWN (Mar. 27, 2020), https://www.mayerbrown.com/en/perspectives-events/publications/2020/03/small-business-loans-under-the-cares-act.

[128] Joseph Seliga, *Summary of Infrastructure and Transportation Provisions: Coronavirus Aid, Relief, and Economic Security Act*, MAYER BROWN (Mar. 27, 2020), https://www.mayerbrown.com/en/perspectives-events/publications/2020/03/summary-of-infrastructure-and-transportation-provisions-coronavirus-aid-relief-and-economic-security-act.

[129] Allyson B. Baker et al., *The Application is Now Available for CARES Act Small Business Loans: What You Need to Know*, VENABLE LLP (Apr. 1, 2020), https://www.venable.com/insights/publications/2020/03/the-cares-act-what-you-need-to-know-about.

[130] Ryan J. Liebl & Stephanie B. Vasconcellos, *The CARES Act-Compensation and Benefits*, MAYER BROWN (Mar. 27, 2020), https://www.covid19.law/2020/03/the-cares-act-compensation-and-benefits-related-provisions/.

- Real estate and mortgage relief[131] **(Public Relief to Households)**;
- Tax policy[132] **(Public Relief to Households)**; and
- Public health measures[133] **(Public Relief to Households)**;

- March 27, 2020: Bank regulatory agencies authorize early adoption of a new approach to measuring counterparty risk under the "Standardized Approach for Calculating the Exposure Amount of Derivative Contracts" Rule ("SA-CCR Rule"). The agencies also provide a two-year extension on the capital effects of adopting the "current expected credit loss" accounting standard.[134] **(Regulatory & Supervisory Accommodations)**.
- March 27, 2020: President Trump delegates Defense Production Act ("DPA") Title III authority to Secretary Azar "to guarantee loans by private institutions, make loans, make provision for purchases and commitments to purchase, and take additional actions to create, maintain, protect, expand, and restore domestic industrial base capabilities [for medical manufacturing]," as well as activate the DPA's antitrust exemption.[135] **(Public Relief to Business Enterprises)**.
- March 29, 2020: Mortgage Bankers Association ("MBA") urges FINRA and the SEC to "issue guidance to the nation's broker-dealers, making clear that margin calls on mortgage lenders' hedge positions should not be escalated to destabilizing levels. MBA indicates its belief that, absent such guidance and an immediate shift in broker-dealer practices, the U.S. housing market is in danger of large-scale disruption."[136] **(Official Encouragement of Private-Sector Relief)**.

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[131] Faiz Ahmad et al., *CARES Act Provides Much-Needed Stimulus for U.S. Businesses, Individuals*, SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP (Mar. 27, 2020), https://www.skadden.com/insights/publications/2020/03/cares-act-provides-much-needed-stimulus#real.

[132] James R. Barry et al., *US Tax Relief in CARES Act*, MAYER BROWN (Mar. 27, 2020), https://www.mayerbrown.com/en/perspectives-events/publications/2020/03/us-tax-relief-in-cares-act.

[133] John R. Jacob et al., *CARES Act Summary – Health Care*, AKIN GUMP (Mar. 26, 2020), https://www.akingump.com/en/experience/industries/national-security/covid-19-resource-center/cares-act-summary-health-care.html.

[134] Joint Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Fed. Deposit Ins. Corp., & Office of the Comptroller of the Currency, Agencies Announce Two Actions To Support Households and Businesses (Mar. 27, 2020), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200327a.htm.

[135] *See also* Boris Bershteyn & Michael E. Leiter, President Trump Uses the Defense Production Act to Compel Production of Ventilators, Prohibit Hoarding in Response to COVID-19, SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP (Apr. 1, 2020), https://www.skadden.com/insights/publications/2020/04/president-trump-uses-the-defense-production.

[136] *The Response: Federal and State Actions Affecting the Financial Services Industry – Edition 3*, HOLLAND & KNIGHT (Mar. 30, 2020), https://www.hklaw.com/en/insights/publications/2020/03/the-response-federal-and-state-actions-edition-3.

- March 31, 2020: The Federal Reserve establishes a "temporary repurchase agreement facility for foreign and international monetary authorities ('FIMA Repo Facility') . . . to allow FIMA account holders, which consist of central banks and other international monetary authorities with accounts at the Federal Reserve Bank of New York, to enter into repurchase agreements with the Federal Reserve." The Federal Reserve explains, "This facility should help support the smooth functioning of the U.S. Treasury market by providing an alternative temporary source of U.S. dollars other than sales of securities in the open market. It should also serve, along with the U.S. dollar liquidity swap lines the Federal Reserve has established with other central banks, to help ease strains in global U.S. dollar funding markets."[137] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- March 31, 2020: The CFTC announces additional no-action relief for its constituent market participants, extending to September 30, 2020.[138] **(Regulatory & Supervisory Accommodations)**.
- March 31, 2020: The SEC announces a virtual meeting of its Small Business Capital Formation Advisory Committee in response to COVID-19.[139] **(Official Encouragement of Private-Sector Relief)**.
- April 1: The Federal Reserve announces a temporary exclusion of Treasury securities and deposits from calculating the supplementary leverage ratio for bank holding companies, reducing tier 1 capital.[140] **(Official Encouragement of Private-Sector Relief)**.
- April 3, 2020: The Federal Reserve, the CFPB, Conference of State Bank Supervisors ("CSBS"), FDIC, NCUA, and OCC issue guidance encouraging mortgage servicers' participation in forbearance programs under the CARES Act.[141] **(Official Encouragement of Private-Sector Relief)**.

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[137] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Announces Establishment of a Temporary FIMA Facility to Help Support the Smooth Functioning of Financial Markets (Mar. 31, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200331a.htm.

[138] Commodity Futures Trading Comm'n, Release No. 8142-20, CFTC Provides Further Relief to Market Participants in Response to COVID-19 (Mar. 31, 2020), https://www.cftc.gov/PressRoom/PressReleases/8142-20.

[139] Press Release, U.S. Sec. & Exch. Comm'n, SEC Announces Ad Hoc Meeting of Small Business Capital Formation Advisory Committee in Response to COVID-19 Challenges Faced By Small Businesses (Mar. 31, 2020), https://www.sec.gov/news/press-release/2020-76.

[140] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board announces temporary change to its supplementary leverage ratio rule to ease strains in the Treasury market resulting from the coronavirus and increase banking organizations' ability to provide credit to households and businesses (Apr. 1, 2020), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200401a.htm.

[141] Press Release, Fed. Deposit Ins. Cop., Federal Agencies Encourage Mortgage Servicers to Work With Struggling Homeowners Affected by COVID-19 (Apr. 3, 2020), https://www.fdic.gov/news/news/press/2020/pr20047.html.

- April 6, 2020: The Federal Reserve, FDIC, and OCC announce the issuance of two interim final rules, allowing community banks to lower their community bank leverage ratios to 8% on an interim basis, while planning for a return to the prior 9% ratio.[142] **(Regulatory & Supervisory Accommodations)**.
- April 6, 2020: The Federal Reserve announces that it "will establish a facility to provide term financing backed by [Paycheck Protection Program ("PPP")] loans."[143] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.
- April 6, 2020: The CFTC warns against fraud schemes associated with recent job losses.[144] **(Official Encouragement of Private-Sector Relief)**.
- April 6, 2020: The NYSE suspends shareholder approval rules on issuances to related parties and bona fide private financings under the 20% rule through June 30.[145] **(Regulatory & Supervisory Accommodations)**.
- April 7, 2020: The Federal Reserve, CFPB, FDIC, NCUA, and OCC clarify the interaction of their prior March 22 guidance on loan modifications with Section 4013 of the CARES Act, which suspends rules regarding troubled debt restructuring ("TDR") regulatory classification of loans, and further encourages prudent loan modifications. The regulators also interpreted loan modification and capital reporting rules while emphasizing that examiners "will not criticize" COVID-19 related loan modifications.[146] **(Regulatory & Supervisory Accommodations)**.
- April 7, 2020: The SEC issues risk alerts related to Regulation Best Interest and Form CRS for broker dealers and investment advisers, emphasizing that it will consider the effects of COVID-19 in

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142 Press Release, Fed. Deposit Ins. Cop., Agencies Announce Changes to the Community Bank Leverage Ratio (Apr. 6, 2020), https://www.fdic.gov/news/news/press/2020/pr20048.html.

143 Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve will establish a facility to facilitate lending to small businesses via the Small Business Administration's Paycheck Protection Program (PPP) by providing term financing backed by PPP loans (Apr. 6, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200406a.htm.

144 Press Release, Commodity Futures Trading Comm'n, Release No. 8144-20, CFTC Issues COVID-19 Customer Advisory on Fee Scams (Apr. 6, 2020), https://www.cftc.gov/PressRoom/PressReleases/8144-20.

145 U.S. Sec. & Exch. Comm'n, Self-Regulatory Organizations; New York Stock Exchange LLC; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Waive the Application of Certain of the Shareholder Approval Requirements in Section 312.03 of the NYSE Listed Company Manual Through June 30, 2020 Subject to Certain Conditions, Release No. 34-88572 (Apr. 6, 2020), https://www.sec.gov/rules/sro/nyse/2020/34-88572.pdf ; Victor Goldfeld, *NYSE Temporarily Relaxes Shareholder Approval Rules*, WACHTELL, LIPTON, ROSEN & KATZ (Apr. 8, 2020), https://www.wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.26905.20.pdf.

146 Press Release, Fed. Deposit Ins. Cop., Agencies Issue Revised Interagency Statement on Loan Modifications by Financial Institutions Working with Customers Affected by the Coronavirus (Apr. 7, 2020), https://www.fdic.gov/news/news/press/2020/pr20049.html.

implementing the regulations.[147] **(Regulatory & Supervisory Accommodations)**.

- April 8, 2020: The SEC provides exemptions to allow business development companies to issue additional senior securities to finance small and medium-sized businesses.[148] **(Regulatory & Supervisory Accommodations)**.
- April 8, 2020: SEC Chairman Jay Clayton and SEC Director of Corporation Finance William Hinman issue a public statement encouraging companies "to provide as much information as is practicable regarding their current financial and operating status, as well as their future operational and financial planning." The statement explains, "High quality disclosure will not only provide benefits to investors and companies, it also will enhance valuable communication and coordination across our economy—including between the public and private sectors—as together we pursue the fight against COVID-19." Further, the statement observes, "[W]e would not expect good faith attempts to provide appropriately framed forward-looking information to be second guessed by the SEC."[149] **(Official Encouragement of Private-Sector Relief)** / **(Regulatory & Supervisory Accommodations)**.
- April 8, 2020: The Federal Reserve announces that it will temporarily lift limits on Wells Fargo's growth so that Wells Fargo can administer PPP and loans and loans under the Federal Reserve's planned Main Street lending program.[150] **(Regulatory & Supervisory Accommodations)**.
- April 9, 2020: With the Treasury, the Federal Reserve announces further § 13(3) measures to support the economy with $2.3 billion in funding, which will including funding for supporting the SBA's PPP program, buying $600 billion of loans to small and medium-sized

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[147] Press Release, U.S. Sec. & Exch. Comm'n, SEC Office of Compliance Inspections and Examinations Publishes Risk Alerts Providing Advance Information Regarding Inspections for Compliance with Regulation Best Interest and Form CRS (Apr. 7, 2020), https://www.sec.gov/news/press-release/2020-82.

[148] Press Release, U.S. Sec. & Exch. Comm'n, SEC Provides Temporary, Conditional Relief for Business Development Companies Making Investments in Small and Medium-sized Businesses (Apr. 8, 2020), https://www.sec.gov/news/press-release/2020-84.

[149] Jay Clayton, Chairman & William Hinman, Director, Division of Corporation Finance, U.S. Sec. & Exch. Comm'n, The Importance of Disclosure – For Investors, Markets and Our Fight Against COVID-19 (Apr. 8, 2020), https://www.sec.gov/news/public-statement/statement-clayton-hinman; Martin Lipton & Sebastian V. Niles, *What to Say on Your Next Earnings Call in the Time of COVID-19 – SEC Chairman Jay Clayton and CorpFin Director Bill Hinman Lead the Way*, WACHTELL, LIPTON, ROSEN & KATZ (Apr. 8, 2020), https://www.wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.26906.20.pdf.

[150] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board announces, due to the extraordinary disruptions from the coronavirus, that it will temporarily and narrowly modify the growth restriction on Wells Fargo so that it can provide additional support to small businesses (Apr. 8, 2020), https://www.federalreserve.gov/newsevents/pressreleases/enforcement20200408a.htm.

businesses through the Federal Reserve's Main Street Lending Program, expanding the PMCCF, SMCCF, and TALF capital markets programs, and establishing the $500 billion Municipal Liquidity Facility.[151] **(Provision of Liquidity & Public Guarantees of Financial Liabilities)**.

- April 9, 2020: The Treasury announces that more than 300 tax-related deadlines have been extended.[152]
- April 9, 2020: The Federal Reserve, FDIC, and OCC announce an interim final rule to implement the CARES Act's Paycheck Protection Program ("PPP"), providing for neutral capital effects and a 0% risk weight for PPP loans.[153] **(Regulatory & Supervisory Accommodations)**.
- April 10, 2020: The CFTC extends open comment periods for certain derivatives and swaps rules.[154] **(Regulatory & Supervisory Accommodations)**.

Public Health and Other Regulatory Milestones and Interventions

- January 7, 2020: The Centers for Disease Control ("CDC") establish an Incident Management Structure for COVID-19.[155]
- January 21, 2020: The United States reports the first travel-related COVID-19 case in the country.[156]
- January 21, 2020: CDC initiates measures from its Emergency Operations Center.[157]
- January 29, 2020: President Trump forms the President's Coronavirus Task Force, with the National Security Council coordinating.[158]

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[151] Press Release, U.S. Bd. of Governors of the Fed. Reserve Sys., Federal Reserve takes additional actions to provide up to $2.3 trillion in loans to support the economy (Apr. 9, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm; Press Release, Dep't of the Treasury, Treasury and Federal Reserve Board Announce New and Expanded Lending Programs to Provide up to $2.3 Trillion in Financing (Apr. 9, 2020), https://home.treasury.gov/news/press-releases/sm968; Edward D. Herlihy et al., *Federal Reserve Unveils Main Street Lending Program*, WACHTELL, LIPTON, ROSEN & KATZ (Apr. 9, 2020), https://www.wlrk.com/webdocs/wlrknew/WLRKMemos/WLRK/WLRK.26910.20.pdf.

[152] Press Release, Dep't of the Treasury, Treasury and IRS Extend Over 300 Tax Filing, Payment and Administrative Deadlines (Apr. 9, 2020), https://home.treasury.gov/news/press-releases/sm970.

[153] Press Release, Fed. Deposit Ins. Cop., Federal Bank Regulators Issue Interim Final Rule for Paycheck Protection Program Facility (Apr. 9, 2020), https://www.fdic.gov/news/news/press/2020/pr20050.html.

[154] Press Release, Commodity Futures Trading Comm'n, Release No. 8146-20, CFTC Extends Certain Comment Periods in Response to COVID-19 (Apr. 10, 2020), https://www.cftc.gov/PressRoom/PressReleases/8146-20.

[155] Sarah A. Lister, Cong. Research Serv., R46219, Overview of U.S. Domestic Response to the 2019 Novel Coronavirus (2019-nCoV) 2 (Feb. 10, 2020).

[156] *Id.*

[157] *Id.*

[158] *Id. See also* Press Release, The White House, Statement from the Press Secretary Regarding the President's Coronavirus Task Force (Jan. 29, 2020), https://www.whitehouse.gov/briefings-statements/statement-press-secretary-regarding-presidents-coronavirus-task-force/.

- January 31, 2020: Secretary Alex Azar of the U.S. Department of Health and Human Services ("HHS") declares a Public Health Emergency, retroactive to January 27.[159]
- January 31, 2020: President Trump suspends entry by most foreign nationals who had visited China during the prior two weeks.[160]
- February 4, 2020: The Food and Drug Administration ("FDA") allows emergency use of the CDC's coronavirus testing kit.[161]
- February 26, 2020: President Trump appoints Vice President Pence to lead the Presidential Coronavirus Task Force.[162]
- February 29, 2020: FDA seeks to expand diagnostic capacity by allowing certain laboratories that developed coronavirus tests to begin testing prior to seeking FDA approval.[163]
- March 6, 2020: President Trump signs the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 ("Phase I"). Phase I provides $8.3 billion in emergency funding for treating and containing the coronavirus, with attention to developing testing and vaccines.[164]
- March 11, 2020: President Trump delivers a nationally-televised address on COVID-19.[165]
- March 13, 2020: President Trump declares a national emergency.[166]
- March 18, 2020: President Trump signs the Families First Coronavirus Response Act ("Phase II"), including free coronavirus testing, a $1 billion appropriation for the National Disaster Medical System, required paid sick leave for workers at governments or

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[159] *Id.* Press Release, Dep't of Health and Human Servs., Secretary Azar Delivers Remarks on Declaration of Public Health Emergency for 2019 Novel Coronavirus (Jan. 31, 2020), https://www.hhs.gov/about/leadership/secretary/speeches/2020-speeches/secretary-azar-delivers-remarks-on-declaration-of-public-health-emergency-2019-novel-coronavirus.html.

[160] Proclamation No. 9984, 85 Fed. Reg. 6709 (Feb. 5, 2020).

[161] Press Release, U.S. Food and Drug Admin., FDA Takes Significant Step in Coronavirus Response Efforts, Issues Emergency Use Authorization for the First 2019 Novel Coronavirus Diagnostic (Feb. 4, 2020), https://www.fda.gov/news-events/press-announcements/fda-takes-significant-step-coronavirus-response-efforts-issues-emergency-use-authorization-first.

[162] Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Conference, 2020 DAILY COMP. PRES. DOC. (Feb. 26, 2020).

[163] Press Release, U.S. Food & Drug Admin., FDA Issues New Policy to Help Expedite Availability of Diagnostics (Feb. 29, 2020), https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-issues-new-policy-help-expedite-availability-diagnostics.

[164] G. Hunter Bates et al., *Overview of Federal Coronavirus (COVID-19) Stimulus Measures*, AKIN GUMP (Mar. 18, 2020), https://www.akingump.com/en/news-insights/overview-of-federal-coronavirus-covid-19-stimulus-measures.html. https://www.congress.gov/bill/116th-congress/house-bill/6074/actions?KWICView=false.

[165] Philip A. Wallach & Justus Myers, *The federal government's coronavirus response—Public health timeline*, THE BROOKINGS INSTITUTION (Mar. 31, 2020), https://www.brookings.edu/research/the-federal-governments-coronavirus-actions-and-failures-timeline-and-themes/.

[166] Remarks by President Trump, Vice President Pence, and Members of the Coronavirus Task Force in Press Conference, 2020 DAILY COMP. PRES. DOC. (Mar. 13, 2020).

businesses with less than 500 employees, increased funding for states' unemployment benefits, food grants, and Medicaid funding.[167]

- March 18, 2020: President Trump issues an executive order under Title I of the DPA to speed ventilator manufacturing and criminalize hoarding of medical supplies.[168]
- March 25, 2020: CVS Health, the parent company of Aetna, waives cost-sharing and co-payments for COVID-19 care.[169]
- March 27, 2020: Centers for Disease Control confirm over 100,000 COVID-19 cases in the United States.[170]
- March 27, 2020: President Trump uses DPA Title I powers to require General Motors to prioritize contracts to manufacture ventilators.[171]
- March 30, 2020: Two large health insurers, Humana and Cigna, join CVS Health's Aetna in waiving co-payments and cost-sharing for COVID-19 treatment.[172]
- April 1, 2020: Anthem, the health insurer, announces it will waive co-payments related to COVID-19 for sixty days.[173]
- April 2, 2020: President Trump issues orders using the DPA to speed ventilator and N-95 mask production.[174]

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[167] Reuters, *Explainer: What's in the U.S. Coronavirus Aid Bill That Just Passed Congress?*, N.Y. TIMES (Mar. 18, 2020), https://www.nytimes.com/reuters/2020/03/18/us/politics/18reuters-health-coronavirus-usa-congress-explainer.html. https://www.congress.gov/bill/116th-congress/house-bill/6201.

[168] Exec. Order No. 13,909, 85 C.F.R. 16,227 (2020). *See also* Bershteyn & Leiter, *supra* note 135.

[169] Press Release, CVS Health, CVS Health announces cost-sharing and co-pay waivers for COVID-19-related treatment for Aetna members (Mar. 25, 2020), https://cvshealth.com/newsroom/press-releases/cvs-health-announces-cost-sharing-and-co-pay-waivers-covid-19-related-treatment-aetna.

[170] *Cases in U.S.*, CENTERS FOR DISEASE CONTROL AND PREVENTION (Mar. 27, 2020), https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html.

[171] *Memorandum on Order Under the Defense Production Act Regarding General Motors Company*, THE WHITE HOUSE (Mar. 27, 2020), https://www.whitehouse.gov/presidential-actions/memorandum-order-defense-production-act-regarding-general-motors-company/.

[172] Press Release, Cigna, Cigna Waives Customer Cost-Sharing For COVID-19 Treatment And Deploys Clinical Teams To Increase Virtual Care Capacity (Mar. 30, 2020), https://www.prnewswire.com/news-releases/cigna-waives-customer-cost-sharing-for-covid-19-treatment-and-deploys-clinical-teams-to-increase-virtual-care-capacity-301031554.html; Press Release, Humana, Humana to Waive Medical Costs Related to Coronavirus Treatment (Mar. 30, 2020), https://press.humana.com/press-release/humana-waive-medical-costs-related-coronavirus-treatment.

[173] Press Release, Anthem, Anthem Waives Cost Share for COVID-19 Treatment (Apr. 1, 2020), https://ir.antheminc.com/news-releases/news-release-details/anthem-waives-cost-share-covid-19-treatment?field_nir_news_date_value%5bmin%5d=.

[174] *Memorandum on Order Under the Defense Production Act Regarding the Purchase of Ventilators*, THE WHITE HOUSE (Apr. 14, 2020), https://www.whitehouse.gov/presidential-actions/memorandum-order-defense-production-act-regarding-purchase-ventilators/.

- April 2, 2020: HHS announces relaxed HIPAA enforcement for COVID-19 data sharing.[175]
- April 3, 2020: President Trump declares masks and other personal protective equipment "scarce" in order to bar their export using the DPA.[176]
- April 6, 2020: HHS expands CDC state and local funding by $186 million.[177]
- April 8, 2020: HHS announces a contract with Philips to manufacture ventilators under the DPA.[178]
- April 8, 2020: HHS designates $1.3 billion in CARES Act funding to health centers.[179]

[175] Press Release, U.S. Dep't of Health and Human Servs., OCR Announces Notification of Enforcement Discretion to Allow Uses and Disclosures of Protected Health Information by Business Associates for Public Health and Health Oversight Activities During The COVID-19 Nationwide Public Health Emergency (Apr. 2, 2020), https://www.hhs.gov/about/news/2020/04/02/ocr-announces-notification-of-enforcement-discretion.html.

[176] *Memorandum on Allocating Certain Scarce or Threatened Health and Medical Resources to Domestic Use*, THE WHITE HOUSE (Apr. 3, 2020), https://www.whitehouse.gov/presidential-actions/memorandum-allocating-certain-scarce-threatened-health-medical-resources-domestic-use/.

[177] Press Release, U.S. Dep't of Health and Human Servs., HHS Announces Upcoming Funding Action to Provide $186 Million for COVID-19 Response (Apr. 6, 2020), https://www.hhs.gov/about/news/2020/04/06/hhs-announces-upcoming-funding-action-provide-186-million-covid19-response.html.

[178] Press Release, U.S. Dep't of Health and Human Servs., HHS Announces Ventilator Contract with Philips under Defense Production Act (Apr. 8, 2020), https://www.hhs.gov/about/news/2020/04/08/hhs-announces-ventilator-contract-with-philips-under-defense-production-act.html.

[179] Press Release, U.S. Dep't of Health and Human Servs., HHS Awards $1.3 Billion to Health Centers in Historic U.S. Response to COVID-19 (Apr. 8, 2020), https://www.hhs.gov/about/news/2020/04/08/hhs-awards-billion-to-health-centers-in-historic-covid19-response.html.

APPENDIX B

FINANCIAL CBA AND PUBLIC HEALTH POLICY ON PANDEMICS

In this Appendix, we explore another potential linkage between the work of financial regulators and the responsibilities of public health officials with respect to the prevention and management of pandemic risks. As the unfolding crisis has made painfully clear, pandemics can have serious economic and financial consequences in addition to their tragic costs in terms of human loss of life and suffering. While the economic costs of reduced economic output from self-isolation and quarantines are obvious, this direct effect is amplified through the financial systems, precisely because pandemics are a source of systemic financial risk. And financial regulators—most particularly the Federal Reserve Board but also FSOC— has substantial expertise in dealing with systemic risks to the financial system. Quite plausibly then, financial regulators could play a productive role in helping public health official estimate the aggregate costs of failure to contain pandemic risks and thus the socially optimal amount of resources that should be expended to contain pandemic risks or mitigate them once they have begun to propagate.[180] In essence, public health authorities could benefit from input from financial regulators to complete a comprehensive cost-benefit analysis for pandemic risks.[181]

As it turns out, financial cost-benefit analysis has been the subject of considerable academic debate in recent years.[182] While some have been skeptical of the ability to make meaningful estimates of the cost of financial crises or the benefits of reducing the likelihood of such crises, Federal

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[180] We leave to the side, for now, the question of how such input might be organized. One could imagine that financial considerations might be factored in at a higher political level (like the White House), once public health officials weigh in with a provisional recommendation. That would have the benefit of keeping public health analysis separate and focused solely on public health considerations. However, a siloed approach may mean that public health officials ignore important considerations in excluding options early in their decisionmaking process, options that might have seemed more attractive if the input of financial regulators came at an earlier stage. Moreover, to the extent that one values the kinds of interdisciplinary payoffs explored above in Part VI, a more integrated and comprehensive analysis of policy options may be preferable. And, of course, a variety of hybrid approaches for organization input and feedback might also be considered.

[181] For a recent blog post by HKS Professor Robert Stavins endorsing cost effectiveness analysis (as opposed to cost benefit analysis) and titled "What Can Economics Really Have to Say About COVID-19 Policies?, *see* http://www.robertstavinsblog.org/2020/04/03/what-can-economics-really-have-to-say-about-covid-19-policies/ (including citations to other recent discussions of cost benefit analysis with respect to the current crisis).

[182] *See* Howell E. Jackson & Paul Rothstein, *The Analysis of Benefits in Consumer Protection Regulations*, 9 HARV. BUS. L. REV. 197, 207–09 (2019) (reviewing the CBA literature). While financial cost-benefit analysis has lagged the use of cost-benefit analysis in the areas of environmental protection and worker safety particularly with the development of standardized estimates of the statistical value of lives, existing work of regulatory cost-benefit analysis has not extended to the macro-financial consequences of natural disasters or public health crisis on the scale of the current pandemic.

Reserve Board leadership has been more open to the value of such work and the Trump Administration early on committed to promoting cost-benefit analysis (CBA) throughout the financial system.[183] Even some of the most prominent critics of financial CBA have acknowledged the merits of systematic thinking about costs and benefits of regulatory actions (sometimes referred to as qualitative cost-benefit analysis).[184] But whatever the academic views on the subject, as a practical matter, whenever federal regulators choose to pursue or not pursue an element of macroprudential financial regulation, officials are engaging in implicit cost-benefit analysis of systemic risk. Their intuitions on systemic risks to the financial system are thus undoubtedly better informed than that of most public health authorities.

Once again, one can think in terms of input on either an *ex ante* or *ex post* basis. *Ex ante* the pandemic—that is, before 2020—public health officials and the politicians to which these officials reported made decisions on how much to invest in a variety of preventative measures, from staffing the National Security Council, to locating CDC personnel in embassies around the world, to stockpiling emergency equipment (like ventilators and other medical equipment), to developing contingency plans. One wonders, in retrospect, whether these decisions might have been made differently had public health officials been including in their calculations the economic and financial costs of a full blown pandemic. At a minimum, one wonders whether—had these estimates of economic implications been updated periodically during the first few weeks of 2020—aggressive mitigation efforts might have been put in place sooner. This Monday-morning quarterbacking is, of course, quite difficult to do meaningfully, but it strikes us as eminently sensible to making sure, at least, that linkages be established between senior regulatory officials and public health authorities for purposes of future pandemic planning. Indeed, it seems unimaginable that this will not happen, at least going forward.

Ex post—by which we mean right now—there seems also to a role for financial regulators to play in terms of weighing public health measures going

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[183] *See* Randal K. Quarles, Vice Chairman for Supervision, Bd. of Governors of the Fed. Reserve Sys., Early Observations on Improving the Effectiveness of Post-Crisis Regulation (Jan. 19, 2018) (calling for assessing post-crisis financial regulation by net costs and benefits). *See also* DEP'T OF THE TREASURY, FINANCIAL STABILITY OVERSIGHT COUNCIL DESIGNATIONS: REPORT TO THE PRESIDENT OF THE UNITED STATES PURSUANT TO THE PRESIDENTIAL MEMORANDUM ISSUED APRIL 21, 2017 13 (2017), https://www.treasury.gov/press-center/press-releases/Documents/PM-FSOC-Designations-Memo-11-17.pdf (recommending the use of cost-benefit analysis to determine if a firm is systemically important).

[184] *See* John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: A Reply*, 124 YALE L.J.F. 305 (2015). Cost-benefit analysis can be approached in a number of different ways, including for example, with a precautionary principle or using a break-even analysis or as a measure of cost effectiveness. For current purposes, we do not attempt to suggest how cost-benefit analysis would be best applied in the context of analyzing the risks of pandemics; we only suggest that it should include economic and financial considerations with input from financial authorities.

forward. That role is distinct from these regulators' central task of mitigating financial losses and protecting financial stability. As the rate of new coronavirus cases and fatalities recedes, there will come a time when public health measures can be relaxed. At first blush, one might think that such relaxation will be good for the economy and that economic considerations will argue in favor of relaxation. But relaxation will also bring with it the possibility of renewed outbreaks and a resurgent pandemic, and the economic consequences of that possibility should also be considered. Quite likely, the financial system will remain in a fragile state for the coming months if not longer, and correctly assessing the systemic financial risks from a second surge will require careful and nuanced assessments, again a subject on which senior Federal Reserve Board officials would likely have considerable expertise.

In endorsing the possible incorporation of financial cost-benefit analysis into public health calculations, we must address head-on the uncomfortable possibility that this approach has the potential to put a dollar sign on the value of life. And, to the extent that certain political leaders have been hesitant to impose strict public health measures because they would be bad for the economy or, even worse, bad for the stock market, this concern is not entirely unfounded. Anticipating this charge, we would defend ourselves on two grounds. First, all of the examples of financial cost-benefit analysis that we have suggested above would have served to support the increase of expenditures on mitigation efforts or deferral in the relaxation of public health safeguards. Quite clearly, those who thought holding off on mitigation efforts would be good for the economy were wrong, and spectacularly so. Our second defense is to point out that all decisions with respect to public health expenditures—like all decisions with respect to financial regulation—include an implicit cost-benefit analysis. In the real world, we don't and can't spend unlimited resources to save every life or cure every disease or minimize every financial risk. What public officials can and should do is to think hard and systematically about how best to deploy society's resources to benefit as many of our citizens as much as possible. And to do this task effectively with respect to pandemics, public health authorities need the assistance of financial regulators to evaluate the overall costs of pandemic risks and the overall benefits of their avoidance.

To be sure, the political challenges of factoring hypothetical and necessarily speculative benefits into public policy decisions will always be challenging, whether these benefits concern a more resilient financial system or other initiatives that prevent future harms. As Ron Klain[185] recently observed, political decision-making faces an inherent bias against risk

[185] Klain is a Lecturer on Law at Harvard Law School and the former Ebola Czar in the Obama Administration.

reduction measures. As he explained, the body politic tends not to invest in preventing risk if there is no tangible evidence that the investments will prevent the risk from occurring. He gave a fictional example, based on Taleb's The Black Swan, about a congressman who foresees an event like the 9/11 attack and introduces legislation preemptively securing commercial airline cabins. In this hypothetical world, the 9/11 attack is foiled, but with hardened doors, that's merely a counter-factual. The congressman loses his next election.[186] Klain observed that he faced this same problem as Ebola Czar: when you invest and stop Ebola, there is no dramatic end and no political payoff. Without denying the force of these concerns, we remain convinced that there is value to bringing the most relevant expertise to the table to estimate the full value of reducing system risks—and that includes the expertise of financial regulators. Producing expert estimates on the full range of material benefits may not overcome political resistance of the sort Klain identifies, but it will add another shoulder to the wheel leaning in the right direction.

Klain also speculated that public memories of pandemics tend to fade more quickly than our collective recollection of other national crises,[187] noting the existence of only one public memorial to the Spanish Flu Pandemic of 1918 as compared to the innumerable memorials to World War I with only a fraction of the fatalities. Keeping financial regulators focused on the risks and financial consequences of future pandemics could serve to combat collective amnesia of economics costs and human suffering that are now all too obvious and painful.

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[186] Nassim Nicholas Taleb, The Black Swan: The Impact of the Highly Improbable xxvii–xxviii (2nd ed. 2010).

[187] *Cf.* ROBERT MEYER & HOWARD KUNREUTHER, THE OSTRICH PARADOX: WHY WE UNDERPREPARE FOR DISASTERS __-__ (2017) (observing that the "hedonic impact of past losses, [such as] the acute sense of tragedy that one feels when seeing one's house destroyed, or the fear one feels in the immediate wake of a terrorist attack" is forgotten quickly).

THE FINANCIAL RESPONSE TO THE COVID-19 PANDEMIC

As of August 1, 2020

Michael Barr, Howell Jackson, Margaret Tahyar[1]

Abstract

We are living through extraordinary times as the United States has struggled to deal with the global COVID-19 pandemic, and as of the writing of this paper, we remain in the midst of the crisis. We still do not know what the full economic and financial consequences of the pandemic will be, but they are likely to persist for an extended period, as many people are unlikely to return to normal work or consumption patterns soon, and household and business defaults are likely to increase and negatively affect the financial sector. This paper, written to assist faculty in teaching about the pandemic, focuses on key actions taken by the financial regulators in response to the crisis so far, giving a detailed summary of the actions taken by the Federal Reserve, the Treasury Department, and Congress. We discuss the Federal Reserve's monetary policy actions, emergency lending facilities, and supervisory forbearance by the federal banking agencies. We also provide a summary of financial provisions of the CARES Act, including an analysis of the Paycheck Protection Program. We explore a number of central themes already emerging, including the blurry line between monetary policy and fiscal policy. We also highlight the fact that unlike the Financial Crisis of 2008, today's economic crisis is caused by the failure to take sufficient public health actions to contain a global pandemic, not poor policy and risk choices in the financial markets; the fact that the crisis is caused by a public health failure poses unique problems for economic and financial policymakers in crafting responses.

[1] The authors acknowledge the assistance of Amy Lorenc (Michigan Law '22) and Julia Deng (Michigan Law '21) in the development of this supplement to MICHAEL S. BARR, HOWELL E. JACKSON & MARGARET E. TAHYAR, FINANCIAL REGULATION: LAW AND POLICY (Foundation Press, 2d ed. 2018).

I. INTRODUCTION

A. AN UNPRECEDENTED HEALTH CRISIS BUT NOT YET A FINANCIAL CRISIS

We are living through extraordinary times as the United States has struggled to deal with the global COVID-19 pandemic. The public health crisis has laid bare problems with our governmental infrastructure and leadership, exacerbated existing conditions of social and racial inequality, and accelerated many economic and social trends. It would be a vast understatement to say that many parts of the federal and state governments have not functioned as well as citizens have a right to expect. Our government's, and in some ways, our citizens' response to the crisis has not compared well with that of many other countries. As this pandemic module is released, taking into account events up to July 28, 2020, we remain in the midst of the crisis. We still do not know what the economic consequences will be, whether and how any economic recovery or continued COVID-19 surges will play out, and when historic highs in unemployment will lessen. We do know that the societal dislocation is unprecedented and immense. The economic consequences of the pandemic are likely to persist for an extended period, as the virus is increasing in many states—and even in states with muted transmission, many people are unlikely to return to normal work or consumption patterns soon.

The pandemic is a public health and economic crisis, but not yet a financial crisis.[2] Unlike the Financial Crisis of 2008, the problems did not first arise because of poor policy and risk choices in the financial markets. The banking sector entered the pandemic in a position of resilience and strength. Federal Reserve Chairman Jay Powell stated that "[t]he current downturn is unique in that it is attributable to the virus and the steps taken to limit its fallout. This time, high inflation was not a problem. There was no economy-threatening bubble to pop and no unsustainable boom to bust. The virus is the cause, not the usual suspects—something worth keeping in mind as we respond."[3] But, an economic crisis caused by a health crisis can morph into a financial crisis. Congress and the financial regulators have thus been faced with unique challenges as they try to prevent the economic fallout from the pandemic from turning into another financial crisis.[4]

B. ACTIONS TAKEN BY CONGRESS AND THE FINANCIAL REGULATORS

It has been fortunate that many in positions of policy making power, both in Congress and at the financial regulatory agencies, have clear memories of the responses to the 2008 Financial Crisis.[5] Despite the partisan times within which we live, Congress has passed three bills to lessen the economic harms to households and businesses and a fourth bill is widely expected. Many of the Congressional actions have been unprecedented, and bipartisan support for these types of measures would have been unthinkable before the pandemic. Federal financial regulators have been extremely active in developing responses. From January to July, 2020, their output has been

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[2] Throughout this document, cross references are provided in the footnotes to sections of our *Financial Regulation: Law and Policy* textbook that contain useful background information. For more information on systemic risk, see BARR, JACKSON & TAHYAR, *supra* note 1, ch. 9.1 at 935-960.
[3] Press Release, Bd. of Governors of the Fed. Res. Sys., Chair Jerome H. Powell on Current Economic Issues (May 13, 2020), https://www.federalreserve.gov/newsevents/speech/powell20200513a.htm.
[4] *See* Howell E. Jackson & Steven L. Schwarcz, *Protecting Financial Stability: Lessons from the Coronavirus Pandemic* (Duke Law School Public Law & Legal Theory Series No. 2020-39, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3644417.
[5] For more information regarding the 2008 Financial Crisis, see BARR, JACKSON & TAHYAR, *supra* note 1.

prodigious: the Federal Reserve pulled out, on one Sunday afternoon, all of its Financial Crisis monetary policy toolkit, actions which often took weeks or months to develop during the time of the Financial Crisis. These monetary policy actions, plus the announcements of an alphabet soup of programs, both those that are a reprise from the Financial Crisis and those that are new, were aimed at instilling confidence in the financial system and calming market volatility. As we learned during the Financial Crisis, some Federal Reserve actions calm markets by their mere announcement. Not counting the Federal Reserve programs or facilities or the SBA's Paycheck Protection Program, the CFPB, CFTC, FDIC, Federal Reserve, FFIEC, FHFA (along with Fannie Mae and Freddie Mac), OCC and SEC have provided, while themselves working remotely under lockdown conditions, approximately 166 new regulations, guidance and other announcements related to adapting the legal framework to pandemic conditions.[6]

C. ANALYSIS OF KEY ACTIONS TAKEN INVOLVING THE FINANCIAL SECTOR

This paper focuses on key actions taken by financial regulators over the last several months. These include the Federal Reserve's monetary actions and the reprise of its Financial Crisis programs. We then cover the funds distributed by the CARES Act, including the Paycheck Protection Program, before exploring the Federal Reserve's creation of innovative new programs, such as the Main Street Lending Program, the program for municipalities, and the non-profit program. We then cover supervisory actions taken by regulators around stress testing and capital, and actions to provide mortgage and rental relief to consumers and its impact on the credit cycle. We assess transparency and Congressional oversight. We note the uncertainty of what might happen next. We finish by exploring certain central themes that are already emerging.[7]

II. INITIAL FEDERAL RESERVE MONETARY RESPONSE

The Federal Reserve responded aggressively to the economic shock of the COVID-19 crisis, quickly deploying virtually all of its Financial Crisis monetary policy tools and programs. In early March, the Federal Open Market Committee (FOMC) voted twice to lower the target range for the federal funds rate by a total of 1-1.5%, bringing the range to 0 to .25% for the first time since the Financial Crisis.[8] In a long-range use of forward guidance, Chairman Powell has made clear

[6] *Financial Regulatory Agency Actions in Response to COVID-19*, DAVIS POLK & WARDWELL LLP (July 31, 2020), https://www.davispolk.com/files/financial_regulatory_agency_actions_in_response_to_covid-19.pdf. This count approximates total agency actions. Where appropriate, it includes the grouping of similar actions and announcements together. State financial regulatory agencies, Governors, and Mayors have also been acting at an unprecedented rate. During the same period covered in the text, the New York Department of Financial Services, New York Governor Andrew Cuomo and New York City Mayor Bill de Blasio, for example, have implemented approximately 26 financial actions in response to the pandemic.

[7] This paper could be used to facilitate discussion of these central themes in financial regulation courses during the 2020 academic year.

[8] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Issues FOMC Statement (Mar. 3, 2020, 10:00 AM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200303a.htm; Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Issues FOMC Statement (Mar. 15, 2020, 5:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm; Liz Frazier, *Fed Cuts Rates to Near Zero in an Effort to Combat Coronavirus Impact*, FORBES (Mar. 15, 2020), https://www.forbes.com/sites/lizfrazierpeck/2020/03/15/fed-cuts-rates-to-near-zero-in-an-effort-to-combat-coronavirus-impact/#703f56133517.

that the Federal Reserve is not considering raising rates in the foreseeable future.[9] In fact, most Federal Reserve Board members and Bank presidents project that rates will stay near zero through the end of 2022.[10] Chairman Powell has indicated that the FOMC is unlikely to lower rates below zero,[11] unlike the European Central Bank,[12] and despite Twitter comments by President Trump.[13]

On the same day it announced its second rate cut, the Federal Reserve also lowered the rate it charges banks to borrow from its discount window[14] from 1.75% to 0.25%, and eliminated banks' reserve requirement, allowing the funds banks must usually keep in accounts at a Federal Reserve Bank to be used instead to support more lending.[15] Despite this measure, excess reserves remain extremely elevated. To further encourage lending, the Federal Reserve eased the conditions that applied to the intraday credit it provides to banks and encouraged banks to use their capital and liquidity buffers.[16] The Federal Reserve also expanded its repurchase agreement operations and begin purchasing massive amounts of Treasury securities and agency MBS, resumed Quantitative Easing, and ended the notion of shrinking the Federal Reserve's balance sheet.[17] The Federal Reserve initially committed to purchasing $500 billion in Treasury securities and $200 in agency mortgage-backed securities (MBS), but one week later made the purchases open ended, promising to purchase "in the amounts needed to support smooth market functioning and effective transmission of monetary policy . . . ."[18] The Federal Reserve also re-instated dollar swap lines for foreign central banks, which are designed to ease overseas liquidity in the dollar.[19]

Each of these monetary policy tools had been widely used during the Financial Crisis. Based on concerns that the powerful tool of the discount window was underused during the Financial

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[9] *See Transcript of Chair Powell's Press Conference*, BD. OF GOVERNORS OF THE FED. RES. SYS. (June 10, 2020), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20200610.pdf.
[10] *Survey of Economic Projections*, BD. OF GOVERNORS OF THE FED. RES. SYS. (June 10, 2020, 2:00 PM), https://www.federalreserve.gov/monetarypolicy/files/fomcprojtabl20200610.pdf.
[11] *See Full Transcript: Fed Chair Jerome Powell's 60 Minutes Interview on Economic Recovery from the Coronavirus Pandemic*, CBS NEWS (May 17, 2020), https://www.cbsnews.com/news/full-transcript-fed-chair-jerome-powell-60-minutes-interview-economic-recovery-from-coronavirus-pandemic/.
[12] For the ongoing controversy on negative interest rates in the European Union, *see, e.g.,* M. Arnold, ECB Rebuffs Bank Complaints on Negative Interest Rates, Financial Times, May 13, 2020, https://www.ft.com/content/52de6e70-56bc-4da9-adf7-b228c8da79a0.
[13] *See, e.g.,* S. Goldstein, Trump tweets support for negative interest rates, MarketWatch, Sept. 11, 2019, https://www.marketwatch.com/story/trump-tweets-support-for-negative-interest-rates-2019-09-11.
[14] For more information on the discount window and the Federal Reserve's role as the lender of last resort, see BARR, JACKSON & TAHYAR, *supra* note 1, ch. 9.1 at 935-60.
[15] Press Release, Bd. of Governors of the Fed. Res. Sys, Federal Reserve Actions to Support the Flow of Credit to Households and Businesses (Mar. 15, 2020, 5:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315b.htm.
[16] *Id*.
[17] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Issues FOMC Statement (Mar. 15, 2020, 5:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm.
[18] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Announces Extensive New Measures to Support the Economy (Mar. 23, 2020, 8:00 AM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm.
[19] *See, e.g.*, Press Release, Bd. of Governors of the Fed. Res. Sys., Coordinated Central Bank Action to Enhance the Provision of U.S. Dollar Liquidity (Mar. 15, 2020), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315c.htm.

Crisis because of the stigma attached to its use, the Federal Reserve made announcements designed to reduce that stigma and encourage its use. JPMorgan Chase, along with other large banks, announced that it would make use of the discount window. [20]

III. FEDERAL RESERVE INVOCATION OF EMERGENCY LENDING

A. FEDERAL RESERVE USE OF EMERGENCY AUTHORITY UNDER SECTION 13(3)

Shortly after cutting interest rates, the Federal Reserve began invoking its emergency authority under Section 13(3) of the Federal Reserve Act[21] for the first time since the Financial Crisis. Section 13(3), "discounts to individuals, partnerships and corporations," provides that in "unusual and exigent" circumstances, the Federal Reserve may make loans to "any participant" in a broad-based facility or program.[22] Any participant in such a program must be unable to "secure adequate credit accommodations" from the banking sector.[23] The program must be "for the purposes of providing liquidity to the financial system," a term that the Federal Reserve has broadly interpreted, cannot be aimed at one company (to prevent bail-outs of particular financial firms as experienced during the Financial Crisis), and must be terminated in a "timely and orderly fashion."[24] Only secured loans may be made under Section 13(3), and at the time that the loans are made, the Federal Reserve must have procedures in place designed to ensure that it has security sufficient in its judgment to protect the taxpayer from losses.[25]

At least five of the Federal Reserve governors must vote for any use of the Federal Reserve's emergency powers and, in a reform instituted by Dodd-Frank, the Treasury Secretary must concur. When Dodd Frank reforms were being added to Section 13(3), it had been contemplated that requiring the Treasury Secretary's agreement to any Federal Reserve use of emergency authority would provide an important measure of political accountability because potential losses might be seen as more appropriate for fiscal policy, rather than monetary policy. Some had expressed concerns, and others the hope, that this political check might be used by a Treasury Secretary (and behind him a President) to block Federal Reserve interventions in the next Financial Crisis. As it turned out, these fears and hopes did not play out in the face of a global health crisis. The Treasury Secretary quickly consented to all such uses of the Federal Reserve's emergency authority.

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[20] *See Financial Services Forum Statement on the Discount Window*, FIN. SERVS. F. (Mar. 16, 2020), https://www.fsforum.com/types/press/releases/financial-services-forum-statement-on-the-discount-window/ (announcing that "all members [of the Financial Services Forum] are accessing funding from the discount window to reassure financial institutions of all sizes that they should use the facility to meet client liquidity needs during this difficult period").

[21] For more information on the Federal Reserve's emergency lending authority under Section 13(3), see BARR, JACKSON & TAHYAR, *supra* note 1, ch. 9.1 at 935-60.

[22] 12 U.S.C. § 343(3)(A) (2010). Capital market reactions in mid-March also triggered a number of SEC-imposed circuit breakers for both individual securities and broader market indices, responding to extreme volatility and a rush to cash. An industry-led task force is currently studying whether this experience suggests the need to reform the design of circuit-breakers. *See* Alexander Osipovich & Dawn Lim, *Wall Street Explores Changes to Circuit Breakers After Coronavirus Crash,* WALL STREET J. (Apr. 15, 2020), https://www.wsj.com/articles/wall-street-explores-changes-to-circuit-breakers-after-coronavirus-crash-11586952558.

[23] *Id.*

[24] *Id* § 343(3)(B)(i).

[25] *Id.*

B. REVIVAL OF THE FINANCIAL CRISIS ALPHABET SOUP OF PROGRAMS

The Federal Reserve began the use of its emergency lending authority by reviving four lending facilities that were used during the Financial Crisis to provide liquidity to nonbank financial entities and corporations: the Primary Dealer Credit Facility (PDCF), the Money Market Mutual Fund Liquidity Facility (MMLF), the Commercial Paper Funding Facility (CPFF) and the Term Asset Backed Securities Loan Facility (TALF).[26] The PDCF is intended to keep credit markets functioning by lending to primary dealers with investment grade debt securities as collateral. The MMLF provides an indirect backstop to money-market mutual funds (MMFs),[27] which have experienced high rates of investor redemptions during times of financial turbulence. MMLF lends to banks against collateral they purchase from MMFs. The CPFF allows the Federal Reserve to purchase commercial paper, providing support to eligible issuers, including financial and commercial companies. The Federal Reserve also restarted the crisis-era Term Asset Backed Securities Loan Facility (TALF), which lends to holders of asset-backed securities collateralized by loans, including student loans, auto loans, and credit card loans.[28] Unlike during the Financial Crisis, the Federal Reserve broadened the range of assets that are eligible collateral for TALF to include triple-A rated tranches of outstanding commercial MBS and newly issued collateralized loan obligations.[29]

The Treasury pledged $20 billion from its Exchange Stabilization Fund (ESF) to backstop both the MMLF and CPFF facilities, with $10 billion allotted to each, and provided $10 billion in first loss support to the TALF.[30] As of the date of this paper, the TALF has not actually been used, which may be an example of the Federal Reserve's announcement effect or which may be because banks are directly using the discount window instead of using TALF. The CPFF has had relatively low but stable usage since it became operational.[31] The PDCF and the MMF facilities were heavily used in March and April, but then usage gradually fell off.[32]

During the Financial Crisis, the Treasury Department had established a Temporary Guarantee Program for Money Market Funds, using its Exchange Stabilization Fund to guarantee MMFs on an unsecured basis. Congress prohibited the use of the ESF to guarantee MMFs in the Dodd-Frank Act. At Treasury's request, Congress reversed the prohibition on Treasury using the ESF to provide a guaranty to MMFs as part of the CARES Act. That new power has not yet been invoked as of the end of July, 2020.

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[26] For a review of all of the Federal Reserve's programs during the Financial Crisis see, e.g., Margaret E. Tahyar (editor), *Republication: 2009 Financial Crisis Manual: A Guide to the Laws, Regulations and Contracts of the Financial Crisis, with Updated 2020 Introduction*, DAVIS POLK & WARDWELL LLP (Mar. 2020), https://www.davispolk.com/files/2020-03-16_republication_the_2009_davis_polk_financial_crisis_manual.pdf.
[27] For more information on money market mutual funds, see BARR, JACKSON & TAHYAR, *supra* note 1, ch. 12.3 at 1301-1324.
[28] Federal Reserve, *supra* note 18.
[29] Federal Reserve, *supra* note 18.
[30] Jeffrey Cheng, Dave Skidmore & David Wessel, *What's the Fed Doing in Response to the COVID-19 Crisis? What More Could It Do?*, BROOKINGS INST. (July 17, 2020), https://www.brookings.edu/research/fed-response-to-covid19/.
[31] *See* Daleep Singh, *The Fed's Emergency Facilities: Usage, Impact, and Early Lessons*, FED. RES. BANK OF N.Y. (July 8, 2020), https://www.newyorkfed.org/medialibrary/media/newsevents/speeches/2020/sin200708/Singh_HVPP_exhibits_7.7.pdf.
[32] *Id.*

Lev Menand has suggested that the Dodd Frank prohibition on a guaranty raises questions about whether, before the CARES Act, the Treasury had the legal authority to use the ESF to backstop MMFs in the days between the announcement of the MMF facility and the passage of the CARES Act.[33] One of the key learnings from the Financial Crisis is that the law gets stretched in a crisis; the use of indirect purchases as opposed to direct guarantees raises that question once again.[34] It is a fair question to ask whether the Treasury had the authority to announce such a backstop in light of the prohibition on a direct guarantee. In March and April, the Fed's MMLF was the most widely used of the Federal Reserve's programs.[35] This usage makes it apparent that there were real stresses and strains in the money market funds and that announcement affect alone did not create enough positive impact. The need for a federal backstop also raises questions about whether the post-Financial Crisis reforms of money market funds were sufficient.[36]

IV. FISCAL RESPONSE—CONGRESSIONAL RELIEF LEGISLATION

A. THE CARES ACT

Congress responded to the COVID-19 pandemic by passing three relief bills in March, 2020, each more comprehensive than the last. The third bill, known as the CARES Act, was signed into law by President Trump on March 27 and provided more than $2 trillion in financial assistance to individuals and businesses, making it by some measures (although not GDP[37]) the largest aid bill in U.S. history.[38] The bill included $250 billion to expand unemployment insurance eligibility and increase unemployment benefits by $600 per week for four months.[39] The bill also included $300 billion in direct payments to households, with most households under an income threshold eligible to receive one-time checks for $1,200 per adult and $500 per child.[40] The $2 trillion total does not include the effect of leverage from the Federal Reserve programs. The $454 billion in allocations to the Treasury to provide credit protection to the Federal Reserve programs can be

[33] Lev Menand, *Unappropriated Dollars: The Fed's Ad Hoc Lending Facilities and the Rules that Govern Them* (European Corp. Governance Inst., Law Working Paper No. 518/2020, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3602740.
[34] *Id.*
[35] *See* Singh, *supra* note 31.
[36] BlackRock, one of the largest asset managers, has acknowledged this point and has already published a paper suggesting reforms. Barbara Novick et al., *Lessons from COVID-19: U.S. Short-Term Money Markets*, BLACKROCK (July 2020), https://www.blackrock.com/corporate/literature/whitepaper/viewpoint-lessons-from-covid-19-us-short-term-money-markets-july-2020.pdf. Please see Barr, Jackson, and Tahyar, FINANCIAL REGULATION, Chapter 12.3 and 12.4.
[37] Douglas Holtz-Eakin, *CARES Act in Historical Perspective*, AM. ACTION F. (Mar. 27, 2020), https://www.americanactionforum.org/daily-dish/cares-act-in-historical-perspective/.
[38] CARES Act, H.R. 748, 116th Cong. (2020); Jack Brewster, *Trump Signs $2 Trillion Coronavirus Relief Bill into Law, Largest Aid Package in U.S. History*, FORBES (Mar. 27, 2020), https://www.forbes.com/sites/jackbrewster/2020/03/27/trump-signs-2-trillion-stimulus-bill-into-law-largest-aid-package-in-us-history/#4abbfd124ea5.
[39] AnnaMaria Andriotis et. al, *What's in the $2 Trillion Senate Coronavirus Bill*, WALL STREET J. (Mar. 26, 2020), https://www.wsj.com/articles/whats-in-the-2-trillion-senate-coronavirus-bill-11585185450.
[40] *Id.*

leveraged, according to some estimates, up to approximately $4 trillion or more because of the Federal Reserve lending power added on to the Treasury credit protection layer.[41]

B. THE PAYCHECK PROTECTION PROGRAM

The CARES Act created a $349 billion loan program for small businesses known as the Paycheck Protection Program (PPP) that was designed to provide an incentive for small businesses to keep workers on their payroll.[42] The definition of a small business was drawn from the Small Business Association's (SBA's) regulations and guidelines,[43] with modifications aimed at increasing eligibility.[44] The most commonly known requirement is that the business must have fewer than 500 employees, though exceptions are made for certain industries such as restaurants, hotels, and franchisees where the 500 employee requirement is counted on a per location basis.[45] Exceptions to the usual SBA eligibility requirements[46] were also made for religious organizations and non-profits.[47]

A PPP loan is essentially a grant disguised as a loan: the loans can be forgiven if the recipient business maintains or restores most of its employee headcount and the proceeds are primarily used for payroll, rent, mortgage interest, or utilities.[48] While the PPP is implemented by the SBA, the SBA relies on private lenders to originate and service the loans, which are then fully guaranteed by the U.S. government.[49] Lenders take no credit risk and receive a fee for processing the loan application.[50] The PPP is supported by the Federal Reserve's PPP Liquidity Facility (PPPLF), which extends credit to financial institutions that make PPP loans.[51]

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[41] Jeanna Smialek, *How the Fed's Magic Money Machine Will Turn $454 Billion Into $4 Trillion*, WALL STREET J. (Mar. 26, 2020), https://www.nytimes.com/2020/03/26/business/economy/fed-coronavirus-stimulus.html; Nathan Stovall, *Coronavirus Bailout Already Towers Over TARP, With More to Come*, S&P GLOBAL (Apr. 8, 2020), https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/coronavirus-bailout-already-towers-over-tarp-with-more-to-come-57964369.

[42] *Paycheck Protection Program*, U.S. SMALL BUS. ADMIN. (SBA), https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program (last visited July 20, 2020).

[43] *See, e.g.*, 13 C.F.R. § 121 (2020).

[44] CARES Act § 1102, 15 U.S.C. § 636(a)(36)(D) (2020).

[45] *Id.*

[46] For a deeper dive into the SBA eligibility requirements, see Office of Financial Assistance, *SOP 50 10 5(K): Lender and Development Company Loan Programs*, U.S. SMALL BUS. ADMIN., ch. 2 at 40 (Apr. 1, 2019), https://www.sba.gov/sites/default/files/2019-02/SOP%2050%2010%205%28K%29%20FINAL%202.15.19%20SECURED%20copy%20paste.pdf.

[47] 15 U.S.C. § 636(a)(36)(D) (2020); *Frequently Asked Questions Regarding Participation of Faith-Based Organizations in the Paycheck Protection Program (PPP) and the Economic Injury Disaster Loan Program (EIDL)*, U.S. SMALL BUS. ADMIN. (Apr. 3, 2020), https://www.sba.gov/sites/default/files/2020-06/SBA%20Faith-Based%20FAQ%20Final-508.pdf.

[48] CARES Act § 1106; Business Loan Program Temporary Changes; Paycheck Protection Program—Revisions to Loan Forgiveness and Loan Review Procedures Interim Final Rules, 85 Fed. Reg. 38,304 (June 26, 2020) (hereinafter First IFR).

[49] 15 U.S.C. § 636(a)(1).

[50] *Id.* at § 636(a)(1), 636(a)(36)(P).

[51] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Takes Additional Actions to Provide up to $2.3 Trillion in Loans to Support the Economy (Apr. 9, 2020, 8:30 AM), https://www.federalreserve.gov/newsevents/pressreleases/monetary20200409a.htm.

After the PPP became operational on April 3, 2020, the program struggled with huge demand and all $349 billion of funding was claimed within just two weeks.[52] In those 14 days, the SBA processed more than 14 years' worth of usual loans.[53] In response to calls for additional funding and program reforms, Congress expanded the PPP by $310 billion, of which $60 billion was set aside for lending by community banks and credit unions and community development financial institutions.[54]

The SBA began processing applications for a second round of loans on April 27, which has been more successful in reaching smaller businesses: the average loan size dropped from $206,000 in round one to $73,000 in about the first two weeks of round two.[55] Similarly, the proportion of loans that were for $150,000 or less grew from 74% in round one to 91% at the beginning of round two.[56] More than 90% of the loans for $1 million or more were approved in April.[57] By the end of June, between 72 and 96 percent of small business payroll was covered by PPP loans across all 50 states.[58] In July, Congress extended the PPP program beyond its initial end date, allowing businesses until August 8, 2020 to claim the remaining $132 billion in funding that remained unallocated at the end of June.[59]

Early research on the impact of the PPP is mixed. On the one hand, a recent paper by Raj Chetty and others finds that the PPP had little material impact on employment at small business, potentially because PPP loans were not distributed to the industries most likely to experience job losses from the COVID-19 crisis.[60] On the other hand, research by economists at MIT, the Federal Reserve, and the ADP Research Institute finds that the PPP increased aggregate U.S.

[52] Press Release, U.S. Small Bus. Admin., Statement from Secretary Steven T. Mnuchin and Administrator Jovita Carranza on the Success of the Paycheck Protection Program (Apr. 17, 2020), https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/statement-secretary-steven-t-mnuchin-and-administrator-jovita-carranza-success-paycheck-protection; Thomas Franck & Kate Rogers, *Small Business Rescue Loan Program Hits $349 Billion Limit and is Now Out of Money*, CNBC (Apr. 16, 2020), https://www.cnbc.com/2020/04/16/small-business-rescue-loan-program-hits-349-billion-limit-and-is-now-out-of-money.html.
[53] *Id.*
[54] Paycheck Protection Program and Health Care Enhancement Act, H.R. 266, 116th Cong. (2020).
[55] *Compare*, *Paycheck Protection Program (PPP) Report: Approvals Through 12 PM EST 4/16/2020*, U.S. SMALL BUS. ADMIN. (Apr. 16, 2020), https://www.sba.gov/sites/default/files/2020-06/PPP%20Deck%20copy-508.pdf *with Paycheck Protection Program (PPP) Report: Second Round: Approvals from 4/27/2020 through 5/08/2020*, U.S. SMALL BUS. ADMIN. (May 8, 2020), https://www.sba.gov/sites/default/files/2020-06/PPP_Report_200508_0-508.pdf.
[56] *Id.* While large businesses could choose to take out smaller loans, loan size is a good proxy for the size of businesses getting loans because the maximum allowable loan size is a function of business payroll. CARES Act § 1102 (2020).
[57] *See* Yan Wu and Vivien Ngo, *Where Did the Biggest PPP Loans Go?*, WALL STREET J. (July 23, 2020, 12:00 PM), https://www.wsj.com/graphics/where-did-the-biggest-ppp-loans-go/.
[58] *Paycheck Protection Program (PPP) Report: Approvals Through 6/30/2020,* U.S. SMALL BUS. ADMIN. (June 30, 2020), https://www.sba.gov/sites/default/files/2020-07/PPP%20Results%20-%20Sunday%20FINAL-508.pdf (citing data from Bloomberg/Evercore and SBA).
[59] *Id.*; S. 4116, 116th Cong. (2020). On unallocated funding, see J. Grotto et al., *Where $521 Billion in U.S. Small-Business Aid Went*, BLOOMBERG (July 6, 2020), https://www.bloomberg.com/graphics/2020-ppp-loans-data-disclosure/.
[60] Raj Chetty et al., *How Did COVID-19 and Stabilization Policies Affect Spending and Employment? A New Real-Time Economic Tracker Based on Private Sector Data*, OPPORTUNITY INSIGHTS (June 17, 2020), https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf.

employment by roughly 2.3 million workers through the first week of June.[61] The two papers use similar methodology but different data samples in their analyses.

Throughout its tenure, the PPP program has been marked by significant regulatory confusion and administrative disarray—a function of both the need for quick rulemaking in a crisis and a small agency that was ill-equipped to suddenly administer a half-trillion-dollar economic rescue program. The first interim final rule was published on April 2, the day before the program began.[62] From April 2 to May 8, the SBA issued 10 regulations and 45 guidance FAQs.[63]

The PPP program was situated within a long-existing regulatory framework created by the Small Business Act of 1953, generating almost immediate questions of the extent to which various existing requirements would apply to the PPP program. Certain business were denied loans based on decades-old ineligibility regulations, though some courts have found that some of these regulations are superseded by the CARES Act.[64] Reflecting the frenetic pace of issuance and the struggles of a small and overwhelmed staff, the regulations and guidance that have been issued have been frequently unclear. Given the urgency of getting funds to small businesses and the first-come-first served nature of the program, none of these pronouncements have been subject to traditional notice and comment processes. All regulations have been issued as emergency rules with frequent supplements by guidance or FAQs and no official comment period offered to the public.

The frenetic pace and constantly shifting regulatory goalposts both caused confusion for borrowers and created opportunities to game the system or engage in outright fraud. In the early days, many small businesses were unable to reach their banks or to understand the complex forms required for an application. The public and media were surprised when a major basketball team and certain large restaurant chains, relying on the 500 employees per location rule, were able to get funding.[65] Questions were quickly raised about whether such businesses could show economic necessity if they had access to other funds in the markets, and some gave the funds back.[66] Churches, including many individual Dioceses of the Catholic Church, received $1.4 billion, and Planned Parenthood received $80 million, both relying on the theory that they should be exempt

[61] David Autor et al., *An Evaluation of the Paycheck Protection Program Using Administrative Payroll Microdata*, MIT WORKING PAPER (July 22, 2020), http://economics.mit.edu/files/20094?campaign_id=9&emc=edit_nn_20200722&instance_id=20513&nl=the-morning&regi_id=95631744&segment_id=34035&te=1&user_id=ef4ac774eaf0ba0ead1ff2caa23203f0.

[62] First IFR, *supra* note 48.

[63] *Paycheck Protection Program*, U.S. SMALL BUS. ADMIN. (SBA), https://www.sba.gov/funding-programs/loans/coronavirus-relief-options/paycheck-protection-program (last visited July 20, 2020).

[64] *See, e.g.*, *Camelot Banquet Rooms v. U.S. Small Bus. Admin.*, 2020 WL 2088637 (E.D. Wis. 2020) (Order granting preliminary injunction to enjoin the SBA from using certain regulations in making eligibility determinations); *DV Diamond Club of Flint, LLC* v. *U.S. Small Bus. Admin.*, No. 20-cv-10899 (E.D. Mich. May 13, 2020).

[65] Jim Zarroli, *Even The Los Angeles Lakers Got A PPP Small Business Loan*, NPR (Apr. 27, 2020), https://www.npr.org/sections/coronavirus-live-updates/2020/04/27/846024717/even-the-la-lakers-got-a-ppp-small-business-loan.

[66] Thomas Franck, *Companies Returned $30 Billion in Small-Business Loans from Paycheck Protection Program*, CNBC (July 6, 2020, 11:00 AM), https://www.cnbc.com/2020/07/06/companies-returned-30-billion-in-small-business-loans-from-ppp.html. First IFR, *supra* note 48. Most portfolio companies of private equity firms were excluded due to the SBA's strict affiliation requirements. *See* Office of Financial Assistance, *supra* note 46.

from the affiliation rules because of their unique structures.[67] Predictable criticisms followed. The DOJ quickly opened investigations into fraud by borrowers and began arresting some who had lied on their applications.[68] The Department of Treasury announced that the SBA would audit any loan over $2 million.[69]

The wide and shifting regulatory goalposts also caused significant angst for the banks responsible for carrying out the program, which has led to downstream effects for borrowers. Despite having no credit underwriting, PPP loans require a considerable amount of paperwork and must meet Anti-Money Laundering and Know Your Customer requirements. While large banks have generally invested in automated systems for loan processing, small and regional banks processed loans manually and had capacity limitations, even when they pulled employees from across the bank to become temporary loan processors. As a result, many banks only accepted applications from existing business customers and many eligible borrowers found themselves effectively barred from applying for funds because they did not have existing relationships with SBA-approved lenders; the problem was worse for really small businesses who most needed the support, and for minority-owned small businesses of all sizes without strong banking relationships.[70]

The SBA has also shown signs of stress under the pressure of millions of loans, with its computer system for accepting loans failing often early on in the program.[71] Observers have also questioned whether the overwhelmed SBA would allow loan fraud to slip through the cracks. The Treasury Department announcement that all loans over $2 million would be reviewed does little to quell this concern, as such loans number nearly thirty thousand.[72] Limited reporting during the early phase raised questions of how much Congress and the public would be able to peer within the SBA's black box and evaluate its performance. Under pressure from members of Congress and the public, the SBA and Treasury's initial reluctance to provide transparency has begun to recede. On July 6, the Department of the Treasury announced that it would release details on all loans over $150,000, which account for nearly 75 percent of the loan dollars approved.[73]

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[67] *See* Reese Dunklin & Michael Rezendes, *AP: Catholic Church Lobbied for Taxpayer Funds, Got $1.4B*, ASSOCIATED PRESS (July 10, 2020), https://apnews.com/dab8261c68c93f24c0bfc1876518b3f6; Kate Smith, *Planned Parenthood Received $80 Million in PPP Loans. Now, the SBA Wants It Back*, CBS NEWS (May 22, 2020, 2:13 PM), https://www.cbsnews.com/news/planned-parenthood-paycheck-protection-program-loan-controversy; Business Loan Program Temporary Changes; Paycheck Protection Program, 85 Fed. Reg. 20,817, 20,819 (Mar. 27, 2020) (Exempting religious organizations from the SBA's affiliation rules).

[68] *See, e.g.*, Office of Pub. Affairs, *Texas Man Charged with COVID-Relief Fraud, False Statements and Money Laundering*, U.S. DEP'T OF JUST. (June 23, 2020), https://www.justice.gov/opa/pr/texas-man-charged-covid-relief-fraud-false-statements-and-money-laundering.

[69] Press Release, U.S. Dep't of the Treasury, Joint Statement by Secretary Steven T. Mnuchin and Administrator Jovita Carranza on the Review Procedure for Paycheck Protection Program Loans (Apr. 28, 2020), https://home.treasury.gov/news/press-releases/sm991.

[70] *See, e.g.,* Michael S. Barr, *Paycheck Protection Program Failed to Reach the Smallest Businesses: How Congress Can Do Better*, CRAIN'S DETROIT BUSINESS (Apr. 22, 2020, 6:00 AM), https://www.crainsdetroit.com/other-voices/paycheck-protection-program-failed-reach-smallest-businesses-how-congress-can-do.

[71] *Id.*

[72] *Paycheck Protection Program (PPP) Report: Approvals Through 6/30/2020,* U.S. SMALL BUS. ADMIN. (June 30, 2020), https://www.sba.gov/sites/default/files/2020-07/PPP%20Results%20-%20Sunday%20FINAL-508.pdf.

[73] Jeff Drew, *SBA, Treasury Release Names of Some PPP Recipients,* J. OF ACCT. (July 6, 2020),

The administrative hurdles plaguing the SBA, banks, and borrowers alike are likely to continue as the loan application phase gives way to the loan forgiveness phase, and litigation will likely continue through 2020 and beyond. The complexity of the PPP, especially when compared to the much simpler one-step grant systems with easier applications that took place in many European countries, raises the question about how the United States could have created a better and less complex system for channeling funds to small businesses.

C. DIRECT LOANS BY TREASURY

The CARES Act designated $500 billion for the U.S. Department of the Treasury, a small portion of which Treasury is using for direct loans to specific sectors: $46 billion was to be lent to airlines, air carriers, ticket agents, and businesses critical to maintaining national security.[74] As of July 7, the Department of the Treasury had executed letters of intent with ten major airlines, and indicated that it was continuing loan discussions with others.[75] Borrowers are required to provide warrants, equity, or senior debt instruments as appropriate taxpayer compensation. Despite the aid afforded to the aviation industry, in light of the continuing dire collapse in air travel, a number of airlines have announced plans to furlough tens of thousands of workers.[76]

V. INNOVATIVE FEDERAL RESERVE PROGRAMS

One of the novel twists in the global pandemic has been the Federal Reserve's decision to support lending to large corporations, medium-sized businesses denominated as "Main Street" businesses, as well as municipalities and a range of non-profits. The Federal Reserve's power to lend beyond the financial sector has long been a part of its emergency lending authorities, but the Federal Reserve had not used it.[77] The economic brutality of the pandemic, as well as direct encouragement from the CARES Act, appears to have changed that traditional reluctance.[78]

Although some of these programs were announced as concepts before the passage of the CARES Act, none of them were truly fleshed out or made operational until well after its passage. On March 23, the Federal Reserve announced two facilities aimed toward supporting large corporate employers, the Primary Market Corporate Credit Facility (PMCCF) and the Secondary

https://www.journalofaccountancy.com/news/2020/jul/sba-treasury-release-names-of-ppp-recipients.html; the full list of names sorted by state is posted on the Treasury Department's site, available at https://home.treasury.gov/policy-issues/cares-act/assistance-for-small-businesses/sba-paycheck-protection-program-loan-level-data (last accessed July 28, 2020).

[74] *Q&A: Loans to Air Carriers and Eligible Businesses and National Security* Businesses, Treasury Department (updated April 10, 2020), https://home.treasury.gov/system/files/136/CARES-Airline-Loan-Support-Q-and-A-national-security.pdf.

[75] *The Third Report of the Congressional Oversight Commission*, CONGRESSIONAL OVERSIGHT COMMISSION at 35 (July 20, 2020), https://www.toomey.senate.gov/files/documents/Oversight%20Commission%20-%203rd%20Report%20(FINAL)_7.20.20.pdf.

[76] *See, e.g.*, Alison Sider, *American Airlines Plans to Furlough up to 25,000 Workers This Fall*, WALL STREET J. (July 15, 2020)

[77] *See, e.g.,* Tahyar, *supra* note 26, ch. 1 at 18.

[78] The Federal Reserve announced before the passage of the CARES Act that it would create a facility for Main Street lending. In the CARES Act, Congress explicitly blessed a Main Street program, a separate mid-size business program that has not been made operational, and lending to states and municipalities. Lending to non-profits is not explicitly mentioned in the CARES Act and derives from the Federal Reserve's emergency lending powers.

Market Corporate Credit Facility (SMCCF).[79] The two facilities allow the Federal Reserve to purchase up to $750 billion in newly issued or existing eligible corporate bonds.[80] These programs were initially limited to investment grade debt, but later expanded to those companies who had been newly downgraded. The SMCCF also allows for the purchase of U.S.-listed exchange-traded funds (ETFs), including bond funds, which allows for broader investments rather than buying individual corporate bonds, but the program may have less of an impact because ETFs tend to be more liquid in any event. As of July 1, 2020, these programs had been barely used, perhaps illustrating the positive impact of the Federal Reserve's announcement, or the lack of need. The Treasury will provide up to $75 billion in first-loss credit protection for the facilities.[81]

The Federal Reserve's Main Street lending program is a highly innovative but complex effort to support mid-market lending and since it is so recently operational, its impact is still unclear.[82] In essence, the Federal Reserve has partnered with both the Treasury, as the provider of first-loss credit protection, and private-sector commercial banks, as underwriters and allocators of credit, with the goal of providing funds to companies in the middle of the market, many of which are too small to tap the capital markets and too large to qualify for the PPP. Facing many design choices ranging from the philosophical to the operational, and mindful of the glitches in the rollout of the PPP, the Federal Reserve and the Treasury have taken their time in designing and setting up the program. They have also invited comments on the term sheets, issued several rounds of FAQs, hired outside advisors, and developed a computer portal for banks to use.[83]

To qualify as an eligible borrower, a company must have either less than $2 billion in 2019 annual revenues or fewer than 15,000 employees. In general, the company's leverage cannot exceed six times its 2019 EBITDA.[84] As a result, many growth companies are excluded,[85] as are many portfolio companies of private equity sponsors and owners of commercial real estate.[86] The loans range in size from $250,000 up to $300 million. Until one year after the loan is repaid, a borrower cannot distribute capital to its shareholders through dividends or stock buybacks, and will be subject to limits on employee compensation. Most banks are limiting the program to existing customers, although a few are accepting new customers.

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[79] Press Release, *supra* note 18.
[80] Cheng, *supra* note 30.
[81] *Id*.
[82] As of July 16, the Main Street lending program for businesses had made one $12 million loan to a single borrower. *See* Glenn Hubbard & Hal Scott, *'Main Street' Program Is Too Stingy to Banks and Borrowers*, WALL STREET J. (July 20, 2020, 6:31 PM), https://www.wsj.com/articles/main-street-program-is-too-stingy-to-banks-and-borrowers-11595284266. The program's expected capacity is $600 billion. Press Release, *supra* note 51.
[83] *Main Street Program: Davis Polk Visual Memo*, DAVIS POLK & WARDWELL LLP (June 12, 2020), https://www.davispolk.com/files/main_street_program_visual_memo.pdf.
[84] EBITDA refers to earnings before interest, taxes, depreciation and amortization. It is commonly used as a measure of a company's net income. The program would generally exclude any company that, after receiving a Main Street loan, would have outstanding debt of more than 6 times its 2019 EBITDA, depending on the type of loan and subject to some adjustments. *See Main Street Lending Program: Frequently Asked Questions*, FEDERAL RESERVE (July 15, 2020), http://www.bostonfed.org/mslp-faqs.
[85] Jeanna Smialek, *A Coffee Chain Reveals Flaws in the Fed's Plan to Save Main Street*, N.Y. TIMES (July 9, 2020), https://www.nytimes.com/2020/07/09/business/economy/federal-reserve-treasury-main-street.html.
[86] *Main Street Program: Davis Polk Visual Memo*, DAVIS POLK & WARDWELL LLP (June 12, 2020), https://www.davispolk.com/files/main_street_program_visual_memo.pdf. In an unusual move, the Federal Reserve borrowed many eligibility standards from SBA programs.

At the time this paper was finalized, use of the Main Street program was quite muted. Federal Reserve Chairman Jay Powell acknowledged that the program was "not getting a ton of interest from borrowers," but the Federal Reserve expects demand to grow and it "[continues to] be open to playing with the formula and making adjustments going forward."[87] The President of the Federal Reserve Bank of Boston, which is administering the program, has suggested that the program will become an important source of support if the economy remains weaker through the summer and fall than many companies had anticipated.[88]

Additionally, the Federal Reserve created the Municipal Liquidity Facility (MLF) to offer loans directly to states, counties, and cities – a move the Federal Reserve had explicitly avoided during the Financial Crisis.[89] The Federal Reserve's program for states and municipalities is also innovative. Like the Main Street program, it was specifically contemplated by the CARES Act. The Federal Reserve will purchase bonds issued by states, cities, and counties that meet certain requirements as to their credit ratings and population size. Funds from the program can only be used to manage the cash flow impact of the pandemic, such as the deferral of tax revenue due to the extension of tax filing deadlines.[90] In response to criticisms that it did not reach a wide enough scope of municipalities, and may have inadvertently excluded communities with high populations of minorities, the Federal Reserve reduced the population size requirements to 250,000 for cities and 500,000 for counties, and authorized governors to designate two cities or counties for participation if they cannot meet the population threshold.[91] As of July 10, 2020 only the State of Illinois had used the facility, for a total of $1.2 billion.[92] The Treasury is providing $35 billion in first-loss support to the MLF.[93]

The Federal Reserve's program for non-profits has been announced and initial details determined. For example, non-profits with high endowments and a large number of employees are excluded. The program is not explicitly contemplated in the CARES Act but is based on Federal Reserve 13(3) authorities. Details on all Federal Reserve facilities are noted in a chart referenced in the footnote.[94]

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[87] *Federal Reserve Chair Powell and Treasury Secretary Mnuchin on Coronavirus Response: Hearing Before the H. Fin. Serv. Comm.*, 116th Cong. (June 30, 2020), https://www.c-span.org/video/?473448-1/fed-chair-powell-treasury-secretary-mnuchin-testify-coronavirus-response.

[88] Jonnelle Marte, *Fed's Rosengren Says Demand for Main Street Loans Expected to Grow as U.S. Economy Grapples with Virus*, REUTERS (July 8, 2020, 2:27 PM), https://www.reuters.com/article/us-usa-fed-rosengren/feds-rosengren-says-demand-for-main-street-loans-expected-to-grow-as-u-s-economy-grapples-with-virus-idUSKBN2492VN.

[89] Press Release, *supra* note 51; Nick Timiraos & Heather Gillers, *Fed Includes Municipal Debt in Money-Market Lending Backstop*, WALL STREET J. (Mar. 20, 2020 1:37 PM), https://www.wsj.com/articles/federal-reserve-to-increase-frequency-of-dollar-transactions-with-foreign-central-banks-11584712851.

[90] *Key CARES Act Provisions and Fed Programs for Corporates*, DAVIS POLK & WARDWELL LLP (May 22, 2020), https://www.davispolk.com/files/davis_polk_key_cares_act_provisions_fed_programs_corporates.pdf; Municipal Liquidity Facility Term Sheet, "Eligible Use of Proceeds" (June 3, 2020), https://www.federalreserve.gov/newsevents/pressreleases/files/monetary20200603a1.pdf.

[91] Cheng, *supra* note 30.

[92] *MLF Transaction-specific Disclosures*, BD. OF GOVERNORS OF THE FED. RES. SYS. (July 10, 2020), https://www.federalreserve.gov/publications/files/mlf-transaction-specific-disclosures-7-10-20.xlsx.

[93] Press Release, *supra* note 51.

[94] *The Federal Reserve's Actions to Address the Coronavirus Crisis,* DAVIS POLK & WARDWELL LLP (May 22, 2020), https://www.davispolk.com/files/the_federal_reserves_actions_address_coronavirus_crisis.pdf.

While take-up of many of the Federal Reserve's facilities already in operation has been low, this does not necessarily indicate that the facilities have been unsuccessful. To the contrary, one might argue, as President of the Federal Reserve Bank of New York John Williams recently noted, the relatively low take-up "is in fact a measure of success."[95] Williams opined that "the existence of the facilities, even in a backstop role, has helped boost confidence to the point where borrowers are able to access credit from the private market at affordable rates."[96] To the extent it succeeds in calming markets, the Federal Reserve's so-called "announcement effect" reflects on the institution's credibility among market participants. The announcement effect is at its strongest for liquidity programs, although it may not always be sufficient. This can be seen by the relatively high usage of the MMLF as compared to other Federal Reserve facilities. Whether the announcement effect is sufficient in the novel credit programs, such as the Main Street, the municipal, and the non-profit programs, remains to be seen.

Many of the actions taken by the Federal Reserve to reduce the economic and financial effects from an unprecedented pandemic have helped so far, but the responses raise concerns of their own. Some worry, for example, that the Federal Reserve's facilities are delaying the default of poorly run corporations that were already in weak financial positions before the pandemic began.[97] There are also concerns that by keeping bond rates low, the Federal Reserve is making it harder for investors to judge the true strength of corporations.[98] These actions could be inflating the stock market and creating a bubble that will eventually "pop."[99]

It is an important question whether the Federal Reserve's foray into making loans to the real economy, both directly and indirectly, will strengthen or weaken its independence, require more Congressional oversight of its mandate, or otherwise cause concern about the role of a central bank in a democracy.[100] It has been argued that the Federal Reserve's purchases of corporate and municipal debt are more aligned with the role of a national investment authority rather than a central bank,[101] and that recent Federal Reserve activities amount to investment management, which is unrelated to traditional central banking responsibilities such as managing the monetary supply or supervising banks.[102] It has also been argued that the Federal Reserve could be more successful in helping small businesses if it relied more heavily on market participants that specialize in making loans to small business.[103] The nature of the Federal Reserve programs, which either rely on the banking sector to make credit decisions or rely on broad eligibility standards across a range of eligible companies may mute, for the moment, concerns that the Federal Reserve is directly making decisions about credit allocation, but these questions may come more to the fore as the Federal Reserve and Treasury programs effectively pick winners and

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95 John C. Williams, *Rising to the Challenge: Central Banking, Financial Markets, and the Pandemic*, FED. RES. BANK OF N.Y. (July 16, 2020), https://www.newyorkfed.org/newsevents/speeches/2020/wil200716.
96 *Id*.
97 Victoria Guida & Kellie Mejdrich, *'The Balloon Might Pop': Fed's Corporate Intervention Spurs Anxiety*, POLITICO (July 16, 2020, 4:30 AM), https://www.politico.com/news/2020/07/16/fed-corporate-intervention-worry-365047.
98 *Id*.
99 *Id*.
100 PAUL TUCKER, UNELECTED POWER: THE QUEST FOR LEGITIMACY IN CENTRAL BANKING AND THE REGULATORY STATE (Princeton Univ. Press 2018).
101 *See* Lev Menand, *supra* note 33.
102 David Zaring, *The Government's Economic Response to the Coronavirus Crisis* (draft as of July 2020).
103 Kathryn Judge, *The Fed Can Do More for Small Businesses, But It Needs Help*, FORBES (July 13, 2020, 4:32 PM), https://www.forbes.com/sites/kathrynjudge/2020/07/13/the-fed-can-do-more/#7d33305666fd.

losers.[104] It is an open question whether the special purpose vehicle (SPV) structure provides enough governance for what are essentially policy decisions about the distribution of resources.

Another interesting question, as the Federal Reserve moves beyond its Financial Crisis toolkit, is the extent to which the Federal Reserve, in its partnership with the Treasury, is now subject to more political influence in the design and operation of those programs. The credit protection supplied by the Treasury is similar to the credit protection supplied by Treasury during the Financial Crisis and is aimed at insulating the Federal Reserve from losses. Since Treasury approval is now required for each use of Section 13(3), Treasury has more say and more power to influence what the Federal Reserve does.[105] This influence may bring more political accountability, and also make the Federal Reserve more willing to move beyond the Financial Crisis toolkit. It might also reduce the political independence of the Federal Reserve or subject it to criticism either for being more bound up in political decisions or because its impact on the real economy is seen as more direct.

VI. SUPERVISORY ACTIONS

It remains to be seen to what degree the economic crisis we are currently experiencing will flow through to the financial sector, and whether or not the financial sector is stable enough to withstand serious shock. As Federal Reserve Vice Chair for Supervision Randal Quarles has noted, "[U]nlike the global financial crisis, this shock originated from outside the financial system… Banks entered the current crisis in a much stronger position than they did the global financial crisis."[106] Despite this, the severity of the pandemic has made the resiliency of the banking sector, including its level of capital and liquidity, and any required provisioning for anticipated credit losses, an area of focus and concern.

A. REGULATORY FORBEARANCE

Financial regulators had taken a number of steps before the crisis, including implementing a 2018 law that mandated changes in the capital and liquidity positions of banks; additional regulatory steps went beyond those required in the 2018 enactment. For the banking sector, these steps are seen as minor recalibration of the capital framework. Critics argue that these steps have weakened the capital of the banking sector and left both the banking sector and some parts of the non-banking financial sector more exposed to risk than they should be.

In April 2018, the Federal Reserve proposed to tailor leverage ratio requirements for global systemically important banks (G-SIBs) to tie the enhanced supplementary leverage ratio (eSLR) buffer requirement to the risk-based G-SIB capital surcharge of each firm, estimating that it would reduce the required amount of tier 1 capital for the holding companies of G-SIBs by approximately $400 million, which is approximately 0.04 percent of total tier 1 capital as of the

[104] Morgan Ricks, John Crawford & Lev Menand, *Central Banking for All: A Public Option for Bank Account*, GREATER DEMOCRACY INITIATIVE (June 2018), https://greatdemocracyinitiative.org/wp-content/uploads/2018/06/FedAccountsGDI.pdf.
[105] Nick Timiraos & Kate Davidson, *Fed, Treasury Disagreements Slowed Start of Main Street Lending Program*, WALL STREET J. (July 12, 2020, 9:00 AM), https://www.wsj.com/articles/fed-treasury-disagreements-slowed-start-of-main-street-lending-program-11594558800.
[106] Randal K. Quarles, *Global in Life and Orderly in Death: Post-Crisis Reforms and the Too-Big-to-Fail Question*, BD. OF GOVERNORS OF THE FED. RES. SYS. (July 7, 2020), https://www.federalreserve.gov/newsevents/speech/quarles20200707a.htm.

third quarter 2017.[107] In March 2019, the Federal Reserve announced that it would limit the use of qualitative objections in stress testing, a suggestion that had originally been made by former Governor Tarullo.[108] It also voted not to invoke the countercyclical capital buffer (CCyB), a macroprudential tool that can be used to raise capital requirements when the economy is strong and loan volumes and asset prices are increasing.[109] Later that year, the Federal Reserve finalized rules establishing a framework to tailor regulations for domestic and foreign banks based on asset size, cross-jurisdictional activity, reliance on short-term wholesale funding, and other factors.[110] Under the framework, the most stringent compliance requirements for the largest firms were maintained while requirements for smaller firms were reduced.[111] In March of this year, the Federal Reserve finalized its stress capital buffer (SCB) rule, which individualizes required capital levels for large firms by integrating stress test results with non-stress capital requirements.[112]

There have been differing perspectives and debates on these changes to capital and liquidity rules. For example, Vice Chair for Supervision Quarles noted that the SCB rule would lead to an increase in the common equity capital requirements for large banking firms of approximately $11 billion, including an approximately $46 billion increase for the U.S. G-SIBs.[113] On the other hand, Governor Lael Brainard, who dissented from the SCB rule, made a drastically different estimate that the SCB rule would reduce current required common equity tier 1 capital by $60 billion (5%) and required tier 1 capital by roughly $100 billion (7%) for large banks, including an approximately $40 billion decrease for the G-SIBs.[114] Brainard noted that these reductions "reflect the rule's substantial reduction in the requirement to prefund distributions and, to a

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107 Press Release, Bd. of Governors of the Fed. Res. Sys., Rule Proposed to Tailor 'Enhanced Supplementary Leverage Ratio' Requirements (Apr. 11, 2018, 4:30 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20180411a.htm.

108 Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Announces It Will Limit the Use of the "Qualitative Objection" in Its Comprehensive Capital Analysis and Review (CCAR) Exercise, Effective for the 2019 Cycle (Mar. 6, 2019, 4:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20190306b.htm; Daniel K. Tarullo, Governor, Bd. of Governors of the Fed. Res. Sys., Departing Thoughts (Apr. 04, 2017), https://www.federalreserve.gov/newsevents/speech/tarullo20170404a.htm.

109 Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Votes to Affirm the Countercyclical Capital Buffer (CCyB) at the Current Level of 0 Percent (Mar. 6, 2019), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20190306c.htm.

110 Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board finalizes rules that tailor its regulations for domestic and foreign banks to more closely match their risk profiles (Oct. 10, 2019, 3:45 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20191010a.htm.

111 *Id.*

112 Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Approves Rule to Simplify Its Capital Rules for Large Banks, Preserving the Strong Capital Requirements Already in Place (Mar. 4, 2020, 4:30 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200304a.htm#:~:text=The%20Federal%20Reserve%20Board%20on,its%20non%2Dstress%20capital%20requirements.

113 Press Release, Bd. of Governors of the Fed. Res. System, Statement by Vice Chair for Supervision Quarles (Mar. 4, 2020), https://www.federalreserve.gov/newsevents/pressreleases/quarles-statement-20200304a.htm.

114 Press Release, Bd. of Governors of the Fed. Res. Sys., Statement by Governor Brainard (Mar. 4, 2020), https://www.federalreserve.gov/newsevents/pressreleases/brainard-statement-20200304a.htm.

lesser extent, the elimination of any stress leverage requirement (for tier 1) and the assumption of a flat balance sheet."[115]

Similarly, a number of the Federal Reserve's other decisions on capital and stress testing were subject to dissents by Governor Brainard,[116] including in relation to the eSLR,[117] the easing of capital rules for banks $100-$250 billion in asset size,[118] the decision not to invoke the counter-cyclical capital buffer in 2019,[119] the elimination of qualitative objections from stress tests,[120] the reduction in capital stemming from the Federal Reserve's stress capital buffer rule,[121] and permitting banks to pay dividends after the stress test results in summer 2020.[122]

Since the COVID-19 crisis began, the Federal Reserve and other banking agencies have taken a number of additional steps to ease supervisory burdens. On March 24, the Federal Reserve announced that it would temporarily reduce its examination activities in order to minimize disruption in light of the coronavirus.[123] Shortly thereafter, the Federal Reserve, Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) issued a joint statement allowing banks to mitigate the capital impact of a new accounting standard on "current expected credit loss" (CECL) for up to two years and early adopt a new, less stringent methodology for measuring counterparty credit risk.[124] The Federal Reserve also eased capital requirements by announcing changes to its supplementary leverage ratio (SLR) rule and total

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[115] *Id.*
[116] Governor Brainard also dissented from the Federal Reserve's decision to alter the Volcker Rule's provisions with respect to covered funds, arguing that the rule would expose the banking system to excessive risk, and should not in any event have been undertaken during the pandemic. *See* Press Release, Bd. of Governors of the Fed. Res. Sys., Statement of Governor Brainard (June 25, 2020), https://www.federalreserve.gov/newsevents/pressreleases/brainard-statement-20200625a.htm. The banking sector views the changes to the Volcker Funds rule as a calibration that was in process before the pandemic.
[117] Press Release, *supra* note 107.
[118] Press Release, Bd. of Governors of the Fed. Res. Sys., Statement by Governor Lael Brainard (Oct. 10, 2019), https://www.federalreserve.gov/newsevents/pressreleases/brainard-statement-20191010.htm.
[119] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Votes to Affirm the Countercyclical Capital Buffer (CCyB) at the Current Level of 0 Percent (Mar. 6, 2019), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20190306c.htm.
[120] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Announces It Will Limit the Use of the "Qualitative Objection" in Its Comprehensive Capital Analysis and Review (CCAR) Exercise, Effective for the 2019 Cycle (Mar. 6, 2019, 4:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20190306b.htm.
[121] Press Release, Bd. of Governors of the Fed. Res. Sys., Statement by Governor Brainard (Mar. 4, 2020), https://www.federalreserve.gov/newsevents/pressreleases/brainard-statement-20200304a.htm.
[122] Press Release, Bd. of Governors of the Fed. Res. Sys., Statement by Governor Brainard (June 25, 2020), https://www.federalreserve.gov/newsevents/pressreleases/brainard-statement-20200625c.htm.
[123] Press Release, Bd. of Governors of the Fed. Res. System, Federal Reserve Provides Additional Information to Financial Institutions on How Its Supervisory Approach is Adjusting in Light of the Coronavirus (Mar. 24, 2020, 5:30 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200324a.htm.
[124] Joint Press Release, Bd. of Governors of the Fed. Res. Sys., Fed. Deposit Ins. Corp. & Off. of the Comptroller of the Currency, Agencies Announce Two Actions to Support Lending to Households and Businesses (Mar. 27, 2020), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200327a.htm.

loss absorbing capacity (TLAC) rule.[125] The community bank leverage ratio was reduced from 9% to 8%.[126]

The changes made during the COVID-19 pandemic are intended to be temporary, and regulatory forbearance on capital and liquidity are designed to help financial institutions in the short term. Yet, some worry that these measures will reduce the resiliency of the banking system when its strength is most needed.[127] Given the pressure that the sharp inflow of deposits has placed on some banking institutions with respect to their leverage ratios, there will be pressure from the banking sector to make some of these changes permanent, especially given the increased liquidity of banks as of July 2020. In addition to these concerns about the financial sector, many non-financial companies increased their leverage leading into the pandemic, the non-bank financial sector such as money market funds and hedge funds were increasingly exposed to risk, and many households had little financial slack with which to weather a crisis during a time of growing income inequality, stagnant wages, and huge wealth inequality.

B. RESULTS OF STRESS TESTING

The Federal Reserve released results of its 2020 stress tests on June 25,[128] which were based upon scenarios developed before the impact of the pandemic. As a result, even the most severe scenario included in the stress tests was not severe enough. To account for this, the Federal Reserve included an additional sensitivity analysis in light of the COVID-19 crisis, the scenarios for which had not been previously announced.[129] The additional sensitivity analysis tested large banks under three hypothetical scenarios that could be caused by COVID-19: a V-shaped recession and recovery; a slower, U-shaped recession and recovery; and a W-shaped, double-dip recession.[130] The analysis did not include an L-shaped test where the economy remains in a

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[125] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Announces Technical Change to Support the U.S. Economy and Allow Banks to Continue Lending to Creditworthy Households and Businesses (Mar. 23, 2020, 9:15 AM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200323a.htm; Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Announces Temporary Change to Its Supplementary Leverage Ratio Rule to Ease Strains in the Treasury Market Resulting from the Coronavirus and Increase Banking Organizations' Ability to Provide Credit to Households and Businesses (Apr. 1, 2020, 4:45 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200401a.htm.

[126] Press Release, Bd. of Governors of the Fed. Res. Sys., Agencies Announce Changes to the Community Bank Leverage Ratio (Apr. 6, 2020, 9:00 AM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200406a.htm.

[127] For instance, there is a view that the Federal Reserve could have made more targeted adjustments to its SLR rule, still minimizing the impact of pandemic-related deposit inflows on banks' supplementary leverage ratios, but keeping more bank capital in the financial system. Jeremy Kress, *Don't Weaken the G-SIB Surcharge*, AM. BANKER (July 10, 2020, 10:14 AM), https://www.americanbanker.com/opinion/dont-weaken-the-g-sib-surcharge.

[128] For more information on Federal Reserve stress testing, see BARR, JACKSON & TAHYAR, *supra* note 1, ch. 2.7 at 165-188.

[129] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Board Releases Results of Stress Tests for 2020 and Additional Sensitivity Analyses Conducted in Light of the Coronavirus Event (June 25, 2020, 4:30 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200625c.htm.

[130] A recent working paper by Jeremy Stein and others finds that while U.S. banks were generally well capitalized going into the COVID-19 pandemic, banks may face large credit losses as the pandemic continues. Michael Blank et al., *How Should U.S. Bank Regulators Respond to the COVID-19 Crisis?* (Hutchins Center, Working Paper 63, 2020), https://www.brookings.edu/research/how-

recession for a prolonged period of time due to a slow COVID-19 recovery, or other more severe scenarios.

While the Federal Reserve released results of its usual stress test on a bank-by-bank basis, it declined to do so for the sensitivity analysis. The results were only provided qualitatively and in the aggregate,[131] with the Federal Reserve stating that most firms would remain well capitalized, but several firms would approach minimum capital levels under the most severe scenarios,[132] and some would breach their minimum capital ratios.[133] Kathryn Judge argues that stress tests designed to reflect distinct periods of systemic distress can provide critical "just-in-time" information to policymakers and others, but acknowledges that regulators will rationally be hesitant to disclose negative information during an already fragile time for the financial system.[134] Judge suggests that safety nets should be designed to lessen the negative impact of bad news, such as vesting the Treasury Department with broad, time-limited guarantee authority.[135] During the Financial Crisis, the Federal Reserve's stress tests were disclosed in real-time as to individual firms, with credible economic scenarios, which enhanced market stability;

should-u-s-bank-regulators-respond-to-the-covid-19-crisis/. The authors employed a stress scenario model to assess the potential impact of COVID-19 on the aggregate common equity Tier 1 capital ratio (CET1 ratio) for the 21 U.S. banks subject to the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR). In the least adverse scenario considered by the authors, the aggregate CET1 ratio drops from 11.5% to 7.3% of risk-weighted assets. Under the most adverse scenario, the aggregate CET1 ratio drops from 11.5% to 5.5%. While the authors note that their analysis is subject to a wide range of caveats, they stress that the message that U.S. banks might experience significant capital depletion should be taken seriously. Former Federal Reserve Board Governor Daniel Tarullo remarked that by not releasing bank-by-bank results, the stress tests provide limited information and cause confusion. He also argued that the Federal Reserve should have required large banks to resubmit their capital plans this spring, and should not be waiting until later to do so. Daniel K. Tarullo, *Are We Seeing the Demise of Stress Testing?*, BROOKINGS INST. (June 25, 2020), https://www.brookings.edu/blog/up-front/2020/06/25/stress-testing/.

[131] Bd. of Governors of the Fed. Res. Sys., *Assessment of Bank Capital during the Recent Coronavirus Event* (June 2020), https://www.federalreserve.gov/publications/files/2020-sensitivity-analysis-20200625.pdf.

[132] Press Release, *supra* note 129.

[133] *See Transcript of Chair Powell's Press Conference*, BD. OF GOVERNORS OF THE FED. RES. SYS. (July 29, 2020), https://www.federalreserve.gov/mediacenter/files/FOMCpresconf20200729.pdf (stating that "[U]nder the regular way stress test, the banks passed. But right in the middle of the stress test came the pandemic. And so we quickly dropped in three other scenarios which were, you know, really bad scenarios. And many of the banks passed, but some didn't."). It is possible that up to roughly a quarter of the banks included in the sensitivity analysis would breach their minimum quarter ratios under the W-shaped scenario, based on a chart in the sensitivity analysis showing the distribution of banks in the 25th to 75th percentile passing the test, implying that some number of those in the 0 to 25th percentile did not, but a senior Federal Reserve official "cautioned against reading too much into this because the analysis . . . did not incorporate the effects of actions already taken by Congress, including stimulus checks and expanded unemployment insurance." Victoria Guida & Aubree Eliza Weaver, *Stress Tests Turn Out Stressful*, POLITICO (June 26, 2020, 8:00 AM), https://www.politico.com/newsletters/morning-money/2020/06/26/stress-tests-turn-out-stressful-788818.

[134] Kathryn Judge, *Stress Testing During Times of War* (European Corp. Governance Inst., Law Working Paper No. 529/2020, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=363331.

[135] *Id.*

at the same time, Treasury and the Federal Reserve made it clear that firms needing capital under the stress tests would be backstopped.[136]

With the stress test results, the Federal Reserve also announced that it is requiring large banks to suspend share repurchases, cap dividends based on past income, and resubmit their capital plans later this year.[137] The Federal Reserve will conduct quarterly analysis to determine if further actions should be taken.[138] The results of, and the level of transparency to be provided in, the extra out-of-cycle stress tests to be conducted later in the year remain to be seen.

Much concern has been expressed regarding the Federal Reserve's decision to cap (rather than suspend) dividends.[139] Former Federal Reserve Governor Jeremy Stein and his coauthors, for example, have called on the Federal Reserve to suspend dividends, encourage banks to raise new common equity via secondary offerings, and require that banks suspend cash bonus payments to senior executives in order to conserve capital.[140] They argue that banks should be conserving and raising capital now, rather than waiting until things get worse because a central lesson of the Financial Crisis is that earlier capital conservation and capital-raising end up being more effective than later efforts. The banking sector, of course, feels differently, especially about the suspension of dividends and how it might impact share price. Since March, many banks have raised Tier 2 capital via subordinated debt. Given the fact that bank stocks have dropped almost 34% year to date as of July 31 and are trading in many cases barely above book value, banks would not want voluntarily to raise equity given current prices.[141] The interaction between stopping dividends and share price is of major concern to the banking sector, but regulators will need to decide whether in the public interest they should require conservation and raising of equity given the potential for future losses from the global pandemic. It should be noted that dividends have largely been suspended already in the European Union.

In anticipation of credit losses to come, there was a sharp rise in the amount of provisions that banks took in the first quarter of 2020 and this trend continued in the second quarter.[142] Given that increases in the allowance for loan losses provides a cushion against losses in addition to capital, this is a positive sign in terms of the resilience of the system, but whether it is sufficient remains to be seen. As noted above, some believe that more should be done to ensure the capital adequacy of the banking system throughout the remainder of the COVID-crisis.

[136] *See* Tim Clark, Matthew Kabaker, & Lee Sachs, *Bank Capital: Reviving the System*, *in* FIRST RESPONDERS: INSIDE THE U.S. STRATEGY FOR FIGHTING THE 2007-2009 GLOBAL FINANCIAL CRISIS 254-288 (Ben S. Bernanke, Timothy F. Geithner & Henry M. Paulson, Jr., with J. Nellie Liang, eds., Yale Univ. Press 2020).
[137] Press Release, *supra* note 129.
[138] *Id*.
[139] *See, e.g.*, *Fed's Stress Test Actions Allowing Capital Payouts in the Middle of an Historic Economic Crisis Undermines Its Credibility and Makes Bank Failures and Bailouts More Likely*, BETTER MARKETS (June 25, 2020), https://bettermarkets.com/newsroom/fed's-stress-test-actions-allowing-capital-payouts-middle-historic-economic-crisis; *Blog: Wall Street Reaps Huge Profits from Fed as Main Street Still Waits for Help,* AMS. FOR FIN. REFORM (July 17, 2020), https://ourfinancialsecurity.org/2020/07/blog-wall-street-reaps-huge-profits-from-fed-as-main-street-still-waits-for-help/.
[140] Blank, *supra* note 130.
[141] *KBW Bank Index,* BLOOMBERG (July 31, 2020), https://www.bloomberg.com/quote/BKX:IND.
[142] Emily Flitter, Stacy Cowley and Gillian Friedman, *Banks Stockpile Billions as They Prepare for Things to Get Worse*, NY TIMES (July 14, 2020), https://www.nytimes.com/2020/07/14/business/big-banks-quarterly-results.html. For more information on the interaction of loan loss reserves and bank capital more generally, see BARR, JACKSON & TAHYAR, *supra* note 1, at 265-340.

C. OTHER SUPERVISORY ACTIONS

The pace, breadth and sheer output of new regulations, guidance and other announcements by the financial regulatory agencies has been impressive. Among other changes, these actions have tailored regulatory requirements to reflect the country's adjustment to social distancing and remote-working; delayed and/or relaxed reporting requirements and rulemaking comment deadlines; modified capital and liquidity requirements to promote lending and facilitate implementation of Federal Reserve funding facilities and the CARES Act; and provided guidance to the financial sector on the agencies' approaches to supervision and public disclosure in light of the novel challenges presented by the crisis. For instance, the Federal Reserve, FDIC, and OCC took quick, aggressive action, first announcing an interim final rule on March 17 to facilitate the use of firms' capital and liquidity buffers to promote lending activity to households and businesses,[143] and subsequently took actions to neutralize the capital and liquidity impacts of certain Federal Reserve programs and facilities.[144] Multiple agencies provided guidance on how financial institutions can provide loan modifications.[145] The SEC provided guidance on how public companies should disclose the impacts of COVID-19 in their financial statements.[146] The SEC also issued rule changes to facilitate the continued operation of securities exchanges following the

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[143] Joint Release, Off. of the Comptroller of the Currency, Bd. of Governors of the Fed. Res. Sys. & Fed. Deposit Ins. Corp., Federal Banking Agencies Provide Banks Additional Flexibility to Support Households and Businesses (Mar. 17, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-34.html.

[144] Joint Release, Off. of the Comptroller of the Currency, Bd. of Governors of the Fed. Res. Sys. & Fed. Deposit Ins. Corp., Federal Bank Regulatory Agencies Issue Interim Final Rule for Money Market Liquidity Facility (Mar. 19, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-36.html; Joint Release, Off. of the Comptroller of the Currency, Bd. of Governors of the Fed. Res. Sys. & Fed. Deposit Ins. Corp., Federal Bank Regulators Issue Interim Final Rule for Paycheck Protection Program Facility (Apr. 9, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-51.html (interim final rules regarding the capital treatment of PPP activities); Joint Release, Off. of the Comptroller of the Currency, Bd. of Governors of the Fed. Res. Sys. & Fed. Deposit Ins. Corp., Federal Bank Regulatory Agencies Modify Liquidity Coverage Ratio for Banks Participating in Money Market Mutual Fund Liquidity Facility and Paycheck Protection Program Liquidity Facility (May 5, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-59.html (interim final rule on modification to Liquidity Coverage Ratio to support MMLF and PPP activities).

[145] *See, e.g.,* Joint Release, Off. of the Comptroller of the Currency, Bd. of Governors of the Fed. Res. Sys., Fed. Deposit Ins. Corp., Nat'l Credit Union Admin., Consumer Fin. Protection Bureau & Conf. of State Bank Supervisors, Agencies Provide Additional Information to Encourage Financial Institutions to Work with Borrowers Affected by COVID-19 (Mar. 22, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-39.html.

[146] Public Statement, Sec. and Exch. Comm'n, Statement on Proposed Amendments to Modernize and Enhance Financial Disclosures; Other Ongoing Disclosure Modernization Initiatives; Impact of the Coronavirus; Environmental and Climate-Related Disclosure (Jan. 30, 2020), https://www.sec.gov/news/public-statement/clayton-mda-2020-01-30; Public Statement, Sec. and Exch. Comm'n, Statement on Continued Dialogue with Audit Firm Representatives on Audit Quality in China and Other Emerging Markets; Coronavirus – Reporting Considerations and Potential Relief (Feb. 19, 2020), https://www.sec.gov/news/public-statement/statement-audit-quality-china-2020-02-19; Public Statement, Sec. and Exch. Comm'n, Statement on the Important of High-Quality Financial Reporting in Light of the Significant Impacts of COVID-19 (Apr. 3, 2020), https://www.sec.gov/news/public-statement/statement-teotia-financial-reporting-covid-19-2020-04-03 Public Statement, Sec. and Exch. Comm'n, The Importance of Disclosure for Our Municipal Markets (May 4, 2020), https://www.sec.gov/news/public-statement/statement-clayton-olsen-2020-05-04.

temporary closure of trading floors;[147] provided relief to manual signature,[148] notarization[149] and paper filing requirements;[150] and relaxed in-person requirements for board meetings[151] and annual meetings.[152] The Federal Reserve relaxed reporting requirements for small financial institutions,[153] the CFPB postponed data collection requirements under the HMDA, Reg Z, TILA and other Bureau-related rules,[154] the FDIC provided extensions for Call Reports[155] and the SEC provided an extension to the filing deadline for Part III of Form 10-K.[156] Financial regulatory agencies also relaxed regulatory requirements by extending the swap margin rule compliance

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[147] Press Release, Sec. and Exch. Comm'n, Cboe Options Exchange Temporarily Shifts to Fully Electronic Trading – SEC Enables Immediate Effectiveness of Proposed Rule Change to Facilitate Continued Operations in Light of Temporary Suspension of Cboe Physical Trading Floor (Mar. 14, 2020), https://www.sec.gov/news/press-release/2020-64; SEC. AND EXCH. COMM'N, SELF-REGULATORY ORGANIZATIONS; NEW YORK STOCK EXCHANGE LLC; NOTICE OF FILING AND IMMEDIATE EFFECTIVENESS OF PROPOSED RULE CHANGE TO AMEND RULES 7.35A, 7.35B, AND 7.35C FOR A TEMPORARY PERIOD, (Mar. 20, 2020), https://www.sec.gov/rules/sro/nyse/2020/34-88444.pdf.

[148] Announcement, Sec. and Exch. Comm'n, Staff Statement Regarding Rule 302(b) of Regulation S-T in Light of COVID-19 Concerns (June 22, 2020), https://www.sec.gov/corpfin/announcement/staff-statement-regarding-rule-302b-regulation-s-t-light-covid-19-concerns.

[149] Press Release, Sec. and Exch. Comm'n, SEC Provides Additional Temporary Regulatory Relief and Assistance to Market Participants Affected by COVID-19 (Mar. 26, 2020), https://www.sec.gov/news/press-release/2020-74.

[150] *Division of Trading and Markets Staff Statement Regarding Requirements for Certain Paper Submissions in Light of COVID-19 Concerns,* SEC. AND EXCH. COMM'N (Apr. 2, 2020), https://www.sec.gov/tm/paper-submission-requirements-covid-19; Announcement, Sec. and Exch. Comm'n, Division of Corporation Finance Statement Regarding Requirements for Form 144 Paper Filings in Light of COVID-19 Concerns (Apr. 10, 2020), https://www.sec.gov/corpfin/announcement/form-144-paper-filings-email-option; *Updated Division of Trading and Markets Staff Statement Regarding Requirements for Certain Paper Submissions in Light of COVID-19 Concerns,* SEC. AND EXCH. COMM'N (June 18, 2020), https://www.sec.gov/tm/paper-submission-requirements-covid-19-updates-061820.

[151] Securities and Exchange Commission, *Staff Statement* (Modified March 4, 2020), https://www.sec.gov/investment/staff-statement-im-covid-19; Securities and Exchange Commission, *Press Release* (March 13, 2020), https://www.sec.gov/news/press-release/2020-63.

[152] Announcement, Sec. and Exch. Comm'n, Staff Guidance for Conducting Shareholder Meetings in Light of COVID-19 Concerns (Apr. 7, 2020), https://www.sec.gov/ocr/staff-guidance-conducting-annual-meetings-light-covid-19-concerns. The OCC has also issued guidance to banks and federal savings associations and an interim final rule regarding board and shareholder meetings. Off. of the Comptroller of the Currency, OCC Bulletin 2020-51, Corporate Governance: Annual Meetings and the COVID-19 Emergency (May 12, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-51.html; Off. of the Comptroller of the Currency, OCC Bulletin 2020-55, Director, Shareholder, and Member Meetings: Interim Final Rule (May 26, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-55.html.

[153] Press Release, Bd. of Governors of the Fed. Res. Sys., Federal Reserve Offers Regulatory Reporting Relief to Small Financial Institutions Affected by the Coronavirus (Mar. 26, 2020, 1:00 PM), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200326b.htm.

[154] Press Release, Consumer Fin. Protection Bureau, CFPB Provides Flexibility During COVID-19 Pandemic (Mar. 26, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-provides-flexibility-during-covid-19-pandemic/.

[155] *Financial Institution Letter: The FDIC Announces a 30-Day Grace Period for the Call Report for the First Quarter of 2020,* FED. DEPOSIT INS. CORP. (Mar. 26, 2020), https://www.fdic.gov/news/news/financial/2020/fil20028.html.

[156] *Compliance and Disclosure Interpretations*, SEC. AND EXCH. COMM'N (Apr. 6, 2020), https://www.sec.gov/divisions/corpfin/guidance/exchangeactforms-interps.htm#104.18.

deadline,[157] revising the short-term investment fund (STIF) rule[158] and proposing to reduce deposit insurance assessments.[159]

Financial regulators have also focused many of their actions on providing relief to the financial sector that they contend would assist the countless number of consumers who have been affected by the economic effects of the crisis.[160] They have, among other actions, encouraged the offering of small-dollar loans,[161] provided an extension to permit banks to continue to estimate certain rates and fees for remittance transfers,[162] facilitated the provision of pandemic relief

[157] Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants, 85 Fed. Reg. 69,19878 (Apr. 9, 2020), https://www.cftc.gov/sites/default/files/2020/04/2020-06625a.pdf; *Voting Draft: Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants*, COMMODITY AND FUTURES TRADING COMM'N (May 28, 2020), https://www.cftc.gov/media/3916/votingdraft052820b/download; Off. of the Comptroller of the Currency, OCC Bulletin 2020-67, Extension of the Swap Margin Rule Compliance Dates: Interim Final Rule (July 1, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-67.html.

[158] *OCC Revises Short-Term Investment Fund Rule*, OFF. OF THE COMPTROLLER OF THE CURRENCY (Mar. 22, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-occ-2020-38.html.

[159] *Financial Institution Letter: Proposed Rulemaking to Mitigate the Deposit Insurance Assessment Effects of Participation in the Paycheck Protection Program (PPP), the PPP Lending Facility, and the Money Market Mutual Fund Liquidity Facility*, FED. DEPOSIT INS. CORP. (May 12, 2020), https://www.fdic.gov/news/news/financial/2020/fil20056.html; Press Release, Fed. Deposit Ins. Corp., FDIC Issues Final Rule to Mitigate the Deposit Insurance Assessment Effect of Participation in the Paycheck Protection Program (PPP), the PPP Liquidity Facility, and the Money Market Mutual Fund Liquidity Facility (June 22, 2020), https://www.fdic.gov/news/press-releases/2020/pr20071.html.

[160] As alluded to in note 6, many actions have also been taken at the state and local level with respect to consumer relief.

[161] Off. of the Comptroller of the Currency, News Release 2020-40, Federal Agencies Encourage Banks, Savings Associations and Credit Unions to Offer Responsible Small-Dollar Loans to Consumers and Small Businesses Affected by COVID-19 (Mar. 26, 2020), https://www.occ.gov/news-issuances/news-releases/2020/nr-ia-2020-40.html; Off. of the Comptroller of the Currency, OCC Bulletin 2020-54, Small-Dollar Lending: Interagency Lending Principles for Offering Responsible Small-Dollar Loans (May 20, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-54.html.

[162] Press Release, Consumer Fin. Protection Bureau, Consumer Financial Protection Bureau Announces Guidance on Remittance Transfers During COVID-19 Pandemic (Apr. 10, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-guidance-remittance-transfers-during-covid-19-pandemic/; Press Release, Consumer Fin. Protection Bureau, Consumer Financial Protection Bureau Issues Final Remittance Rule (May 11, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-issues-final-remittance-rule/.

payments,[163] eased requirements for mortgage disclosures,[164] provided loan origination flexibilities,[165] and encouraged the reduction of banking fees.[166]

In recent hearings, Republican members of Congress have commended that CFPB for the actions it has taken during the crisis.[167] At the same time, some commentators argue that the CFPB's policy changes both before and during the pandemic may harm consumers and weaken the financial system when it should be protecting customers. Consumer advocates worry, for example, that the CFPB policy changes have weakened consumer protections at precisely the time that households need the most protection from debt collectors, mortgage servicers, and other financial service providers. Complaints to the CFPB consumer complaint database have soared.[168] And some argue that the CFPB regulatory actions on mortgages, payday lending, and the like may leave consumers much more exposed to risk in the middle of the pandemic. One advocacy group has warned that the CFPB's actions regarding payday lending "will give loan shark-like payday lenders greater leeway to exploit the current crisis by continuing to trap people in debt and hamper their financial recovery."[169] In late June, a group of 104 organizations, including many nonprofits and consumer advocacy groups, submitted a letter to Congress calling for a temporary ban of the most aggressive forms of debt collection during the COVID-19 crisis.[170]

VII. MORTGAGE FORBEARANCE AND LOAN DEFERMENTS

[163] Press Release, Consumer Fin. Protection Bureau, Consumer Financial Protection Bureau Paves Way for Consumers to Receive Economic Impact Payments Quicker (Apr. 13, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-paves-way-consumers-receive-economic-impact-payments-quicker/.

[164] Press Release, Consumer Fin. Protection Bureau, CFPB Paves Way for Consumers Facing Financial Emergencies to Obtain Access to Mortgage Credit More Quickly (Apr. 29, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-paves-way-consumers-facing-financial-emergencies-access-mortgage-credit-quickly/.

[165] Federal Housing Finance Agency, *News Release* (May 5, 2020), https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Extends-Loan-Processing-Flexibilities-for-Fannie-Mae-and-Freddie-Mac-Customers.aspx; Federal Housing Finance Agency, *News Release* (July 9, 2020), https://www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Extends-COVID-Related-Loan-Processing-Flexibilities-for-Fannie-Mae-and-Freddie-Mac-Customers-Through-August.aspx.

[166] Press Release, Consumer Fin. Protection Bureau, Consumer Financial Protection Bureau Outlines Responsibilities of Financial Firms During Pandemic (May 13, 2020), https://www.consumerfinance.gov/about-us/newsroom/cfpb-outlines-responsibilities-financial-firms-during-pandemic/.

[167] Press Release, Consumer Fin. Protection Bureau, Crapo Statement at CFPB Semi-Annual Report to Congress (July 29, 2020), https://www.banking.senate.gov/imo/media/doc/Crapo%20Statement%207-29-201.pdf.

[168] *See* Andrew Keshner, *Consumer Complaints to the CFPB Are Skyrocketing as the Coronavirus Outbreak Continues*, MARKETWATCH (July 19, 2020, 6:58 AM), https://www.marketwatch.com/story/consumer-complaints-to-the-cfpb-are-skyrocketing-as-the-coronavirus-outbreak-continues-2020-07-17; *Complaint Bulletin*, CONSUMER FIN. PROTECTION BUREAU (July 2020), https://files.consumerfinance.gov/f/documents/cfpb_july-complaint-bulletin_coronavirus-complaints_2020-07.pdf (last accessed July 28, 2020).

[169] *News Release: Rollback of Payday Protections Enables Predator Profiteering Amid Health Crisis*, AMS. FOR FIN. REFORM (July 7, 2020), https://ourfinancialsecurity.org/2020/07/news-release-rollback-of-payday-protections-enables-predator-profiteering-amid-health-crisis/.

[170] *Joint Letter: Letter to Congress from 104 Groups in Support of COVID-19 Debt Collection Protections*, AMS. FOR FIN. REFORM (June 23, 2020), https://ourfinancialsecurity.org/2020/06/joint-letter-letter-to-congress-from-104-groups-in-support-of-covid-19-debt-collection-protections/.

One of the criticisms in the response to the Financial Crisis is that policymakers did not provide enough relief to homeowners and renters.[171] Despite the extensive support provided to homeowners, many agree that more should have been done.[172] During the current crisis, the CARES Act required that banks provide homeowners with mortgages insured by the federal government (now most homeowners) up to a six month deferment in payments upon request, similar to deferments provided in the Financial Crisis for the unemployed.[173] Homeowners are only required to attest to a financial hardship in order to qualify for the mortgage forbearance – no additional documentation is required, unlike during the Financial Crisis.[174] In addition, a number of banks voluntarily provided deferments on consumer credit and other loans, as was the case a decade ago.[175] The CARES Act provides protections from eviction for most tenants in federally subsidized or federally backed housing.[176] Individual states such as New York,[177] California,[178] and Michigan,[179] have provided relief to renters, most commonly in the form of temporary eviction bans.

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[171] Alan Blinder, *After the Music Stopped: The Financial Crisis, the Response, and the Work Ahead* (2013). A separate policy question—not addressed in this supplement—is whether the U.S. bankruptcy system is equipped to handle the volume of cases that the pandemic is expected to generate. *See* David Skeel, *Bankruptcy and the Coronavirus* (Apr. 2020) (Brookings Economic Studies Working Paper); David Skeel, *Bankruptcy and the Coronavirus: Part II* (July 2020) (Brookings Economic Studies Working Paper). *See also* Benjamin Charles Iverson et al., *Estimating the Need for Additional Bankruptcy Judges in Light of the COVID-19 Pandemic* (Harvard Business Law Review, Vol. 11, forthcoming 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3624529. Some scholars have also recommended that the Federal Reserve extend its Section 10B discount window authority to provide debtor-in-possession financing. *See* Peter Conti-Brown & David Skeel, *Using the Federal Reserve's Discount Window for Debtor-in-Possession Financing During the Covid-19 Bankruptcy Crisis,* BROOKINGS INST. (July 2020), https://www.brookings.edu/research/using-the-federal-reserves-discount-window-for-debtor-in-possession-financing-during-the-covid-19-bankruptcy-crisis/.

[172] Michael S. Barr, Neel T. Kashkari, Andreas Lehnert & Phillip Swagel, *Crisis-Era Housing Programs*, *in* FIRST RESPONDERS: INSIDE THE U.S. STRATEGY FOR FIGHTING THE 2007-2009 GLOBAL FINANCIAL CRISIS 320 (Ben S. Bernanke, Timothy F. Geithner & Henry M. Paulson, Jr., with J. Nellie Liang, eds., Yale Univ. Press 2020).

[173] CARES Act, H.R. 748, 116th Cong. § 4022 (2020).

[174] *Id*.

[175] For example, Ally Bank gave homeowners the option to defer their Ally home loan payment for up to 120 days. *A Message for Our Ally Community About Coronavirus (COVID-19)*, ALLY Fin. Inc., https://www.ally.com/coronavirus-response (last updated July 14, 2020). Many other banks are offering deferments on a case-by-case basis.

[176] *See Protections for Renters,* CONSUMER FIN. PROTECTION BUREAU, https://www.consumerfinance.gov/coronavirus/mortgage-and-housing-assistance/renter-protections/ (last modified July 2, 2020); H.R. 748 § 4024.

[177] *See* Memorandum from Lawrence K. Marks to All Judicial and Non-Judicial Personnel of the Unified Court System (Mar. 15, 2020), https://www.nycourts.gov/whatsnew/pdf/Updated-Protocol-AttachmentA3.pdf.

[178] *See Governor Newsom Takes Executive Action to Establish a Statewide Moratorium on Evictions*, OFF. OF GOVERNOR GAVIN NEWSOM (Mar. 27, 2020), https://www.gov.ca.gov/2020/03/27/governor-newsom-takes-executive-action-to-establish-a-statewide-moratorium-on-evictions/.

[179] *See* Mich. Exec. Order 2020-19 (COVID-19) (Mar. 20, 2020), https://www.michigan.gov/whitmer/0,9309,7-387-90499_90705-522509--,00.html#:~:text=The%20novel%20coronavirus%20.

The need to provide relief for homeowners and renters is urgent. Recent news articles suggest that up to a quarter of renters in New York City are unable to pay their full rent,[180] and ensuring housing security for all individuals is necessary during a public health crisis. While Congress and states have already taken action, there is debate regarding the effectiveness of mortgage forbearance and eviction moratoriums. A temporary halt of rent payments may result in ripple effects that hurt local economies due to a reduction in income to landlords, property taxes collected, and money spent on things like maintenance and hiring property staff. [181]

There is also the pressing question of what happens when mortgage forbearance and eviction bans end. With respect to mortgages, many homeowners will be eligible for a payment deferral which makes missed mortgage payments due at the sale or refinancing of the home, or at the end of the loan.[182] Others who have a sustained reduction in income may be eligible for a loan modification. [183] But these solutions are not as easily applied to renters. Many fear that a surge of evictions will follow the end of eviction moratoriums, leaving tens of thousands at risk of losing their homes while we are still fighting a public health crisis.[184] A recent study has shown that "eviction filings have almost returned to their prepandemic levels in places where local bans have expired or where they were never enacted."[185] Some have argued for providing cash to individuals would be a more effective policy tool that offers longer-term housing security and avoids the problem of ripple effects.[186]

As the pandemic has continued, some states, notably California, are considering legislation that would allow mortgage borrowers to request forbearances from their loan servicers.[187] The OCC, however, under Acting Comptroller Brian Brooks, recently issued a bulletin stating that "federal law preempts state and local laws that impermissibly conflict with banks' exercise of federally authorized powers."[188] The OCC specifically stated that federal law preempts "state

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[180] *See* Matthew Haag, *A Moratorium on Evictions Ends, Leaving Thousands of Tenants Fearful*, N.Y. TIMES (June 22, 2020), https://www.nytimes.com/2020/06/22/nyregion/nyc-evictions-moratorium-coronavirus.html.
[181] Jenny Schuetz, *Halting Evictions During the Coronavirus Crisis Isn't As Good As It Sounds*, BROOKINGS INST. (Mar. 25, 2020), https://www.brookings.edu/blog/the-avenue/2020/03/25/halting-evictions-during-the-coronavirus-crisis-isnt-as-good-as-it-sounds/.
[182] *What to Do After You Receive Forbearance*, CONSUMER FIN. PROTECTION BUREAU, https://www.consumerfinance.gov/coronavirus/mortgage-and-housing-assistance/after-you-receive-relief/ (last accessed July 18, 2020).
[183] *Id*.
[184] *See, e.g.,* Haag, *supra* note 180.
[185] Rebecca Cowin et al., *Measuring Evictions During the COVID-19 Crisis*, FED. RES. BANK OF CLEVELAND (July 17, 2020), https://www.clevelandfed.org/en/newsroom-and-events/publications/community-development-briefs/db-20200717-measuring-evictions-during-the-covid-19-crisis.aspx.
[186] *See, e.g.*, Schuetz, *supra* note 181.
[187] *See, e.g.,* AB-2501, 2019-2020 Reg. Sess. (Cal. 2020), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB2501.
[188] *See* Off. of the Comptroller of the Currency, OCC Bulletin 2020-62, COVID-19 Relief Programs: Preemption (June 17, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-62.html. Prior to Acting Comptroller Brooks' tenure, the OCC stated that it has exclusive visitorial authority over banks, which generally precludes state and local officials from conducting examinations, requiring the production of banks' books or records, or exercising other visitorial authority with respect to banks. *See* Off. of the Comptroller of the Currency, OCC Bulletin 2020-43, COVID-19 Financial Support Programs: Visitorial Authority (Apr. 24, 2020), https://www.occ.gov/news-issuances/bulletins/2020/bulletin-2020-43.html.

actions that limit banks' ability to foreclose on a defaulted loan and take possession of collateral, beyond what is provided for in the CARES Act."[189]

VIII. TRANSPARENCY AND CONGRESSIONAL OVERSIGHT

One of the key lessons from the Financial Crisis was a consensus on the need for transparency over the Federal Reserve's emergency lending programs. As a result, new requirements were put in place for Federal Reserve reporting to the Committee on Banking, Housing, and Urban Affairs of the Senate and the Committee on Financial Services of the House of Representatives, providing the details of who received loans and the terms of these loans.[190] The Federal Reserve has been making this information available to Congress on a monthly basis. In addition, under the Dodd-Frank reforms, the names of banks who make use of the discount window and the amount of usage will be made publicly available after two years.[191] After initial resistance by Secretary Mnuchin, the Treasury Department agreed in June to provide data on PPP loans above $150,000.[192] This transparency may provide a vein of data upon which to later assess the efficacy and fairness of programs created in the heat of the rushed moment.

Another lesson from the Financial Crisis is the need for strong congressional oversight of emergency programs. The most obvious point is to protect taxpayer money from fraud, and DOJ has made several high-profile arrests in connection with PPP fraud.[193] There are other deeper reasons as well. The distribution of cash and grants to citizens and the operation of Federal Reserve and Treasury lending programs may favor particular firms, and also takes place within the existing economic and social context. It may help or exacerbate existing inequalities. There are also fair questions about which businesses ought to be helped.

The CARES Act sets in place oversight in the following ways. The Act established the Pandemic Response Accountability Committee that will be made up of the Inspector Generals (IGs) from nine federal agencies, including the Departments of Defense, Education, Justice, and the Treasury.[194] The Committee is responsible for promoting transparency and conducting oversight of all funds provided by the CARES Act.[195] The Act also established a new Office of the Special Inspector General within the Department of the Treasury and a Congressional Oversight Commission.[196] The Office of the Special Inspector General, whose head is appointed by the President, is responsible for overseeing the $500 billion fund designated by the Act for the Treasury to use for direct lending.[197] The Congressional Oversight Commission is responsible for overseeing the implementation of the Act by the Treasury and the Federal Reserve.[198] The Commission is similar in structure to the TARP Congressional Oversight Panel, consisting of four members and a Chairperson. Members are appointed by congressional leadership in both houses

[189] *Id.*
[190] 12 U.S.C. § 343(3)(C) (2010).
[191] Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, § 1103, 124 Stat. 1376, 2118 (2010).
[192] Press Release, U.S. Small Bus. Admin., SBA and Treasury Announce Enhanced Transparency Regarding the Paycheck Protection Program (June 19, 2020), https://www.sba.gov/about-sba/sba-newsroom/press-releases-media-advisories/sba-and-treasury-announce-enhanced-transparency-regarding-paycheck-protection-program.
[193] *See, e.g.*, Office of Pub. Affairs, *supra* note 68.
[194] H.R. 748, 116th Cong. § 15010 (2019).
[195] *Id.*
[196] CARES Act, H.R. 748, 116th Cong. § 4018, 4020 (2020).
[197] H.R. 748 § 4018.
[198] H.R. 748 § 4020.

and the Chairperson is to be chosen jointly by the House Speaker and Senate Majority Leader. The Commission is required to submit regular reports to Congress.[199]

The effectiveness of these oversight provisions remains to be seen. The White House released a statement on March 27th describing a number of constitutional concerns related to the oversight required by the CARES Act,[200] and in early April President Trump removed the first Chairman of the Pandemic Response Accountability Committee without offering an explanation.[201] As of late-July, House Speaker Nancy Pelosi and Senate Majority Leader Mitch McConnell had yet to name a Chairperson to the Congressional Oversight Commission.[202]

IX. WHAT HAPPENS NEXT?

As of late July 2020, financial markets have largely rebounded, with the stock market even turning positive for the year,[203] despite the persistence of high unemployment, and the failure of the United States to stem the health crisis caused by the pandemic. Governor Lael Brainard has referred to a "thick fog of uncertainty" over the U.S. economy and Chairman and CEO of JPMorgan Jamie Dimon has stated that "this is not a normal recession."[204] With cases currently on the rise in many states, and initial relief measures set to end in July, it is widely expected the Congress will pass a fourth fiscal stimulus sometime. In June, more than 150 scholars–including former chairs of the Federal Reserve Ben Bernanke and Janet Yellen, as well as four former chairs of the Council of Economic Advisors and two Nobel laureates– released a statement imploring Congress to immediately pass another relief bill "commensurate with the nearly $16 trillion nominal output gap our economy faces over the next decade."[205] As this paper was being finalized, Congress was negotiating over the fourth fiscal stimulus bill. Undoubtedly, further actions by the financial regulators will also continue to unfold during the fall.

199 *Id*.

200 White House Press Release, Statement by the President (Mar. 27, 2020), https://www.whitehouse.gov/briefings-statements/statement-by-the-president-38/.

201 Ben Kesling, Andrew Restuccia & Dustin Volz, *Trump Removes Watchdog Who Heads Panel Overseeing Pandemic Stimulus Spending*, WALL STREET J. (Apr. 7, 2020), https://www.wsj.com/articles/trump-removes-acting-defense-department-inspector-general-11586277895.

202 *Nearly 100 Days Later, Key Position For COVID-19 Congressional Oversight Commission Remains Unfilled: Dozens of Groups Call on Pelosi, McConnell to Appoint Chair*, PUB. CITIZEN (July 1, 2020), https://www.citizen.org/news/nearly-100-days-later-key-position-for-covid-19-congressional-oversight-commission-remains-unfilled/.

203 *See* Matt Phillips, *Despite Recession, Stock Markets Turn Positive for the Year*, N.Y. TIMES (June 8, 2020), https://www.nytimes.com/2020/06/08/business/recession-stock-market-coronavirus.html.

204 Lael Brainard, Governor, Bd. of Governors of the Fed. Res. Sys., Navigating Monetary Policy Through the Fog of COVID (July 14, 2020), https://www.federalreserve.gov/newsevents/speech/brainard20200714a.htm; *see* Ben Eisen & David Benoit, 'This is Not a Normal Recession': Banks Ready for Wave of Coronavirus Defaults, WALL STREET J. (July 14, 2020, 4:08 PM), https://www.wsj.com/articles/this-is-not-a-normal-recession-banks-ready-for-wave-of-coronavirus-defaults-11594746008.

205 *More than 150 Economists Tell Congress: More Relief Needed to Avoid 'Prolonged Suffering' and 'Stunted Economic Growth*, WASHINGTON CTR. FOR EQUITABLE GROWTH (June 16, 2020), https://equitablegrowth.org/press/more-than-150-economists-tell-congress-more-relief-needed-to-avoid-prolonged-suffering-and-stunted-economic-growth/.

X. CENTRAL THEMES

We remain in the midst of the pandemic and so it is too early to render any final judgment on whether and how the actions taken by the financial regulators have worked. Nonetheless, certain central themes have emerged that could be explored.

First, as in the Financial Crisis, the Federal Reserve seems to have set up its first wave of crisis response programs seeking to adhere to some undefined line between monetary policy and fiscal policy. One can see that, for example, in the partnership between the Federal Reserve and Treasury for a number of facilities under which Treasury is effectively taking the first loss position, permitting the Federal Reserve to lend with a lower risk of loss to a broader range of firms. The second wave of Federal Reserve programs, including the Main Street Lending program and the announced but not yet implemented program for non-profits, have thrust the Federal Reserve into the unknown territory of lending, albeit indirectly, to companies and others in the real economy. These programs raise questions about the role of a central bank in a modern democracy, bringing to the fore themes posed by Paul Tucker in *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State*.[206] But despite the Federal Reserve's willingness to tread closer to the blurred line between monetary policy and fiscal policy than ever before, there may be limits to what the Federal Reserve considers it can do. As Federal Reserve Chair Jerome Powell succinctly noted during a recent speech, "the Fed has lending powers, not spending powers."[207] Chair Powell went on to suggest that additional fiscal support could be "costly, but worth it," and noted that the tradeoff is "one for our elected representatives, who wield powers of taxation and spending."

Second, Congress and the White House have taken the policy decision to rely on the Federal Reserve, and the banking sector, to transmit credit to an economy whose main risk today is not inadequate access to low-cost credit, but a fundamental lack of demand because of the global pandemic and associated shut-downs. In addition to the Federal Reserve programs, especially the Main Street Lending program and the non-profit program, one can see this in the PPP, which is fundamentally a grant, disguised as a loan and funneled through the banking system. Query whether direct spending would be more effective.

Third, a global pandemic was not on financial regulators' list of top threats to the financial system, despite the fact that a global pandemic was very much in the minds of top epidemiologists.[208] This suggests the need for humility about the ability of the Financial Stability Oversight Council, the Office of Financial Research, or the Federal Reserve to forecast systemic financial risk, and the wisdom of building significant capital and liquidity buffers into the banking sector during normal economic times to buttress it against systemic risk.

Fourth, the political and societal push for transparency and oversight in the government programs is intense. The post Financial Crisis reforms rightly imposed more transparency on the Federal Reserve programs, and similar reforms were eventually incorporated into the PPP. Much of this transparency and oversight reflects good public policy even if one questions the immediate

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[206] TUCKER, *supra* note 100.
[207] Jerome H. Powell, Chair, Bd. of Governors of the Fed. Res. Sys., Current Economic Issues (May 13, 2020), https://www.federalreserve.gov/newsevents/speech/powell20200513a.htm.
[208] Nonetheless, it is interesting to note that after MERS, the prudential banking regulators had required the banking sector to create a pandemic business continuity plan and one of the first pronouncements by the banking agencies was to remind banks of that fact. *See* Press Release, Bd. of Governors of the Fed. Res. Sys., SR 20-4 / CA 20-3: Supervisory Practices Regarding Financial Institutions Affected by Coronavirus (Mar. 13, 2020), https://www.federalreserve.gov/supervisionreg/srletters/SR2004.htm.

feedback loop of press and social media about which companies or non-profits are deemed deserving and which are not. We have already seen how transparency can led to course correction as well as to politicization.

Last, but certainly not least, households' and businesses' lack of economic and social financial slack[209] is a source of systemic risk, exposing our society to heightened risks from external shocks. Steps are being taken to directly help homeowners, consumers and renters. If the crisis persists, we will see an even greater need in this area.

[209] MICHAEL S. BARR, NO SLACK (Brookings Inst. Press 2012).

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