AFTERWORD: WHY "TAMING THE MEGABANKS" SHOULD REMAIN A TOP PRIORITY FOR FINANCIAL REGULATORS AND POLICYMAKERS

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INTRODUCTION

I would like to express my profound gratitude to Professor Erik Gerding and the editors of the *University of Colorado Law Review* for organizing and hosting the May 2021 conference that evaluated my scholarship on regulating megabanks,[1] and for

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Part I of this Afterword discusses the Articles in this Issue and their relationship to my own work. Part II analyzes the global financial crisis that was triggered by the outbreak and spread of the COVID-19 pandemic during the first quarter of 2020, as well as the responses to that crisis by governments around the world. As shown in Part II, the pandemic crisis confirms that "universal banks" (financial holding companies that engage in a wide range of banking and capital markets activities) and "shadow banks" (large nonbank financial institutions, such as private equity funds and hedge funds) pose grave dangers to financial markets and economies around the globe.

The pandemic crisis also shows that the world remains trapped in a "global doom loop"—a toxic web of mutual dependence that links universal banks, shadow banks, wealthy investors, governments, and central banks. The "global doom loop" produces continually rising levels of private and public debts, which promote dangerous boom-and-bust cycles. In turn, those boom-and-bust cycles require ever-larger bailouts when serious financial and economic disruptions occur. Accordingly, the goal of "taming the megabanks"—of both "universal" and "shadow" varieties—must remain at the top of the agenda for financial regulators and policymakers.[2]

of the *University of Colorado Law Review* for their dedication and skill in editing this Essay and the other Essays included in this symposium issue. Unless otherwise indicated, this Essay includes developments through December 31, 2021.

1. Colo. L., *Regulating Megabanks: A Conference in Honor of Arthur Wilmarth*, YOUTUBE (May 24, 2021), https://www.youtube.com/playlist?list=PLwFq2GL-i5UiyIX9OK3fgYZKOK0BtLCbN [https://perma.cc/F332-9H8M].

2. *See* ARTHUR E. WILMARTH, JR., TAMING THE MEGABANKS: WHY WE NEED A NEW GLASS-STEAGALL ACT 12–14, 325–27, 353–56 (2020) (describing the "global doom loop" and its causes).

I. RESPONSES TO ARTICLES IN THIS ISSUE

A. Jeremy Kress's Article

Jeremy Kress's article[3] proposes an important and valuable reform to the corporate governance of financial holding companies. His proposal would reduce the risks posed by nonbank affiliates to banks that are subsidiaries of financial holding companies. As Professor Kress explains, one of the principal reasons for my opposition to the Gramm-Leach-Bliley Act of 1999 ("GLBA") was my expectation that financial holding companies would cause their subsidiary banks to transfer their federal "safety net" subsidies to their nonbank affiliates. He finds that my concerns about transfers of safety-net subsidies—including those provided by federal deposit insurance, lender of last resort assistance from the Federal Reserve (Fed), and bailouts of "too big to fail" banks—have been confirmed by events since GLBA's enactment.[4]

Post-GLBA developments have provided abundant evidence of megabanks' ability to exploit safety-net subsidies with the help of Congress and federal bank regulators. The Fed has repeatedly approved exemptions to the statutory limits on affiliate transactions imposed by section 23A of the Federal Reserve Act. The Fed granted broad exemptions to section 23A's limits during three crisis episodes: the terrorist attacks on September 11, 2001; the global financial crisis of 2007–09; and the COVID-19 pandemic. The Fed's exemptions enabled bank subsidiaries of large financial holding companies to support endangered nonbank affiliates, including securities broker-dealers, money market mutual funds, and securitization conduits. As Professor Saule Omarova observed, the Fed's exemptions during the global financial crisis of 2007–09 permitted "massive transfers of funds" from large banks to their nonbank affiliates, thereby "transfer[ing] [the] federal subsidy outside the [banking] system."[5]

3. Jeremy C. Kress, *Who's Looking Out for the Banks?*, 93 U. COLO. L. REV. 897 (2022).

4. *Id.* at 898–901, 908–15.

5. Saule T. Omarova, *From Gramm-Leach-Bliley to Dodd-Frank: The Unfulfilled Promise of Section 23A of the Federal Reserve Act*, 89 N.C. L. REV. 1683, 1762–63 (2011); Kress, *supra* note 3, at 898–902, 911–15, 919–23; *see also* WILMARTH, *supra* note 2, at 174–76, 180–85, 192–93; Arthur E. Wilmarth, Jr., *The*

Congress authorized further transfers of safety-net subsidies in 2014 when it repealed virtually all of the Lincoln Amendment. The Lincoln Amendment—enacted as section 716 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank")—required financial holding companies to conduct most of their derivatives activities through nonbank subsidiaries. Megabanks vehemently opposed the Lincoln Amendment because it significantly limited their ability to use cheap, federally-insured deposits to finance their derivatives trading operations. The Fed and the Office of the Comptroller of the Currency (OCC) postponed the Lincoln Amendment's compliance date for two years, and Congress subsequently gutted the provision before it took effect. As a result, financial holding companies are permitted to conduct nearly all of their derivatives activities through their subsidiary banks and can use federally insured deposits to fund those activities.[6]

In March 2020, the Fed, the Federal Deposit Insurance Corporation (FDIC), and the OCC added insult to injury by rescinding a regulation they had jointly issued in 2015. The 2015 rule required banks to collect margin (collateral) for their derivatives transactions with affiliates, thereby protecting banks against the risk of default by their affiliates. As Professor Kress points out, the federal agencies' decision to rescind that regulation and "[e]liminat[e] interaffiliate margin requirements allows—indeed, encourages—financial conglomerates to transfer risk into their depository institution subsidiaries."[7]

Senior executives and directors of large financial holding companies have strong incentives to transfer safety-net subsidies from subsidiary banks to nonbank affiliates. Top executives manage financial conglomerates in a highly integrated and consolidated manner designed to maximize their organizations' total revenues and profits.[8] In addition, corporate leaders

Transformation of the U.S. Financial Services Industry, 1975–2000: Competition, Consolidation, and Increased Risks, 2002 U. ILL. L. REV. 215, 446–50, 454–57, 472–73.

6. Kress, *supra* note 3, at 929–31; *see also* WILMARTH, *supra* note 2, at 302–03, 308–09, 340–41, 463 n.60.

7. Kress, *supra* note 3, at 929–33 (citing Margin and Capital Requirements for Covered Swap Entities, 85 Fed. Reg. 39,754 (July 1, 2020)).

8. Wilmarth, *supra* note 5, at 256, 449–50, 456–57. In his annual letter to shareholders dated March 15, 2011, Bank of America CEO Brian Moynihan said, "We run the franchise for every customer in full, delivering all of the services they may have traditionally sought separately from a retail bank, a commercial bank, an investment bank, a wealth management firm, a brokerage or a private bank. *We*

encourage investors and the public to rely on the combined strength of their entire holding companies, including their subsidiary banks and their nonbank subsidiaries. Jamie Dimon, CEO of JPMorgan Chase (JPMC), explained in a recent annual letter to shareholders that JPMC's "fortress balance sheet" is one of "the basic principles and strategies we use to build this company"—meaning JPMC's complete holding company.[9] In an earnings call with institutional investors in July 2020, Brian Moynihan, CEO of Bank of America (BofA), similarly stated that "[w]e've also improved our fortress balance sheet even from year-end to today," and "we built this company [to] be adamantine in all times and [a] fortress."[10]

Dimon and Moynihan have repeatedly invoked the "fortress balance sheet" metaphor to tout the overall strength of their respective holding companies during the past decade.[11] To my knowledge, federal bank regulators have never objected to those statements or to similar public claims made by CEOs of other megabanks regarding the consolidated strength of their holding companies.[12] Yet such statements clearly appear to violate section 23B(c) of the Federal Reserve Act. Section 23B(c) prohibits each FDIC-insured bank and its nonbank affiliates from

serve them on an integrated, customer-focused basis." BANK OF AM., 2010 ANNUAL REPORT 2–3 (2010) (emphasis added), https://www.annualreports.com/HostedData/AnnualReportArchive/b/NYSE_BAC_2010.pdf [https://perma.cc/CYC4-83FQ]; *see also* JPMORGAN CHASE & CO., 2020 ANNUAL REPORT 294 (2020), https://www.jpmorganchase.com/content/dam/jpmc/jpmorgan-chase-and-co/investor-relations/documents/annualreport-2020.pdf [https://perma.cc/DN7M-RUVT] (stating that "the Firm's operations are highly integrated").

9. *See* JPMORGAN CHASE & CO., *supra* note 8, at 3, 5, 9, 31, 91 (describing the firm's "fortress balance sheet" philosophy repeatedly).

10. *Bank of America Corporation (BAC) CEO Brian Moynihan on Q2 2020 Results: Earnings Call Transcript*, SEEKING ALPHA (July 16, 2020), https://seekingalpha.com/article/4358922-bank-of-america-corporation-bac-ceo-brian-moynihan-on-q2-2020-results-earnings-call [https://perma.cc/8QV2-HECA].

11. *See, e.g.*, BANK OF AM., *supra* note 8, at 2 (quoting Brian Moynihan's annual letter to shareholders, dated March 15, 2011, which states that "[w]e are building and will maintain a fortress balance sheet"); Christopher Westfall, *JPMorgan Defends 'Fortress' Balance Sheet*, STREET (July 14, 2011), https://www.thestreet.com/investing/stocks/jpmorgan-chase-earnings-beat-estimates-11184659 [https://perma.cc/HLV9-R6Y6] (quoting Jamie Dimon's statement that "[w]e maintained our fortress balance sheet").

12. For example, William Demchak, CEO of PNC Financial, stated in July 2020 that "our focus right now is to make sure we have . . . a fortress balance sheet." *The PNC Financial Services Group, Inc. (PNC) CEO William Demchak on Q2 2020 Results: Earnings Call Transcript*, SEEKING ALPHA (July 15, 2020), https://seekingalpha.com/article/4358655-pnc-financial-services-group-inc-pnc-ceo-william-demchak-on-q2-2020-results-earnings-call [https://perma.cc/X2EX-QLBF].

publishing any "advertisement . . . stating or suggesting that the bank shall in any way be responsible for the obligations of its affiliates."[13] The public statements quoted above by Dimon and Moynihan strongly imply that the assets of the subsidiary banks of JPMC and BofA stand behind the liabilities of their nonbank affiliates as part of the combined "fortress balance sheet" of the entire financial holding company. The Fed's failure to enforce section 23B(c) provides an additional example of its general laxity in implementing the affiliate transaction rules governing financial holding companies.[14]

Professor Kress points out that the willingness of federal regulators to allow significant transfers of safety-net subsidies within large financial holding companies is consistent with regulators' failure to protect subsidiary banks from the risks posed by their parent holding companies and nonbank affiliates.[15] For example, regulators do not require subsidiary banks to appoint independent directors. Common directors that serve on the boards of both a subsidiary bank and its parent holding company have conflicting loyalties and are very likely to favor the interests of the holding company at the expense of the bank.[16]

Professor Kress has assembled a valuable data set that includes the identities of directors of thirteen large financial holding companies (each with more than $100 billion of assets) and their subsidiary banks. That data set reveals that 78 percent (119 of 152) of the directors of the subsidiary banks also serve as directors of the parent holding companies.[17] At the two largest U.S. banking organizations—JPMC and BofA—all of the directors of the subsidiary banks are also directors of the parent holding companies. The CEOs of the two parent holding companies (Dimon and Moynihan) are also CEOs of the subsidiary banks.[18]

13. 12 U.S.C. § 371c-1(c). The advertising prohibition in Section 23B(c) applies to banks that are members of the Federal Reserve System and their nonbank affiliates. Another federal statute applies the same prohibition to all other FDIC-insured depository institutions and their affiliates. 12 U.S.C. § 1828(j)(1).

14. In addition to the Fed's frequent approvals of exemptions from sections 23A and 23B, the Fed has failed for more than a decade to implement Dodd-Frank's mandate for rules that would impose the requirements of sections 23A and 23B on derivatives transactions, securities repurchase agreements, and securities lending arrangements between banks and their nonbank affiliates. Kress, *supra* note 3, at 911–15, 921–23, 928–29.

15. *Id.* at 924–33.

16. *Id.* at 916–20.

17. *Id.* at 921.

18. *Id.* at 923.

Ten other large financial holding companies with over $100 billion of assets do not publicly disclose the identities of directors of their subsidiary banks.[19] Those holding companies refused to provide the names of directors of their subsidiary banks to Professor Kress, and federal regulators rejected his requests for such information under the Freedom of Information Act.[20] I agree with Professor Kress that the absence of publicly available information identifying the directors of subsidiary banks of major financial holding companies should be considered a matter of great public concern.

To provide better protection for banks owned by large financial holding companies and to reduce the spread of federal safety-net subsidies, Professor Kress would require holding companies with over $100 billion of assets to appoint independent directors for their subsidiary banks.[21] He would also require large holding companies whose nonbanking operations account for more than 10 percent of their assets to appoint a majority of independent directors for their subsidiary banks. Holding companies would need to give prior notice to their federal regulators before appointing or removing independent directors. In addition, lead directors and chairs of the risk and audit committees of subsidiary banks would have to be independent. Independent directors would also have direct reporting responsibilities to federal bank regulators. Professor Kress's proposed requirement for independent directors at subsidiary banks of large financial holding companies would be consistent with the practices of other countries, including the United Kingdom and France.[22]

Professor Kress's proposal would substantially strengthen the corporate governance of large financial holding companies and their subsidiary banks. It would provide important safeguards for subsidiary banks and discourage the spread of federal safety-net subsidies to nonbank affiliates. A major advantage of his proposal is that it could be adopted by federal bank regulators under their existing statutory authorities.[23]

19. *Id.* at 920 n.111. There are currently twenty-three financial holding companies with over $100 billion of assets. Professor Kress was unable to obtain the names of subsidiary bank directors for ten of those holding companies. *See id.* at 936 n.179.

20. *Id.* at 920 n.111.

21. *Id.* at 934–39, 941–43.

22. *Id.*

23. *Id.* at 939–44.

Professor Kress acknowledges that the success of his proposal would depend on its effective implementation by regulators. He identifies potential obstacles that could prevent or undermine the implementation of his proposal, including the enormous influence that financial giants wield within our political and regulatory systems.[24] I strongly support his proposal as a desirable step toward limiting the ability of financial conglomerates to take advantage of public subsidies for banks. However, my analysis of the financial industry over the past forty years has persuaded me that only fundamental structural reforms—including mandatory breakups of universal banks and shadow banks—are likely to stop transfers of safety-net subsidies, which Professor Kress has correctly identified as a major problem in our financial regulatory system.[25]

B. Heidi Schooner's Article

Heidi Schooner's article[26] provides a compelling rationale for an important component of my proposed new Glass-Steagall Act. As Professor Schooner explains, my proposal would create three independent sectors in the financial industry by separating banks from the capital markets and the insurance industry.[27] In addition to improving financial stability, my proposed tripartite division of the financial industry would reduce the political power and regulatory influence that giant financial conglomerates currently possess. Separating the three sectors would "rekindle the heated political rivalries that existed among banks, securities firms, and insurance companies" prior to the repeal of the original Glass-Steagall Act.[28] Structural separation would also encourage each sector of the financial industry to

24. *Id.* at 944 (recognizing that the successful implementation of his proposal would depend on strong action by federal regulators, despite their past "fail[ures] to adequately protect depository institutions from exploitation"); *id.* at 945 (pointing out that "financial conglomerates have had a powerful incentive to exploit their depository institution subsidiaries and take advantage of federal safety net subsidies" since the enactment of GLBA in 1999).

25. WILMARTH, *supra* note 2, at 13–14, 340–41, 355–56 (arguing that a new Glass-Steagall Act is needed to "break up universal banks" and "stop banks from exploiting safety net subsidies to finance speculative capital markets activities").

26. Heidi M. Schooner, *The Role of Rival Litigation in Wilmarth's New Glass-Steagall*, 93 U. COLO. L. REV. 961 (2022).

27. *Id.* at 970–72; *see also* WILMARTH, *supra* note 2, at 13–14, 335–56.

28. WILMARTH, *supra* note 2, at 348.

"serve as a strong counterweight against the political and regulatory influence of the others."[29]

My proposal is designed to prevent a repetition of the history of the 1980s and 1990s, when federal agencies and courts issued rulings that opened loopholes in the original Glass-Steagall Act and paved the way for its repeal in 1999. To protect a new Glass-Steagall Act from a similar fate, I have recommended two highly important provisions.[30] First, the new statute should stipulate that agency interpretations of its provisions will not receive judicial deference under the *Chevron* doctrine and will instead be reviewed on a de novo basis by the courts. Second, the new statute should expressly authorize financial firms to file lawsuits challenging agency interpretations that could weaken the statute's structural boundaries. Professor Schooner's article focuses on the second component of my plan.[31]

Professor Schooner highlights the importance of my plan by linking it to the standing requirements for judicial review of actions by federal agencies.[32] As she explains, courts apply a two-part test to determine whether a private plaintiff has standing to challenge a federal agency's order or regulation. First, the plaintiff must show that it has suffered "injury in fact" as a result of the agency's action. Second, the plaintiff must show that its claim arguably falls within the "zone of interests" protected or regulated by the applicable statute. The Supreme Court developed this two-part test in a series of decisions, including several opinions arising out of challenges to federal agency rulings that expanded the permissible activities of national banks and bank holding companies.[33]

Judicial challenges to federal agency rulings expanding the activities of banks largely ended after Congress passed GLBA in 1999.[34] GLBA authorized banks to create financial holding companies that owned a wide array of nonbank subsidiaries,

29. *Id.* at 349; *see also id.* at 347–49; Schooner, *supra* note 26, at 970–71.

30. WILMARTH, *supra* note 2, at 349; *see also id.* at ch. 7 (describing how federal agencies and courts undermined the Glass-Steagall Act during the 1980s and in 1999).

31. *Id.* at 349; *see also id.* at 159–61, 165–66 (explaining that federal courts upheld federal agency rulings that weakened the Glass-Steagall Act by granting extensive *Chevron* deference to those rulings); Schooner, *supra* note 26, at 6–11 (discussing my analysis and proposals).

32. Schooner, *supra* note 26, at 972–85.

33. *See id.* at 980–85 (citing and discussing relevant Supreme Court decisions).

34. *Id.* at 985–91.

including securities firms, investment managers, and insurance companies. By permitting affiliations between banks and many types of nonbank financial institutions, GLBA greatly weakened the incentives for nonbanks to challenge agency actions that allowed banks to enter new markets.

Professor Schooner rightly calls attention to the significance of the Supreme Court's 1998 decision in *NCUA v. First National Bank & Trust*.[35] In a 5-4 decision, the Court upheld the standing of banks to challenge a ruling by the National Credit Union Administration (NCUA). The NCUA's ruling broadened the scope of membership for credit unions and enabled credit unions to compete more directly with banks. The majority opinion held that the "zone of interests" test for standing did not require evidence of a specific congressional intent to protect banks or other financial firms from competition with credit unions.[36] Four dissenting Justices argued that previous Supreme Court decisions had required at least some evidence of a congressional purpose to protect private parties from the additional competition authorized by challenged agency rulings. The Supreme Court has not considered the "zone of interests" test in a financial industry case since 1998.[37]

As Professor Schooner explains, the dissenting opinion in *NCUA v. First National Bank & Trust* highlights the importance of my recommendation that a new Glass-Steagall Act should expressly authorize financial firms to challenge agency interpretations of the statute.[38] Such a provision would clearly indicate Congress's intent that the statute protects financial firms from agency rulings that might weaken the statute's structural boundaries. It would thereby enable financial firms to satisfy the "zone of interests" test for standing to challenge such agency rulings, even if the Supreme Court adopts the reasoning of the dissenters in *NCUA v. First National Bank & Trust* in future decisions.

Professor Schooner also points out that the ability of private parties to defend a new Glass-Steagall Act would be strengthened if the statute empowered citizens to file lawsuits

35. Nat'l Credit Union Admin. v. First Nat'l Bank & Tr. Co., 522 U.S. 479 (1998).

36. *Id.* at 492–95.

37. *Id.* at 505–12; *see also* Schooner, *supra* note 26, at 983–85 (discussing the majority and dissenting opinions in *NCUA v. First National Bank & Trust*).

38. Schooner, *supra* note 26, at 990–91.

challenging agency rulings. A provision authorizing citizen suits would support the public policies advanced by the statute, including improving financial stability, reducing systemic risks, and protecting households and communities from the hazards posed by universal banks and large shadow banks. Such a provision would also be consistent with comparable statutes that currently authorize citizen suits to defend important public interests.[39] I agree with Professor Schooner that a new Glass-Steagall Act should include a citizen-suit provision, thereby enabling individuals to defend the statute's policies in situations where financial firms might not be willing to do so.

C. Graham Steele's Article

Part I of the article by Assistant Secretary of the Treasury Graham Steele[40] provides an excellent overview of the "macroprudential" regulations that federal banking agencies adopted during the Obama Administration to pursue the Dodd-Frank Act's goals of making large banks safer and less likely to fail. Federal banking agencies adopted rules that required large bank holding companies ("BHCs") to satisfy enhanced capital and liquidity standards, pass rigorous stress tests, and prepare plans for resolving their failures ("living wills"). As Assistant Secretary Steele explains, those regulations were designed to force "large BHCs to internalize the risks that they pose to themselves and to society" and to hold "BHC shareholders, creditors, and executives responsible in the event that a large BHC should fail."[41]

Part II of Assistant Secretary Steele's article explains how Congress and federal agencies significantly undermined several of the Dodd-Frank Act's important mandates during the Trump

39. *Id.* at 991 nn.155–156 (discussing citizen suit provisions in the Clean Air Act, the Endangered Species Act, and the Fair Housing Act).

40. Graham S. Steele, *The Tailors of Wall Street: Against "Regulatory Tailoring,"* 93 U. COLO. L. REV. 993 (2022). Graham Steele was nominated by President Biden in July 2021 and confirmed by the Senate in November 2021 as Assistant Secretary of the Treasury for Financial Institutions. Kate Berry, *Senate Confirms Former Banking Committee Staffer to Treasury Post*, AM. BANKER (Nov. 16, 2021), https://www.americanbanker.com/news/senate-confirms-former-banking-committee-staffer-to-treasury-post [https://perma.cc/7LKX-FWVK]; Hannah Lang, *White House Nominates Progressive for Treasury Financial Policy Job*, AM. BANKER (July 20, 2021), https://www.americanbanker.com/news/biden-nominates-progressive-for-treasury-financial-policy-job [https://perma.cc/4MMB-BCDE].

41. Steele, *supra* note 40, at 1013; *see also id.* at 1002–12.

Administration. At the urging of large financial institutions, Congress passed a 2018 statute that directed federal banking agencies to "tailor" their regulations under the Dodd-Frank Act.[42] Bank regulators appointed by President Trump interpreted their new "tailoring" authority as giving them carte blanche to reduce regulatory burdens on large banks.[43] Trump-appointed regulators substantially weakened capital and liquidity requirements, stress tests, and resolution planning standards for large banks. They also eliminated margin requirements for derivatives transactions between banks and their nonbank affiliates.[44] The actions taken by Trump-appointed regulators "had a cumulative impact that was overwhelmingly deregulatory in nature" and "increased [the] fragility of the banking system."[45]

Parts I and II of Assistant Secretary Steele's article analyze a number of the regulatory developments that I examined in Chapter 12 of my recent book. I agree that the rules issued under the Dodd-Frank Act during the Obama Administration compelled large U.S. banks to increase their levels of capital and liquidity significantly between 2010 and 2016. In addition, Title VII of the Dodd-Frank Act, which was implemented by the Commodity Futures Trading Commission under the leadership of then-Chairman Gary Gensler, greatly improved the oversight of derivatives activities.[46]

However, I believe that the Dodd-Frank Act did not provide an adequate response to the deeply flawed structure of our financial system, which was exposed by the global financial crisis of 2007–09 ("GFC"). The Obama Administration and Congress allowed universal banks and large shadow banks to maintain their dominant positions in the financial system, even though those institutions played central roles in promoting the toxic credit boom that caused the GFC. The Dodd-Frank Act also did not establish a credible procedure for resolving failures of universal banks and large shadow banks during a systemic crisis without relying on government-funded bailouts.[47]

42. The Economic Growth, Regulatory Relief, and Consumer Protection Act, Pub. L. No. 115–174, tit. IV, § 401(a)(1)(B)(i), 132 Stat. 1297 (2018).

43. Steele, *supra* note 40, at 1015–17 & n.86.

44. *Id.* at 1021–23.

45. *Id.* at 1023.

46. WILMARTH, *supra* note 2, at 299–305.

47. *Id.* at 299–300, 311–21.

I agree with Assistant Secretary Steele that the Trump Administration undermined a number of key financial regulatory reforms that the Obama Administration achieved under the Dodd-Frank Act.[48] The Trump Administration's deregulatory measures were undoubtedly a "contributory factor" that helps to explain why universal banks and shadow banks could not absorb the financial shocks and did not counteract the financial disruptions that followed the outbreak of the COVID-19 pandemic.[49] As Assistant Secretary Steele correctly points out, the inability and unwillingness of large financial institutions to stabilize financial markets "necessitat[ed] significant public financial support for the financial system and the broader economy."[50]

Part III of Assistant Secretary Steele's article examines the "full-blown financial crisis" triggered by the pandemic, which represented "the first test of the Dodd-Frank framework."[51] During the "dash for cash" by financial market participants in March 2020, universal banks and shadow banks quickly "reached the limits of their balance sheet capacity to act as lenders and securities market makers, meaning private market participants were unable to absorb the sudden influx of a variety of assets, including many generally deemed 'safe.'"[52] Universal banks and shadow banks proved to be "the ultimate beneficiaries" when Congress, the Treasury Department, and the Fed bailed out businesses, financial firms, and individuals who were deeply indebted to those banks, thereby "transferring credit and liquidity risks from the private to the public sector."[53] The Fed effectively became the "commercial bank of last resort for the entire economy" by virtue of the federally-guaranteed lending programs that were established during the pandemic.[54]

Federal regulators also provided extensive forbearance to big banks during the pandemic, including reductions in capital requirements and lenient stress tests. Regulatory forbearance

48. *Id.* at 307–11.
49. Steele, *supra* note 40, at 1023.
50. *Id.*; *see also infra* notes 82–92 and accompanying text.
51. Steele, *supra* note 40, at 1023.
52. *Id.* at 1024.
53. *Id.* at 1026–27.
54. *Id.* at 1032 (quoting Julia-Ambra Verlaine & Liz Hoffman, *Banks Could Prove Weak Partner in Coronavirus Recovery*, WALL ST. J. (Apr. 24, 2020) (quoting Michael Feroli, JPMC's chief economist), https://www.wsj.com/articles/banks-could-prove-weak-partner-in-coronavirus-recovery-11587743212 [https://perma.cc/AC2G-DN9A]).

during the pandemic magnified the "tailoring" relief that large banks had previously received during the Trump Administration. As Assistant Secretary Steele points out, those regulatory concessions primarily benefited megabanks, their executives, and shareholders. In contrast, regulatory forbearance for megabanks did little to help businesses and consumers who relied on those banks for credit.[55] Loan-to-deposit ratios for big banks remained largely unchanged during 2018 and the first half of 2019 and declined steadily thereafter. The twenty-five largest U.S. banks reduced their total lending by 8 percent (from $5.9 trillion to $5.45 trillion) between March 2020 and March 2021, and their average loan-to-deposit ratio fell to its lowest level in thirty-six years.[56]

In contrast, community banks increased their total lending by 9 percent (from $1.58 trillion to $1.72 trillion) between March 2020 and March 2021. Growth in community bank lending included a $120 billion rise in loans to businesses.[57] Community banks accounted for almost 60 percent of the loans made to small businesses under the Payment Protection Program (PPP) during the pandemic, even though community banks held less than 13 percent of the banking industry's total assets.[58]

Decisions by the twenty-five largest U.S. banks to slash their lending during the pandemic mirrored the drastic reductions in lending by the four biggest U.S. banks during the GFC. During and after both crises, megabanks sharply reduced their lending to businesses while smaller community banks expanded their lending. Geographic areas that were primarily served by big banks experienced much worse economic outcomes during the GFC and its aftermath compared with areas in which

55. *Id.* at 63–65.

56. *Id.*; Shahien Nasiripour, *Big U.S. Banks Cut Loans to Record Low, Again, as Deposits Jump*, BLOOMBERG (Apr. 12, 2021, 11:34 PM), https://www.bloombergquint.com/onweb/big-u-s-banks-cut-loans-to-record-low-again-as-deposits-jump [https://perma.cc/H8LZ-R5ST].

57. Fed. Deposit Ins. Corp., *Quarterly Banking Profile: First Quarter 2021*, 15 FDIC Q., No. 2, 2021, at 17, 18 tbl. II-B, https://www.fdic.gov/analysis/quarterly-banking-profile/fdic-quarterly/2021-vol15-2/fdic-v15n2-1q2021.pdf [https://perma.cc/P63R-A7VM].

58. *Id.* at 6 tbl. III-A, 17 tbl. II-B (showing that community banks held $2.65 trillion of assets in the first quarter of 2021, representing 12.5 percent of the $21.13 trillion of assets held by all commercial banks); Michelle W. Bowman, Governor, Bd. Governors Fed. Rsrv. Sys., The Lack of New Bank Formations Is a Significant Issue for the Banking Industry (Oct. 22, 2021), https://www.federalreserve.gov/newsevents/speech/bowman20211022a.htm [https://perma.cc/LN74-4BVW] (describing the performance of community banks in providing PPP loans).

community banks had a significant presence. A major reason for that difference in outcomes was that community banks were much more reliable lenders to local small and medium-sized businesses.[59]

I strongly agree with Assistant Secretary Steele's conclusion that large banks "failed to absorb the shocks created by the COVID-19 pandemic–requiring the Fed to intervene through both emergency lending measures and widespread regulatory forbearance."[60] He proposes stronger forms of "macroprudential regulation," including heightened capital requirements and more rigorous stress tests.[61] I share his view that more robust forms of regulation and supervision are urgently needed to address the systemic dangers posed by universal banks and shadow banks. In addition, as described in Part II below, I believe that the pandemic crisis demonstrates the need for fundamental changes to the structure of our financial system.

II. THE PANDEMIC FINANCIAL CRISIS CONFIRMS THE NEED FOR A NEW GLASS-STEAGALL ACT

In August 2021, I published an article analyzing the pandemic financial crisis.[62] As explained in that article and summarized below, the pandemic crisis demonstrates that policymakers have not addressed the GFC's root causes. The reforms adopted after the GFC left in place a volatile and unstable financial system dominated by universal banks and large shadow

59. WILMARTH, *supra* note 2, at 344–47 (discussing differences in the lending performance of big banks and community banks during the GFC and its aftermath, as well as the economic impact of those differences); JESSICA BATTISTO ET AL., SMALL BUSINESS CREDIT SURVEY: 2021 REPORT ON EMPLOYER FIRMS, at ii, 9, 17, 25, 27, 28 (2021), https://www.fedsmallbusiness.org/medialibrary/FedSmallBusiness/files/2021/2021-sbcs-employer-firms-report [https://perma.cc/PAX2-7FML] (reporting results of a survey of over 15,000 small businesses, which found that small banks provided more credit and better services to small businesses during the pandemic compared with large banks and nonbank lenders); Hannah Lang, *Small Banks Are Dominating the Fed's Main Street Lending Program*, AM. BANKER (Aug. 19, 2020), https://www.americanbanker.com/news/small-banks-are-dominating-the-feds-main-street-lending-program [https://perma.cc/5N7P-AK4D].

60. Steele, *supra* note 40, at 1059; *see also infra* notes 82–92 and accompanying text.

61. Steele, *supra* note 40, at 1058–59.

62. Arthur E. Wilmarth, Jr., *The Pandemic Crisis Shows that the World Remains Trapped in a "Global Doom Loop" of Financial Instability, Rising Debt Levels, and Escalating Bailouts*, 40 BANKING & FIN. SERVS. POL'Y REP., No. 8, 2021, at 1, http://ssrn.com/abstract=3901967 [https://perma.cc/6SYY-79GU]. Much of the analysis in Part II of this Afterword is drawn from the foregoing article.

banks. Those financial giants continued to underwrite dangerously high levels of private and public debts after the GFC, based on their expectation of future government bailouts. Governments and central banks fulfilled that expectation during the pandemic crisis by protecting the entire financial system, including short-term wholesale credit markets, large investment managers, and the corporate bond market. The blanket protection provided by governments and central banks effectively "bankified" the entire financial system, thereby undermining market discipline, encouraging further asset bubbles, and increasing social inequality.[63]

The GFC and the pandemic crisis establish beyond any doubt that our financial system urgently needs fundamental structural reforms. The centerpiece of those reforms should be a new Glass-Steagall Act, which would separate banks from the capital markets and the insurance sector and prohibit nonbanks from using functional substitutes for deposits to fund their operations. A new Glass-Steagall Act would break up universal banks and shadow banks, thereby ending their toxic conflicts of interest, speculative risk-taking, and dangerous influence over regulators and politicians. It would also create strong structural risk buffers, thereby greatly reducing the probability that future financial disruptions would spread across the newly separated sectors of banking, insurance, and capital markets. A new Glass-Steagall Act would provide the most direct and practical approach for ending the destructive boom-and-bust cycles that have plagued our financial system and economy during the past quarter century.

A. *Universal Banks and Shadow Banks Financed Unsustainable Credit Booms that Led to the Global Financial Crisis of 2007–09 and the Pandemic Crisis.*

Universal banks and shadow banks promoted massive credit booms on both sides of the Atlantic during the decade preceding the GFC. In the United States, private-sector debts more than doubled (from $20.4 trillion to $41.6 trillion) between 1999 and 2007.[64] The ratio of U.S. private-sector debts to U.S. gross

63. *Id.* at 1, 4–6, 11–13, 16–17.
64. *Id.* at 2.

domestic product (GDP) increased from 212 percent in 1999 to 288 percent in 2007.[65]

A similar credit surge occurred in the U.K. and several other European countries, including Ireland, Portugal, and Spain. U.K. private-sector debts doubled as a percentage of U.K. GDP (from 200 percent to over 400 percent) between 1999 and 2007.[66] In 2008, private-sector debts exceeded 200 percent of GDP in Ireland and Spain and 175 percent of GDP in Portugal.[67] Universal banks and shadow banks played central roles in financing the transatlantic credit boom by underwriting hazardous subprime mortgages and other speculative, high-risk debts.

Government debts also expanded significantly during the decade before the GFC. U.S. federal, state, and local government debts rose from $7 trillion to $12.2 trillion between 1999 and 2007. In 2007, the total amount of U.S. private and public debts reached $53.8 trillion, equal to 366 percent of U.S. GDP.[68] Worldwide private and public debts doubled (from $84 trillion to $167 trillion) between 2000 and 2007 and equaled 275 percent of global GDP in 2007.[69] Consequently, the United States and much of the rest of the world confronted enormous debt overhang problems when the GFC began in 2007.

Governments and central banks provided unprecedented support for their financial systems and economies during the GFC and the Great Recession that the crisis triggered. The total outstanding amount of emergency assistance provided by the U.S. government to financial institutions and financial markets peaked at almost $7 trillion in early 2009.[70] Governments in the European Union (EU) provided nearly €5 trillion of state aid to their troubled financial institutions and financial markets, and the EU narrowly avoided a catastrophic sovereign debt crisis.[71]

Four leading central banks—the Fed, the Bank of England (BoE), the Bank of Japan (BoJ), and the European Central Bank (ECB)—established near-zero or negative short-term interest rates. They also purchased huge quantities of government bonds, mortgage-backed securities, and other financial assets under "quantitative easing" ("QE") programs. Central banks

65. *Id.*
66. *Id.*
67. *Id.*
68. *Id.*
69. *Id.*
70. *Id.*
71. *Id.*

adopted ultra-low interest rate policies and QE programs to reduce borrowing costs and debt service burdens for governments, households, businesses, and financial institutions. QE programs produced unprecedented growth in central bank balance sheets.[72] The Fed's balance sheet grew from $900 billion to $4.5 trillion between August 2008 and December 2016.[73] The combined balance sheets of the Fed, BoE, BoJ, and ECB increased from $4 trillion to $15 trillion during the same period.[74]

The reforms that followed the GFC did not break up universal banks and shadow banks, even though those institutions were primarily responsible for financing the toxic credit boom of the 2000s. The massive bailouts of large financial institutions during the GFC helped universal banks and shadow banks to become even larger and more dominant players in global financial markets after 2009. They quickly proceeded to underwrite another major expansion of private and public debts between 2009 and 2019.[75]

The lax credit policies of universal banks and shadow banks enabled U.S. private-sector debts to increase by 17 percent (from $41.6 trillion to $48.9 trillion) between 2007 and 2019.[76] Public-sector debts grew even faster, as federal, state, and local governments borrowed heavily to finance spending programs to mitigate the impact of the Great Recession. Federal, state, and local government obligations more than doubled between 2007 and 2019, rising from $12.1 trillion to $26.3 trillion.[77] In 2019, U.S. private and public debts totaled $75.2 trillion and topped 350 percent of GDP, not far below 2007's record level of 366 percent.[78]

Global debt levels also rose rapidly after the GFC. In 2019, worldwide private and public debts totaled $253 trillion, equal to 322 percent of global GDP.[79] Leading central banks supported the rapid growth of global debts by maintaining their QE asset purchase programs and expanding their balance sheets.[80]

72. *Id.* at 2–3.
73. *Id.* at 3.
74. *Id.*
75. *Id.*
76. *Id.*
77. *Id.*
78. *Id.*
79. *Id.*
80. *Id.*

U.S. and international policymakers expressed strong concerns in 2019 about rising debt levels, particularly for nonfinancial business firms. A majority of outstanding U.S. and global corporate bonds were rated either at or below the lowest investment grade in 2019, as investors bought riskier bonds with higher yields to compensate for ultra-low interest rates. Most non-investment-grade corporate bonds and leveraged loans to businesses allowed dangerously high levels of corporate leverage and provided few protections to investors. Officials warned that mutual funds and other investment managers holding risky corporate debts would be exposed to large losses as well as potential "runs" by investors if a serious recession occurred.[81]

B. *Bailouts by Governments and Central Banks During the Pandemic Crisis Encouraged Further Growth in Private and Public Debts.*

The rapid spread of the COVID-19 pandemic during the first quarter of 2020 caused governments to close social venues and order mandatory shutdowns of hundreds of thousands of businesses. Those events set off a contagious financial panic that paralyzed global financial markets. Markets froze for most government bonds and nearly all private debt obligations, including commercial paper, securities repurchase agreements ("repos"), corporate bonds, and leveraged loans. Universal banks were unable or unwilling to act as dealers and market makers for repos, mortgage-backed securities, corporate bonds, and exchange-traded funds (ETFs). Many foreign banks and other foreign borrowers could not obtain funding in dollars to meet their dollar-denominated obligations.[82]

Market conditions stabilized only after central banks established emergency facilities to support financial institutions and financial markets and governments authorized massive fiscal stimulus programs. The size and scope of governmental responses to the pandemic crisis far exceeded similar measures adopted during the GFC. Congress approved $5.2 trillion of stimulus programs between March 2020 and March 2021—a response that was four times larger than Congress's stimulus

81. *Id.*
82. *Id.* at 4, 11.

measures during the Great Recession of 2007–09.[83] The pandemic stimulus programs of the U.S. and other countries totaled $16 trillion by March 2021.[84]

Central banks established emergency lending and guarantee programs that stabilized financial institutions and prevented a systemic meltdown of financial markets. The Fed provided over $50 billion of discount window loans to banks. The Fed also reactivated nearly all of the emergency lending facilities it used during the GFC to support large financial institutions and short-term wholesale credit markets (including money market funds, commercial paper, and repos). The Fed used those restored facilities to provide $35 billion of loans to securities broker-dealers (many of which were affiliates of universal banks), $440 billion of repo loans, $66 billion of assistance to money market funds and the commercial paper market, and over $460 billion of swap loans to foreign central banks (which indirectly provided dollar funding for foreign banks).[85]

The Fed cut short-term interest rates to zero and supercharged its QE program by pledging to buy unlimited amounts of government bonds and mortgage-backed securities to reduce borrowing costs and debt service burdens for governments, households, and businesses. The Fed's QE purchases expanded its balance sheet from $4.3 trillion on March 11, 2020, to $7.2 trillion on June 10, 2020, and $8.2 trillion on July 28, 2021.[86]

83. *Id.* at 4–5; *see also* Christina D. Romer, *The Fiscal Policy Response to the Pandemic*, BROOKINGS PAPERS ON ECON. ACTIVITY, Mar. 25, 2021, at 89, 89–90, 94 tbl.1, 97–104.

84. Dario Caldara et al., Bd. Governors Fed. Rsrv. Sys., *The Global Recovery: Lessons from the Past*, FED. RSRV.: FEDS NOTES (June 22, 2021), https://www.federalreserve.gov/econres/notes/feds-notes/the-global-recovery-lessons-from-the-past-20210622.htm [https://perma.cc/4A5A-DEJJ] ("The relatively benign outlook for the post-COVID-19 recovery may be the result of the aggressive and broad measures enacted by foreign governments and central banks in response to the COVID-19 pandemic."); Kristalina Georgieva, *Giving People a Fair Shot–Policies to Secure the Recovery*, INT'L MONETARY FUND (Mar. 30, 2021), https://www.imf.org/en/News/Articles/2021/03/25/sp033021-SMs2021-Curtain-Raiser [https://perma.cc/YWA2-5ZTV] ("[G]overnments took exceptional measures [in response to the pandemic]—including about $16 trillion in fiscal action and a massive liquidity injection by central banks."); Wilmarth, *supra* note 62, at 5–6.

85. Wilmarth, *supra* note 62, at 5–7, 11–12; *see also* Lev Menand, *The Federal Reserve and the 2020 Economic and Financial Crisis* 109–20, 129 fig.8 (European Corp. Governance Inst. L. Working Paper, Paper No. 518/2020, 2021), http://ssrn.com/abstract=3602740 [https://perma.cc/J7UZ-8AM5].

86. For information on the growth of the Fed's balance sheet, see Bd. Governors Fed. Rsrv. Sys., *Assets: Total Assets*, FED. RSRV. BANK ST. LOUIS: FRED ECON.

The Fed also stabilized overseas dollar funding markets by opening swap lines with more than a dozen foreign central banks.[87]

Other leading central banks adopted similar ultra-low interest rate policies and aggressive QE programs. The balance sheets of the Fed, BoE, BoJ, and ECB expanded from $15 trillion to $25 trillion between January 2020 and June 2021.[88] During the same period, central bank balance sheets as a percentage of their home country GDP increased from 19 percent to 34 percent for the Fed, 27 percent to 43 percent for the BoE, 38 percent to 61 percent for the ECB, and 104 percent to 131 percent for the BoJ.[89]

Congress, the Treasury, and the Fed created novel lending and bond-buying programs to support small, midsized, and big businesses. As a practical matter, the federal government avoided the need to rescue large financial institutions by bailing out their customers instead. The federal government's indirect rescue of major financial institutions (through bailouts of their customers) meant that the resilience of universal banks and shadow banks was never put to a real-world test in 2020.[90]

The Fed's Primary and Secondary Market Corporate Credit Facilities broke new ground by empowering the Fed to buy corporate bonds and bond ETFs (a step the Fed did not take during the GFC). The Fed pledged to buy up to $750 billion of corporate bonds—a pledge that succeeded in reviving the corporate bond market.[91] The Fed also provided a crucial lifeline to private equity firms and their troubled portfolio companies by expanding

DATA (Dec. 15, 2021), https://fred.stlouisfed.org/series/WALCL [https://perma.cc/6SYY-79GU].

87. Wilmarth, *supra* note 62, at 5, 11; *see also* DENNIS KELLEHER ET AL., SHOULD FEDERAL RESERVE CHAIRMAN JAY POWELL BE REAPPOINTED? 5–6, 12–16 (Better Mkts., 2021).

88. Wilmarth, *supra* note 62, at 5.

89. *Id.*

90. *Id.* at 11–12; *see also* KELLEHER ET AL., *supra* note 87, at 5–6 ("[T]he unprecedented breadth and scope of Fed actions . . . starkly expos[ed] the continuing dangerous fragility of the financial system . . . . [T]he need for the Fed to bail out virtually every aspect of the financial system with trillions of dollars of support cannot be considered a sign of success of the financial regulatory framework and indeed highlighted the lack of resiliency of the financial and banking systems."); Rochelle Toplensky, *The Covid-19 Pandemic Hasn't Truly Tested Banks*, WALL ST. J. (July 13, 2021, 5:55 AM), https://www.wsj.com/articles/the-covid-19-pandemic-hasnt-truly-tested-banks-11626170102 [https://perma.cc/6CLD-PCMW] (stating that large banks "escaped bailouts [during the pandemic] primarily because their customers were bailed out instead").

91. Wilmarth, *supra* note 62, at 5–6, 11–13; *see also* Menand, *supra* note 85, at 103–04, 121–24, 128–30.

its bond-buying program to include noninvestment-grade corporate bonds.[92]

The Fed's unprecedented support enabled U.S. companies to issue \$2.5 trillion of bonds in 2020, an all-time record. United States nonfinancial business debts rose by more than 9 percent during 2020 and reached a new peak of \$17.7 trillion.[93] With assured backing from the U.S. and other countries, corporations around the world issued \$5.35 trillion of bonds in 2020, another all-time record. Global nonfinancial corporate debts increased by over 12 percent during 2020 and reached \$85.2 trillion.[94]

The QE policies of central banks also supported massive government spending programs, which produced rapid growth in sovereign debt burdens. In December 2020, government debts in the U.S. and worldwide climbed to their highest levels since World War II as a percentage of U.S. and global GDP. Total U.S. private and public debts increased by 10 percent to \$82.7 trillion during 2020 and reached 385 percent of U.S. GDP—surpassing the old record of 366 percent established in 2007.[95] Total worldwide private and public debts rose by more than 12 percent during 2020 and set a new record of \$290.6 trillion, equal to 359 percent of global GDP.[96]

C. Bailouts During the Global Financial Crisis and the Pandemic Crisis Have Trapped the World's Financial System and Economy in a "Global Doom Loop."

The GFC and the pandemic crisis have shown that governments, central banks, universal banks, shadow banks, and wealthy investors are caught in a "global doom loop" of toxic mutual dependence.[97] Governments and central banks adopted unprecedented measures during both crises to stabilize financial markets and rescue universal banks and large shadow banks. Central banks have implemented ultra-low interest rate policies and aggressive QE programs since 2008—an approach that has boosted asset prices and facilitated the rapid growth of private

92. Wilmarth, *supra* note 62, at 13; *see also* KELLEHER ET AL., *supra* note 87, at 15–18, 20.

93. Wilmarth, *supra* note 62, at 5.

94. *Id.* at 5–6.

95. *Id.* at 6.

96. *Id.*

97. *Id.* at 13–14; *see also* WILMARTH, *supra* note 2, at 12–14, 325–27, 353–56 (describing the "global doom loop" and its causes).

and public debts. Universal banks and shadow banks are only too happy to underwrite the continued expansion of private and public debts, given the lucrative fees those institutions receive from arranging credit transactions. Wealthy investors keep "searching for yield" by purchasing higher-risk assets based on their assumption that governments and central banks will continue to intervene to prevent financial crises and preserve financial stability.[98]

For several reasons, the global doom loop poses unacceptable risks to the financial system, the broader economy, and society. First, ongoing QE programs indicate that central banks are monetizing the rapid growth of government debts. The BoE doubled the size of its balance sheet during the pandemic crisis by purchasing £450 billion of U.K. government bonds, and those purchases nearly matched the £486 billion of bonds issued by the U.K. Treasury during the crisis.[99] The Fed bought $2.44 trillion of U.S. Treasury securities between March 2020 and March 2021, equal to half of the $4.91 trillion increase in the federal government's total debt during that period. The Fed's bond-buying program increased its ownership of outstanding federal debt from 9.3 percent to 17.6 percent, making it the largest participant in the Treasury bond market.[100]

Second, the unconventional monetary policies of central banks since 2008 have increased wealth inequality and encouraged speculative risk-taking by financial institutions and investors. The ultra-low interest rate policies and QE programs of central banks (1) greatly reduce the returns received by consumers from bank deposits and other low-risk savings vehicles, (2) encourage market participants to buy more risky, higher-yielding investments, and (3) boost the market values of housing and other higher-risk assets, thereby producing disproportionate wealth gains for the richest households (which own the largest

98. Wilmarth, *supra* note 62, at 1, 13–14, 16–17 (discussing the perverse effects of the global doom loop).

99. *Id.* at 14–15.

100. *Id.* at 15; Christopher Leonard, *The Fed's Doomsday Prophet Has a Dire Warning About Where We're Headed*, POLITICO (Dec. 28, 2021, 4:30 AM), https://www.politico.com/news/magazine/2021/12/28/inflation-interest-rates-thomas-hoenig-federal-reserve-526177 [https://perma.cc/7QW9-VCMG] ("The Fed has been encouraging government spending by purchasing billions of Treasury bonds each month while pumping new money into the banks.").

share of those assets).[101] Bailouts of financial institutions and financial markets during 2008 and 2020 have led market participants to believe that governments and central banks will continue to prevent serious financial disruptions and economic downturns, thereby intensifying the incentives and payoffs for high-risk, high-reward investment strategies.[102]

The total net worth of U.S. households increased by $24.5 trillion between March 2020 and March 2021, supported by the federal government's bailouts and the Fed's accommodating monetary policies. Of those gains in net worth, $18.8 trillion (77 percent) accrued to the richest 10 percent of households. In contrast, the bottom half of households ranked by wealth received only $700 billion (less than 3 percent) of those gains.[103] The S&P 500 and NASDAQ indexes doubled between March 2020 and August 2021, producing investment profits that primarily benefited affluent households. Additional quantitative evidence confirms that wealth inequality has risen substantially since 2008 and accelerated during the pandemic.[104]

101. Wilmarth, *supra* note 62, at 15; *see also* KELLEHER ET AL., *supra* note 87, at 5, 15–22 (contending that the Fed's emergency measures during the pandemic crisis "ignited debt, equity and real estate market booms, while contributing to a substantial increase in what was already massive wealth inequality"); Leonard, *supra* note 100 (describing criticisms of the Fed's monetary policies since 2008 by Thomas Hoenig, a former senior Fed and FDIC official, who argues that the Fed's policies "deepen income inequality, stoke dangerous asset bubbles, and enrich the biggest banks over everyone else").

102. Wilmarth, *supra* note 62, at 13–15; *see also* Martin Arnold, *ECB Executive Schnabel Warns That QE Is Inflating Asset Prices*, FIN. TIMES (Dec. 8, 2021), https://www.ft.com/content/6dd8e765-76e8-44c3-b6a6-d7cc114f3a67 [https://perma.cc/VK7W-BM53] (reporting that Isabel Schnabel, the ECB executive in charge of market operations, warned that the ECB's QE bond-buying program was "inflating asset prices and creating risks of financial instability" by encouraging investors to engage in "excessive risk-taking"); Paul Singer, *Investors Piling on Risk Are Setting Themselves up for a Fall*, FIN. TIMES (Dec. 6, 2021), https://www.ft.com/content/32e000cf-c95a-4940-8985-f67ca6170ae8 [https://perma.cc/9WNS-MC3X] (contending that "the current set of monetary and fiscal policies in the developed world . . . encourage people to believe that risks are limited and that asset prices . . . will always and forever be protected by the government," thereby emboldening investors to "take on more risk").

103. Wilmarth, *supra* note 62, at 15; *see also* KELLEHER ET AL., *supra* note 87, at 20–22 (describing how increases in wealth during 2020–21 were distributed among U.S. households).

104. Wilmarth, *supra* note 62, at 15, 24–25 n.107; *see also* Leonard, *supra* note 100 (explaining that Thomas Hoenig opposed the Fed's QE policies because "[q]uantitative easing stoked asset prices, which primarily benefited the very rich. By making money so cheap and available, it also encouraged riskier lending and financial engineering tactics like debt-fueled stock buybacks and mergers, which did

Third, the extensive support provided by QE bond-buying programs for government spending during the pandemic has entangled central banks in fiscal policy and reduced their political independence. By compromising the independence of central banks, QE policies have weakened their ability to control inflation. The Fed, the BoE, and other central banks lost much of their independence and credibility during the 1960s and 1970s when their easy-money policies facilitated massive government deficit spending and produced high inflation rates. During the summer and autumn of 2021, many analysts warned that (1) huge government deficits and extraordinary monetary stimulus by central banks were fueling higher inflation rates, and (2) political pressures on central banks undermined their ability to respond effectively to inflationary threats.[105] Growing concerns about higher inflation rates were supported by rapidly rising prices for a wide range of goods and services,[106] as well as the lack of strong policy responses by leading central banks.[107]

virtually nothing to improve the lot of millions of people who earned a living through their paychecks.").

105. Wilmarth, *supra* note 62, at 14, 16; *see also id.* at 25 nn.110 & 114 (citing expressions of concern by experts about political pressures that reduced the independence of central banks and weakened their ability to respond effectively to rising inflation rates); Patrick Jenkins, *The Dangers of Politicising 'Independent' Central Banks*, FIN. TIMES (Dec. 20, 2021), https://www.ft.com/content/f3e14f77-1d24-4453-ad6b-1654eb0a7a76 [https://perma.cc/9T73-YXRS] ("[W]orries are growing that central banks will become increasingly instrumentalized by governments. A decade-plus of ultra-low interest rates has suited governments nicely, allowing debts to remain manageable even as they have spiraled. Some governments have explicitly pressured central banks towards even looser policies.").

106. Chris Giles, *Inflation: Is Now the Time to Get Worried?*, FIN. TIMES (Nov. 19, 2021), https://www.ft.com/content/570e9180-45fb-4157-9727-553c2471c309 [https://perma.cc/9Q7K-HESL] ("With inflation at multi-decade highs in the US, Germany, and other advanced economies, the subject has shot to the top of the economic agenda . . . . Central bankers are facing criticism that they have lost control."); Gwynn Guilford, *U.S. Inflation Hit a 39-Year High in November*, WALL ST. J. (Dec. 10, 2021, 12:43 PM), https://www.wsj.com/articles/us-inflation-consumer-price-index-november-2021-11639088867 [https://perma.cc/6RRU-M5D6] (reporting that the U.S. consumer price index rose by 6.8 percent during the prior year, "the fastest pace since 1982"); Leonard, *supra* note 100 ("Inflation is rising faster than the Fed believed it would even a few months ago, with higher prices for gas, goods and automobiles being fueled by the Fed's unprecedented money printing programs.").

107. Wilmarth, *supra* note 62, at 16; *see also* Mohamed El-Erian, *The Fed's Inflation Miscalculations Risk Hurting the Poor*, FIN. TIMES (Nov. 11, 2021), https://www.ft.com/content/8b3f9d33-974a-4b52-b237-e17e0283550a [https://perma.cc/VL2T-XA74] (contending that "Fed hesitancy" to address "the inflation threat . . . risks making things worse by de-anchoring inflationary expectations due to the persistence of extremely loose monetary policy"); Stephen Roach,

The Fed finally responded to rising inflation in December 2021, when the Fed announced that it would end its QE bond-buying program during the first quarter of 2022 and begin to raise short-term interest rates shortly thereafter. The Fed recognized that it confronted "two opposite risks"—inflation could spiral out of control with relatively small interest rate increases, or the U.S. economy could fall into recession with more aggressive interest rate hikes.[108] Most financial market participants expected that the Fed would approve modest rate increases totaling less than 2 percent. However, some analysts argued that the Fed needed to act more decisively to maintain control over inflation.[109]

The Sequencing Trap that Risks Stagflation 2.0, FIN. TIMES (Oct. 13, 2021), https://www.ft.com/content/99eacd37-a2e0-4c74-b6de-99c1ca7caa70 [https://perma.cc/CJ9X-GWXA] (warning that "today's generation of central bankers is afflicted with the same sense of denial that proved problematic in the 1970s . . . [and] the risk of another monetary policy blunder cannot be taken lightly"); Colby Smith & Eric Platt, *US Financial Conditions Remain Easy Even as Fed Pulls Back on Stimulus*, FIN. TIMES (Dec. 23, 2021), https://www.ft.com/content/2c73b1f4-b8c1-415b-8df0-237eff180cb0 [https://perma.cc/UJ9U-NG9H] ("US financial conditions are near the most accommodative on record, even as the Federal Reserve has begun stepping up its exit from coronavirus stimulus measures in a bid to battle elevated inflation.").

108. Nick Timiraos, *Fed Officials Project Three Interest Rate Increases in 2022 and Accelerate Stimulus Wind-Down*, WALL ST. J. (Dec. 15, 2021, 5:45 PM), https://www.wsj.com/articles/fed-officials-project-three-rate-rises-next-year-and-accelerate-wind-down-of-stimulus-11639594785 [https://perma.cc/2ZSW-WU2E]; *see also* Smith & Platt, *supra* note 107 (quoting investment professional Steve Kane) ("If inflation stays high, the Fed will have to go faster [in raising interest rates] . . . That's where financial conditions can tighten very quickly and you could really upset the apple cart.").

109. Robert Armstrong, *The Fed Still Thinks Inflation is Transitory*, FIN. TIMES (Dec. 16, 2021), https://www.ft.com/content/024e4598-61cf-4871-89dc-0626d71a8c96 [https://perma.cc/AZ5F-J3D3] (stating that the Federal Open Market Committee's statements during its meeting in December 2021 indicated the Fed's view that only "a very mild tightening of policy" is needed to "ensure that inflation is transitory;" thus, "[e]veryone, from Powell on down, is betting on transitory. If that bet is lost, it's going to be ugly."); Kate Duguid & Eric Platt, *Traders Bet Fed Will Not Raise Rates as Aggressively as Forecast*, FIN. TIMES (Dec. 17, 2021) (quoting investment professional Tom Graff), https://www.ft.com/content/b16f1969-c524-4aba-8560-730ab1ccd511 [https://perma.cc/3RCR-2S43] (reporting that "the market just doesn't believe that the Fed will ever get past 1.5 percent" of increases in short-term interest rates); Leonard, *supra* note 100 (contending that the Fed's unconventional monetary policies "created a money-printing quagmire that the central bank would not be able to escape without destabilizing the entire financial system," as sharp interest rate hikes would probably "cause stock and bond markets to fall, perhaps precipitously, or even cause a recession"); Smith & Platt, *supra* note 107 (stating that "short-term funding markets are pricing a relatively shallow [rate] hiking cycle" by the Fed, with total rate increases of about 1.5%, and warning that substantially higher interest rate hikes "could send waves through credit and

Central banks should not forget painful lessons from past inflationary episodes, including the Great Inflation of the 1960s and 1970s. Periods of high inflation frequently cause severe recessions with large losses of employment and household wealth. Such episodes worsen social inequality because their adverse effects are felt most strongly by ordinary wage earners and lower- and middle-income households.[110]

Probably the greatest risk of the global doom loop is that its continued support for the escalation of private and public debts will trigger a systemic debt crisis comparable to 2008 and 2020, but with an even worse result. For example, outstanding U.S. nonfinancial corporate debt reached a record amount of $11.4 trillion in September 2021, nearly twice its level in 2007.[111] The most risky segments of the U.S. corporate debt market—high-yield (junk) bonds and leveraged corporate loans—set a combined all-time record of $3 trillion in June 2021, more than double their combined size in 2007.[112] A third of the leveraged loans sold to investors in 2021 were issued by companies with total debts greater than six times their earnings, a level that exceeded

equity markets"); Timiraos, *supra* note 108 (describing the risk of a "wage-price spiral" if "inflation stays higher" despite the Fed's expected rate increases).

110. Leonard, *supra* note 100; 2 ALLAN H. MELTZER, A HISTORY OF THE FEDERAL RESERVE, BOOK 1, 1951–1969, ch. 4 (2010); 2 ALLAN H. MELTZER, A HISTORY OF THE FEDERAL RESERVE, VOLUME 2, BOOK 2, chs. 5–7 (2010); Wilmarth, *supra* note 62, at 16, 25 nn.113, 115; *see also* El-Erian, *supra* note 107 ("Inflation will continue to hit low-income households particularly hard. Already, surging food and petrol prices are taking big chunks out from household budgets.").

111. *Nonfinancial Corporate Business: Debt Securities and Loans*, FED. RSRV. BANK ST. LOUIS: FRED ECON. DATA (Dec. 9, 2021), https://fred.stlouisfed.org/series/BCNSDODNS [https://perma.cc/LVM9-8LG8] (showing that U.S. nonfinancial corporate debt expanded from $6.2 trillion in the third quarter of 2007 to $11.4 trillion in the third quarter of 2021); Eric Platt, *Alarm Bells Are Ringing Unheeded in a World Yearning for Optimism*, FIN. TIMES (Sept. 18, 2021), https://www.ft.com/content/1cba68a5-b776-4dcd-9499-14c11638dbba [https://perma.cc/C3GC-SG6Y].

112. Mayra Rodriguez Valladares, *The U.S. Leveraged Finance Market Is at a Record $3 Trillion*, FORBES (Aug. 10, 2021), https://www.forbes.com/sites/mayrarodriguezvalladares/2021/08/10/the-us-leveraged-finance-market-is-at-a-record-3-trillion/?sh=7ba4c6777880 [https://perma.cc/D9H2-WTFQ]; *see also* Eric Platt et al., *Companies Raise Over $12tn in 'Blockbuster' Year for Global Capital Markets*, FIN. TIMES (Dec. 28, 2021), https://www.ft.com/content/c656c3da-f5db-41f4-942b-1ed6de9c2d60 [https://perma.cc/5XNG-XS39] (reporting that $1.26 trillion of junk bonds and leveraged loans were issued globally in 2021).

the maximum limit recommended by federal banking agencies.[113]

Another risky sector of the U.S. corporate debt market—corporate bonds rated "BBB" (the lowest investment-grade rating)—quadrupled in size from $750 billion to $3 trillion between 2007 and 2021.[114] The $6 trillion of outstanding U.S. junk bonds, leveraged loans, and BBB-rated corporate bonds in 2021 were more than twice the size of the U.S. nonprime mortgage market in 2007.[115] The reckless underwriting of so many hazardous corporate debts might well have planted "the seeds of the next crisis."[116]

As was true when the pandemic crisis began in early 2020, any significant downturn in the U.S. economy would expose tens of thousands of heavily indebted businesses to default and bankruptcy.[117] Is it likely that Congress, the Treasury, and the Fed could finance another massive rescue operation for the corporate debt market, similar to the comprehensive bailout they arranged in 2020, without triggering a global crisis of confidence in the federal government's ability to service its debts and control inflation? As shown in the next Section, many other nations would face similar challenges if a major financial or economic crisis occurs in the near future.[118]

113. Joe Rennison, *US Borrowers Breach Loan Limit Guidance at Record Pace*, FIN. TIMES (Dec. 16, 2021), https://www.ft.com/content/67b625e7-87ab-478e-aca1-995f150e6b9c [https://perma.cc/GQ6U-36FF].

114. Robert Armstrong & Robin Wigglesworth, *Triple-B Movie: 'Big Short' Star Fears for Debt-Laden Companies*, FIN. TIMES (Jan. 7, 2019), https://www.ft.com/content/4cdf8792-056f-11e9-9d01-cd4d49afbbe3 [https://perma.cc/UT84-VCRY] (providing a figure for 2007); Samuel Lopez Briceno, *BBB-Rated Debt is Proving Surprisingly Resistant to Covid-19*, VANGUARD EUROPE (Apr. 1, 2021), https://www.vanguardeurope.com/portal/site/institutional/nl/en/articles/research-and-commentary/markets-economy/bbb-rated-debt-covid-19 [https://perma.cc/6UXR-DYGR] (providing a figure for 2021).

115. *See supra* notes 112–114 (providing figures for U.S. junk bonds, leveraged loans, and BBB-rated corporate bonds in 2021); WILMARTH, *supra* note 2, at 249 (stating that the U.S. nonprime mortgage market reached a peak size of $2.7 trillion in 2007).

116. Platt et al., *supra* note 112 (describing the dangers posed by rising volumes of junk bonds and leveraged loans); *see also* Armstrong & Wigglesworth, *supra* note 114 (warning that the rapid growth of BBB-rated corporate debt was a "menace to the financial system").

117. Platt et al., *supra* note 112; Wilmarth, *supra* note 62, at 2–6, 11–14.

118. Singer, *supra* note 102 ("[T]he ability of governments to protect asset prices from another downturn has never been more constrained. The global $30tn pile of stocks and bonds that have been purchased by central banks in order to drive up their prices has created a gigantic overhang. With inflation rising, policymakers

D. The Massive Debt Loads Accumulated by the U.S. and Other Nations Are Likely to Cause Future Sovereign Debt Crises.

The federal government and many other governments assumed huge debt burdens to prevent the GFC and the pandemic crisis from triggering a second Great Depression.[119] Those enormous debt overhangs are likely to cause severe sovereign debt problems when the next systemic financial or economic crisis occurs. As shown by Europe's experiences during the Great Depression and after the GFC, heavily indebted governments could lose their credibility in sovereign debt markets and forfeit their ability to borrow sufficient funds to stabilize their financial systems and economies. Under those circumstances, a private-sector financial or economic emergency would likely become a sovereign debt crisis, and governments would have to choose between defaulting on their debts explicitly (through a debt repudiation, moratorium, or restructuring) or implicitly (through a currency devaluation or rapid inflation). More than a dozen European countries defaulted on their sovereign debts during the Great Depression, and the Eurozone narrowly avoided a similar series of sovereign defaults after the GFC.[120]

The U.S. government's debt burden has grown rapidly during the past fourteen years, due in large part to the huge costs that federal agencies incurred in dealing with the economic and social fallout of the GFC and the pandemic crisis. Total federal debt rose from $9 trillion in June 2007 to $16.8 trillion in June 2013, $22 trillion in June 2019, and $28.5 trillion in June 2021.[121] The ratio of federal government debt to U.S. GDP

are reaching the limits of their ability to support asset prices in a future downturn without exacerbating inflationary pressures.").

119. *See* Sections II.A and II.B, *supra*.

120. ADAM TOOZE, CRASHED: HOW A DECADE OF FINANCIAL CRISES CHANGED THE WORLD 116–421 (2018); Carmen M. Reinhart & Christopher Trebesch, *A Distant Mirror of Debt, Default, and Relief* (Nat'l Bureau Econ. Rsch. Working Paper 20577, Oct. 2014), https://www.nber.org/papers/w20577 [https://perma.cc/2CZK-PUE6]; WILMARTH, *supra* note 2, at 97–103, 295–98; Wilmarth, *supra* note 62, at 16, 25–26, 26 n.116; *see also* Viral Acharya et al., *Lender of Last Resort, Buyer of Last Resort, and Fear of Fire Sales in the Sovereign Bond Market*, 30 FIN. MKTS., INSTS. & INSTRUMENTS 87 (2021) (describing how the ECB ended the Eurozone's sovereign debt crisis by assuming the role of "buyer of last resort" for bonds issued by higher-risk Eurozone countries).

121. *Federal Debt: Total Public Debt*, FED. RSRV. BANK ST. LOUIS: FRED ECON. DATA, https://fred.stlouisfed.org/series/GFDEBTN [https://perma.cc/2JYK-CTJF] (Dec. 2, 2021).

increased from 62 percent in June 2007 to 101 percent in June 2013, 103 percent in June 2019, and 125 percent in June 2021.[122]

The rapid escalation of the federal government's debt load has increased the danger that other nations and global investors could lose confidence in U.S. Treasury bonds and the U.S. dollar. In March 2021, the Congressional Budget Office warned that projected future increases in the federal government's debt would

> increase the risk of a fiscal crisis—that is, a situation in which investors lose confidence in the U.S. government's ability to service and repay its debt, causing interest rates to increase abruptly, inflation to spiral upward, or other disruptions, . . . such as . . . an erosion of confidence in the U.S. dollar as an international reserve currency, and more difficulty in financing public and private activity in international markets.[123]

Many other countries are also facing potential sovereign debt crises.[124] Between 2007 and 2021, the ratio of government debt to domestic GDP increased from 66 percent to 98 percent for the Eurozone, 40 percent to 104 percent for the U.K., and 175 percent to 266 percent for Japan.[125] A large group of developing nations are struggling with severe debt problems after they borrowed heavily to finance their fiscal responses to the

122. *Federal Debt: Total Public Debt as a Percent of Gross Domestic Product,* FED. RSRV. BANK ST. LOUIS: FRED ECON. DATA (Dec. 22, 2021), https://fred.stlouisfed.org/series/GFDEGDQ188S [https://perma.cc/3W46-QST3].

123. CONGR. BUDGET OFF., THE 2021 LONG-TERM BUDGET OUTLOOK 5–13 (Mar. 2021), https://www.cbo.gov/system/files/2021-03/56977-LTBO-2021.pdf [https://perma.cc/TW56-4VEU].

124. Ruchir Sharma, *There Is No Easy Escape From The Global Debt Trap*, FIN. TIMES (Nov. 22, 2021), https://www.ft.com/content/c9e0c2c1-55af-4258-9c92-92faa111f41e [https://perma.cc/7VEG-AAAN].

125. Trading Economics, *Euro Area Government Debt to GDP*, TRADING ECON., https://tradingeconomics.com/euro-area/government-debt-to-gdp [https://perma.cc/RP8H-EJEZ] (showing ratio at the end of 2020); Fraser Munro, *UK Government Debt and Deficit: June 2021*, U.K. OFF. FOR NAT'L STAT. (Oct. 27, 2021), https://www.ons.gov.uk/economy/governmentpublicsectorandtaxes/publicspending/bulletins/ukgovernmentdebtanddeficitforeurostatmaast/june2021 [https://perma.cc/W3UJ-SMDH]; *Japan General Government Gross Debt to GDP*, TRADING ECON., https://tradingeconomics.com/japan/government-debt-to-gdp [https://perma.cc/VSJ6-3UDM] (showing ratio at the end of 2020).

pandemic.[126] The number of countries with total public and private debts exceeding 300 percent of GDP has increased from none in the mid-1990s to twenty-five in 2021, including the U.S. and China.[127]

China's worsening debt problems pose a significant potential threat to global economic stability. China's private and public sectors have borrowed huge sums during the past two decades to finance massive investments in fixed assets, including real estate developments, industrial facilities, and infrastructure projects. China's total private and public debts increased from 145 percent to 310 percent of China's GDP between 2000 and 2021.[128] Investments in fixed assets generated 40 percent of China's economic growth between 2012 and 2019, but those investments have not created any net productivity gains after 2014.[129] During 2021, several deeply indebted Chinese real estate and industrial firms either defaulted on scheduled debt payments or faced a strong likelihood of future defaults.[130]

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126. Ruchir Sharma, *The Pandemic Stimulus Has Backfired in Emerging Markets*, FIN. TIMES (Oct. 25, 2021), https://www.ft.com/content/37e8e350-71a7-4c00-a4de-a5a6ba776bfb [https://perma.cc/TYD9-R9DU] (explaining that emerging economies that were "big spenders" on fiscal stimulus programs during the COVID-19 pandemic have encountered "more trouble, in the form of higher deficits and debt, which will leave them with less ammunition to fight the next battle"); *see also* Jonathan Wheatley, *UN Chief Warns of Coming Debt Crisis for Developing World*, FIN. TIMES (Mar. 29, 2021), https://www.ft.com/content/abcd97d3-fb65-47e5-973a-598514f1fd5a [https://perma.cc/99KE-WNG6]; Jonathan Wheatley, *Feeble Growth and Chunky Debt Piles Hold Back Emerging Economies*, FIN. TIMES (Mar. 15, 2021), https://www.ft.com/content/b9164299-5a57-4548-9204-370316f47814 [https://perma.cc/UMH4-HB5F].

127. Ruchir Sharma, *Ten Economic Trends that Could Define 2022*, FIN. TIMES (Jan. 3, 2022), https://www.ft.com/content/432d78ee-6163-402e-8950-d961b4b1312b [https://perma.cc/Y76R-RXLF] (highlighting the "debt trap" faced by many nations); *see also* Sharma, *supra* note 126.

128. Greg Ip, *Evergrande's Struggles Reflect China's Efforts to Rein in Multiyear Debt Boom*, WALL ST. J. (Sept. 22, 2021, 10:12 AM), https://www.wsj.com/articles/evergrandes-struggles-reflect-chinas-efforts-to-rein-in-multiyear-debt-boom-11632319200?page=1 [https://perma.cc/43ZS-EHXV].

129. *Id.*; James Kynge & Sun Yu, *Evergrande and the End of China's 'Build, Build, Build' Model*, FIN. TIMES (Sept. 21, 2021), https://www.ft.com/content/ea1b79bf-cbe3-41d9-91da-0a1ba692309f [https://perma.cc/B6S2-7Q9Z]; Martin Wolf, *The Economic Threats from China's Real Estate Bubble*, FIN. TIMES (Oct. 5, 2021), https://www.ft.com/content/1abd9d4b-8d94-4797-bdd7-bee0f960746a [https://perma.cc/B5S3-P3H5].

130. William Langley & Thomas Hale, *Modern Land Becomes Latest Chinese Developer to Miss a Bond Payment*, FIN. TIMES (Oct. 26, 2021), https://www.ft.com/content/5248fe9d-c7e2-46dc-964a-7b8307183e6b [https://perma.cc/9YCS-7VUJ]; Andy Lin & Thomas Hale, *Chinese Developers Hit by Record Rating Downgrades After Evergrande Crisis*, FIN. TIMES (Dec. 22, 2021),

China's economic growth rate slowed during the third quarter of 2021 as government officials imposed new limits on real estate construction and public and private borrowing.[131] Analysts warned that a severe slump in China's real estate industry could destabilize China's economy because real estate construction and related services have produced more than a quarter of China's GDP since 2009.[132] A substantial and prolonged downturn in China's economy would have a significant adverse impact on the global economy, because China contributed 28

https://www.ft.com/content/6b96ecba-1534-4b94-b0b1-b18de668f938 [https://perma.cc/9AZQ-RQ3W]; Quentin Webb & Anniek Bao, *China Evergrande Requests Help from Government as Debt Crunch Looms*, WALL ST. J. (Dec. 3, 2021, 11:24 AM), https://www.wsj.com/articles/china-evergrande-requests-help-from-government-after-warning-of-new-debt-crunch-11638545951 [https://perma.cc/M236-GDY2]; Quentin Webb & Frances Yoon, *Chinese Junk Bond Yields Top 25% as Property-Market Strains Intensify*, WALL ST. J. (Nov. 8, 2021, 9:42 PM), https://www.wsj.com/articles/chinese-junk-bond-yields-top-25-as-property-market-strains-intensify-11636371718 [https://perma.cc/AJ3C-34HF]; Wolf, *supra* note 129.

131. Thomas Hale, *China Cuts Lending Rate as Economic Momentum Falters*, FIN. TIMES (Dec. 20, 2021), https://www.ft.com/content/404ba4a1-d25f-42ee-b602-6d89e8472d4d [https://perma.cc/D2ZA-RBPY]; Langley & Hale, *supra* note 130; Tom Mitchell, *Xi Jinping Gambles on Economic Tumult to Cement His Legacy*, FIN. TIMES (Oct. 12, 2021), https://www.ft.com/content/d4018362-7f61-48cc-931c-a4ebc216c10c [https://perma.cc/4LRH-FPEY]; Tom Mitchell & Thomas Hale, *Xi Jinping Undeterred from Structural Shifts Despite China's Economic Slowdown*, FIN. TIMES (Oct. 18, 2021), https://www.ft.com/content/aafca7d3-10a9-41c5-9832-f6e199a5c630 [https://perma.cc/9668-6USP]; Quentin Webb & Stella Yifan Xie, *Beyond Evergrande: China's Property Market Faces a $5 Trillion Reckoning*, WALL ST. J. (Oct. 10, 2021, 12:07 PM), https://www.wsj.com/articles/beyond-evergrande-chinas-property-market-faces-a-5-trillion-reckoning-11633882048 [https://perma.cc/ZS8H-LQYH].

132. Harriet Agnew, *Evergrande Fallout Could Be Worse than Lehman for China, Jim Chanos Warns*, FIN. TIMES (Sept. 22, 2021), https://www.ft.com/content/0bf52d39-fd42-408f-aa85-52a4135de312 [https://perma.cc/S7HC-W2QB]; Paul Hodges, *Letter: An End to the China Bubble Would Risk a Minsky Moment*, FIN. TIMES (Oct. 11, 2021), https://www.ft.com/content/bc2d8a9f-baf7-4a25-87a9-4d8bc57afadf [https://perma.cc/P7ZW-RBEH]; George Magnus, *Why China's Evergrande Debt Crisis is the Tip of an Iceberg*, NEW STATESMAN (Sept. 22, 2021), https://www.newstatesman.com/world/asia/china/2021/09/why-chinas-evergrande-debt-crisis-is-the-tip-of-an-iceberg [https://perma.cc/3AK9-KKY7]; Kenneth Rogoff, *Can China's Outsized Real Estate Sector Amplify a Delta-Induced Slowdown?*, VOX: EU (Sept. 21, 2021), https://voxeu.org/article/can-china-s-outsized-real-estate-sector-amplify-delta-induced-slowdown [https://perma.cc/S9DY-66HM]; Kevin Rudd, *Xi Jinping's Evergrande Dilemma has Repercussions Far Beyond China*, FIN. TIMES (Oct. 15, 2021), https://www.ft.com/content/d9ce37d7-1999-4fcd-ade3-64657ea32320 [https://perma.cc/N5LT-S57R]; Alexandra Stevenson & Cao Li, *Why China's Economy Is Threatened by a Property Giant's Debt Problems*, N.Y. TIMES (Oct. 20, 2021), https://www.nytimes.com/article/evergrande-debt-crisis.html [https://perma.cc/RKY3-XMFX]; Wolf, *supra* note 129.

percent of the world's economic growth between 2013 and 2018.[133] In November 2021, the Fed warned that "financial stresses in China could strain global financial markets through a deterioration of risk sentiment, pose risks to global economic growth, and affect the United States."[134]

CONCLUSION

Events since 2008 make clear that the world has failed to correct dangerous structural weaknesses in our financial system that caused the GFC and contributed to the pandemic crisis. The global doom loop remains in place, allowing universal banks and shadow banks to take speculative risks and underwrite rising levels of private and public debts in reliance on expected support from governments and central banks. The bailouts of 2008 and 2020 have "bankified" global financial markets by expanding government safety nets to protect short-term wholesale credit markets, systemically important shadow banks, and the corporate debt market.[135] Those bailouts have also imposed extraordinary financial burdens on governments and central banks, raising serious questions about their ability to cope with the next major crisis.

My recent book and article propose a series of reforms to end the global doom loop and create a more decentralized, competitive, stable, and resilient financial system. The most important reform would be a new Glass-Steagall Act, which would separate banks from the capital markets and the insurance sector and prohibit nonbanks from issuing functional substitutes for bank deposits. A new Glass-Steagall Act would break up universal banks and shadow banks, thereby ending their toxic conflicts of interest, speculative risk-taking, and dangerous influence over regulators and politicians. It would create strong structural risk

133. Rudd, *supra* note 132; Jonathan Wheatley & Michael Pooler, *China Property Bust Undercuts Talk of New Commodity 'Super* Cycle*'*, FIN. TIMES (Oct. 20, 2021), https://www.ft.com/content/473f5422-e86d-427d-842e-7439647a6a3b [https://perma.cc/H9QP-3YRP].

134. BD. GOVERNORS FED. RSRV. SYS., FINANCIAL STABILITY REPORT 8, 60 (Nov. 2021), https://www.federalreserve.gov/publications/files/financial-stability-report-20211108.pdf [https://perma.cc/7WT3-CXDZ]; *see also* Gary Silverman & Colby Smith, *Fed Warns Ailing Chinese Real Estate Sector Poses Risks to US Economy*, FIN. TIMES (Nov. 8, 2021), https://www.ft.com/content/fcfe51bc-b7f9-4939-88f7-2f49892440f7 [https://perma.cc/S3LH-T93T].

135. Wilmarth, *supra* note 62, at 1–2, 6–7, 13–14, 16–17.

buffers, thereby greatly reducing the probability that financial disruptions would spread across the newly separated sectors of banking, insurance, and capital markets. Governments and central banks could protect the stability of the commercial banking system without being forced to provide comprehensive bailouts for the entire financial system. A new Glass-Steagall Act would discourage excessive growth in private debts during economic expansions and would also avoid the need for huge government-financed bailouts during economic downturns. It would provide the most direct and practical approach for breaking the global doom loop and ending the destructive boom-and-bust cycles of the past quarter century.[136]

As illustrated by the essays in this symposium issue and oral presentations during the May 2021 conference, our financial system is dangerously unstable and urgently needs fundamental reforms. I applaud the authors and conference participants for presenting persuasive assessments of serious problems in our financial system, as well as constructive proposals for reform. I hope their assessments and proposals will find a receptive audience among financial regulators and policymakers. Our nation (and, indeed, the world) must not delay in taking decisive action to replace our deeply flawed financial system with a new system that will be much sounder, more resilient, and more responsive to the needs of consumers, communities, and business firms.

136. WILMARTH, *supra* note 2, at 13–14, 335–56; Wilmarth, *supra* note 62, at 1, 16–17. My book argues that the structures and activities of universal banks and shadow banks inevitably create perverse incentives for excessive risk-taking as well as pervasive conflicts of interest. Those toxic features cause both types of institutions to finance speculative and dangerous credit booms that frequently lead to destructive busts. Accordingly, my book contends that universal banks and shadow banks should be broken up because they promote harmful boom-and-bust cycles instead of healthy and sustainable economic growth. WILMARTH, *supra* note 2, at 1–9, 13–14, 31–35, 46–49, 134–35, 196–97, 230–51, 254–64, 278–91, 317–27, 335–44, 349–50, 353–56.