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## STRENGTHENING THE TREASURY MARKET

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*For more than 200 years, the market for U.S. Treasury securities has propelled U.S. economic success. More recently, it has been described as the world's most important financial market because Treasury securities promote liquidity, price discovery, and economic stability across the globe. Despite its vital role at home and abroad, the Treasury market lacks certain structural protections that are common in other advanced financial markets. Bringing the Treasury market into the modern age is necessary because it is not immune to the risks that confront other financial markets. This was underscored in early 2020, when the coronavirus (COVID-19) pandemic roiled the Treasury market, producing significant trading disruptions and liquidity constraints.*

*To help reduce the risk of future Treasury market instability, this Article recommends modest enhancements that have proven successful in similar markets. Robust public reporting of Treasury securities trades, improved oversight of trading venues, safeguards that promote operational resiliency, and expanded central clearing will promote Treasury market strength and resiliency well into the future.*

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## I. INTRODUCTION

A great aberration in finance today is that “the single most important financial market in the world”<sup>1</sup> is far less developed than other advanced securities markets. For more than 200 years, the U.S. Treasury securities market has fueled America’s emergence as an economic superpower. In the past several decades, moreover, the Treasury market has been a leading source of liquidity, price discovery, and economic stability for sovereigns and investors around the world.<sup>2</sup> Yet some contend that the very market that is so vital to the

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<sup>1</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, U.S. TREASURY MARKET: STEPS TOWARD INCREASED RESILIENCE 1 (2021), [https://group30.org/images/uploads/publications/G30\\_U.S.\\_Treasury\\_Markets\\_-\\_Steps\\_Toward\\_Increased\\_Resilience\\_\\_1.pdf](https://group30.org/images/uploads/publications/G30_U.S._Treasury_Markets_-_Steps_Toward_Increased_Resilience__1.pdf) [<https://perma.cc/F75L-56NH>].

<sup>2</sup> See *id.* (“[C]onfidence in the U.S. Treasury market, and in its ability to function efficiently even in times of stress, is critical to the stability of the global financial system.”); see also U.S. DEP’T OF THE TREASURY ET AL., RECENT DISRUPTIONS AND POTENTIAL REFORMS IN THE U.S. TREASURY MARKET: A STAFF PROGRESS REPORT 1 (2021), <https://home.treasury.gov/system/files/136/IAWG-Treasury-Report.pdf> [<https://perma.cc/WZ7F-SQDE>] (“The Treasury market is the deepest and most liquid market in the world and a central component of the U.S. and global financial systems.”).

functioning of the global economy<sup>3</sup> remains “pervasively exposed to failure”<sup>4</sup> and subject to “considerable concentration of activity”<sup>5</sup> because it has not continued to evolve with a changing world.<sup>6</sup> There is no question that the Treasury Department, the Federal Reserve Bank of New York, and other stakeholders have done an admirable job of establishing a solid foundation for the world’s most important financial market. But we can and must build on their success in order to strengthen the Treasury market and help it meet the challenges of the future.

In Part II, I offer a brief history of the U.S. Treasury market and explain how it has become a cornerstone of the American economy. In Part III, I outline some of the challenges that the market faces, particularly in light of evolving technologies. Finally, in Part IV, I offer four proposals—robust public reporting, consistent trading-venue oversight, safeguards for operational resiliency, and expanded central clearing—that would effectuate the significant and critical modernization of the Treasury market.

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<sup>3</sup> The current SEC Chair has observed that the U.S. Treasury market “is integral to our overall capital markets as well as to global markets. It is the base upon which so much of our capital markets are built.” Gary Gensler, Chair, Sec & Exch. Comm’n, Testimony Before the United States Senate Committee on Banking, Housing, and Urban Affairs, at 2 (Sept. 14, 2021), <https://www.banking.senate.gov/imo/media/doc/Gensler%20Testimony%209-14-21.pdf> [<https://perma.cc/UBJ5-RCFA>].

<sup>4</sup> Yesha Yadav, *The Failed Regulation of U.S. Treasury Markets*, 121 COLUM. L. REV. 1173, 1177 (2021).

<sup>5</sup> Nellie Liang & Pat Parkinson, *Enhancing the Liquidity of the U.S. Treasury Market Under Stress*, BROOKINGS (DEC. 16, 2020), <https://www.brookings.edu/research/enhancing-the-liquidity-of-u-s-treasury-markets-under-stress/> [<https://perma.cc/ZQK7-Z86L>].

<sup>6</sup> See, e.g., John Dizard, *Pressure Builds for a Revamp of the US Treasuries Market*, FIN. TIMES (Nov. 6, 2021), <https://www.ft.com/content/27e7d7ca-f5d0-4b09-abfe-2f7c39dc7939> (on file with the Columbia Business Law Review) (“The \$22tn US Treasury market is ill-equipped to finance whatever US spending packages are finally delivered by Congress.”).

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## II. THE U.S. TREASURY MARKET, PAST AND PRESENT

### A. America's First Securities Market

The U.S. Treasury market's long history is intertwined with the history of the nation itself. The Treasury market rose from the fiscal ashes of the American Revolutionary War. In 1789, Alexander Hamilton,<sup>7</sup> who had been appointed by President George Washington as the first Secretary of the Treasury, began to execute a vision that would raise an “economic colossus” from thirteen former colonies then laden with debt.<sup>8</sup> Wars cost money—and the early United States had borrowed a lot of it to fight for independence.<sup>9</sup> To refinance war debts and raise capital for the new national government, Hamilton hatched a plan to issue the first Treasury securities: a four-percent bond, a three-percent bond, and a six-percent bond with ten-year deferred interest.<sup>10</sup> Hamilton believed that “[a] national debt, if not

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<sup>7</sup> I should note that Mr. Hamilton himself was a proud graduate of Columbia University (Kings College), making his story particularly apt for this Symposium. *Alexander Hamilton CC 1778*, COLUMBIA COLL. ALUMNI ASSOC. (last visited Dec. 1, 2021), <https://www.college.columbia.edu/alumni/content/alexander-hamilton-cc-1778> [<https://perma.cc/6BL2-AGSW>].

<sup>8</sup> Richard Sylla, *Financial Foundations: Public Credit, the National Bank, and Securities Markets*, in *FOUNDING CHOICES: AMERICAN ECONOMIC POLICY IN THE 1790S*, at 66–67, 86 (Douglas A. Irwin and Richard Sylla, eds. 2011).

<sup>9</sup> Michael D. Bordo, Christopher Meissner & Angela Redish, *How “Original Sin” Was Overcome: The Evolution of External Debt Denominated in Domestic Currencies in the United States and the British Dominions 1800-2000*, at 7 (Nat'l Bureau of Econ. Rsch., Working Paper No. 984, July 2003), [https://www.nber.org/system/files/working\\_papers/w9841/w9841.pdf](https://www.nber.org/system/files/working_papers/w9841/w9841.pdf) [<https://perma.cc/ZXQ8-ANQS>] (“By the end of the Revolutionary war, the U.S. position in terms of debt to revenues ranked among the worst of sovereign Europe.”).

<sup>10</sup> Sylla, *supra* note 8, at 68. Creditors holding U.S. debt subject to refinance received a basket of these three securities that together yielded interest of four percent annually. *Id.*

excessive, . . . will be a powerful cement of our union.”<sup>11</sup> His view was quickly validated, as the early Treasury market (aided by the establishment of a national bank) sparked a flurry of economic development that set the stage for American leadership in the financial markets.<sup>12</sup>

The new Treasury securities naturally created demand for places to trade them, and “active and regularized trading markets . . . emerged in major cities, particularly New York, Philadelphia, and Boston.”<sup>13</sup> Markets for Treasury securities “were joined by a growing list of local securities—those of banking, insurance, transportation, and other corporations” chartered by state governments.<sup>14</sup> This, in turn, stoked the growth of private industry, as emerging securities markets gave businesses “a means of raising equity and debt capital.”<sup>15</sup> Lending markets soon followed, as newly issued securities supplied collateral for bank loans.<sup>16</sup> America’s booming financial markets also opened the spigot of foreign capital, causing overseas investments to flow into our newly independent nation.<sup>17</sup> Given all of those rapid developments, by 1800, no other nation had “modernize[d] its finances. . . . as completely as the United States did.”<sup>18</sup>

## B. Today’s Treasury Market

More than two centuries later, the Treasury securities market that Hamilton envisioned has grown in size and importance—both to the nation and to the world. America’s Treasury market today is central to the global financial system, “as Treasury rates are a fundamental benchmark for

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<sup>11</sup> Letter from Alexander Hamilton to Robert Morris (Apr. 30, 1781), in 3 THE WORKS OF ALEXANDER HAMILTON IN TWELVE VOLUMES 342, 387 (Henry Cabot Lodge ed., 1904).

<sup>12</sup> Sylla, *supra* note 8, at 81, 85–86.

<sup>13</sup> Richard Sylla, *U.S. Securities Markets and the Banking System, 1790-1840*, FED. RSRV. BANK OF ST. LOUIS REV., May–June 1998, at 83, 87.

<sup>14</sup> Sylla, *supra* note 8, at 85.

<sup>15</sup> *Id.* at 69.

<sup>16</sup> Sylla, *supra* note 13, at 89.

<sup>17</sup> Sylla, *supra* note 8, at 85.

<sup>18</sup> *Id.* at 60.

pricing virtually all other financial assets.”<sup>19</sup> That benchmarking function reflects confidence in U.S. finances as a whole: Because U.S. Treasury securities are backed by the “full faith and credit” of the U.S. government, many view them as the world’s safest investments.<sup>20</sup> Today, there is nearly \$22 trillion in face value of U.S. Treasury securities,<sup>21</sup> the vast majority of which are traded in secondary markets after purchase.<sup>22</sup>

Treasury securities are also critical to the U.S. economy and the global financial system because of the role they play in implementing monetary policy. The Federal Reserve’s

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<sup>19</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1; *see also* Peter Ryan & Robert Toomey, *Improving Capacity and Resiliency in US Treasury Markets Part I*, SIFMA (Mar. 24, 2021), <https://www.sifma.org/resources/news/improving-capacity-and-resiliency-in-us-treasury-markets-part-1/> [<https://perma.cc/3M8E-W7TB>] (noting the Treasury market is “the ‘biggest, deepest, and most essential bond market on the planet” (quoting Colby Smith & Robin Wigglesworth, *US Treasuries: the Lessons from March’s Market Meltdown* (July 29, 2020), <https://www.ft.com/content/ea6f3104-eeec-466a-a082-76ae78d430fd> (on file with the Columbia Business Law Review))); Lorie K. Logan, Exec. Vice President, Mkts. Grp. of the Fed. Rsrv. Bank of N.Y., Treasury Market Liquidity and Early Lessons from the Pandemic Shock, Remarks at Brookings-Chicago Booth Task Force on Financial Stability Meeting, (Oct. 23, 2020), <https://www.newyorkfed.org/newsevents/speeches/2020/log201023> [<https://perma.cc/S3DV-WH3M>] (describing the U.S. Treasury market as “the deepest and most liquid fixed-income market in the world”).

<sup>20</sup> *The Basics of Treasury Securities*, TREASURYDIRECT, [https://www.treasurydirect.gov/instit/research/faqs/faqs\\_basics.htm](https://www.treasurydirect.gov/instit/research/faqs/faqs_basics.htm) [<https://perma.cc/HC6R-XSDU>] (last visited Dec. 1, 2021); *see also* Bryan J Noeth & Rajdeep Sengupta, *Flight to Safety and U.S. Treasury Securities*, FED. RSRV. BANK OF ST. LOUIS (July 1, 2010), <https://www.stlouisfed.org/publications/regional-economist/july-2010/flight-to-safety-and-us-treasury-securities> [<https://perma.cc/YD5D-EGD2>] (explaining that investors often view U.S. Treasury securities as “the safest investments” and “relatively risk-free”).

<sup>21</sup> *US Treasury Securities Statistics*, SIFMA (Nov. 4, 2021), <https://www.sifma.org/resources/research/us-treasury-securities-statistics/> [<https://perma.cc/3GDA-XD2C>].

<sup>22</sup> *See* Dominique Dupont & Brian Sack, *The Treasury Securities Market: Overview and Recent Developments*, 1999 FED. RSRV. BULL. 785, 789.

practice of buying and selling Treasury securities in the secondary market is a core vehicle for achieving U.S. monetary-policy objectives: maximizing employment, promoting stable prices, and achieving moderate long-term interest rates.<sup>23</sup> To help meet these goals, the Federal Reserve can purchase Treasury securities to inject capital into the banking system, thus increasing bank reserves and facilitating the making of loans and the extension of credit.<sup>24</sup> Selling Treasury securities has the opposite effect, which can help the Federal Reserve tighten the money supply to address issues such as inflation.<sup>25</sup> Foreign governments also rely on Treasury securities to support their economic goals, including to stabilize exchange rates and maintain liquid stores of value for foreign reserves.<sup>26</sup>

Critical to understanding the Treasury market is both (1) what *securities* it encompasses, and (2) what *transactions* it involves. The Treasury issues four main types of debt securities to finance the operations of the government: bills, notes, bonds, and Treasury Inflation-Protected Securities, commonly known as TIPS.<sup>27</sup> A Treasury bill is a short-term security with a maturity of a few days to fifty-two weeks,<sup>28</sup> which is sold at a discount to its face value and pays interest at maturity.<sup>29</sup> A note is a security with a maturity date of up to ten years that pays monthly interest to the noteholder.<sup>30</sup> Bonds have maturities of twenty or thirty years and pay

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<sup>23</sup> *Monetary Policy Implementation*, FED. RSRV. BANK OF N.Y. (July 28, 2021), <https://www.newyorkfed.org/markets/domestic-market-operations/monetary-policy-implementation> [https://perma.cc/SL9F-J7XA].

<sup>24</sup> MARC LABTONE, CONG. RSCH. SERV., RL30354, *MONETARY POLICY AND THE FEDERAL RESERVE: CURRENT POLICY AND CONDITIONS* 5 (2020).

<sup>25</sup> *See id.*

<sup>26</sup> *See* MARC LABONTE & JARED C. NAGEL, CONG. RSCH. SERV., RS22331, *FOREIGN HOLDINGS OF FEDERAL DEBT* 5 (2021).

<sup>27</sup> *Treasury Securities and Programs*, TREASURYDIRECT, <https://www.treasurydirect.gov/indiv/products/products.htm> [https://perma.cc/X5T2-4XK8] (last visited Dec. 1, 2021).

<sup>28</sup> *Id.*

<sup>29</sup> Dupont & Sack, *supra* note 22, at 786.

<sup>30</sup> *Treasury Securities and Programs*, *supra* note 27.

interest every six months.<sup>31</sup> Finally, TIPS, which protect against inflation by adjusting the principal based on fluctuations in the Consumer Price Index,<sup>32</sup> pay interest every six months and have maturities of five, ten, or thirty years.<sup>33</sup> The government offers a different mix of these instruments from year to year, depending upon its borrowing needs and the then-prevailing term structure of interest rates.<sup>34</sup>

In addition to encompassing four different Treasury securities, the U.S. Treasury market includes at least two distinct markets: a *primary market* and a *secondary trading market*.<sup>35</sup> The primary market for Treasury securities involves transactions between the Treasury Department and the twenty-four primary dealers—banks or broker-dealers that trade in Treasury securities with the New York Federal Reserve<sup>36</sup>—or the wide range of other market participants bidding directly in an auction that the Treasury Department conducts on a regular basis throughout the year.<sup>37</sup> Primary dealers are required to bid on new Treasury issues at auction “even if market environments appear unfavorable.”<sup>38</sup>

The secondary market for Treasury securities involves transactions between market participants, and is itself bifurcated between customer and interdealer markets.<sup>39</sup> The

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<sup>31</sup> *Id.*

<sup>32</sup> *Treasury Inflation-Protected Securities (TIPS)*, TREASURYDIRECT, [https://www.treasurydirect.gov/indiv/products/prod\\_tips\\_glance.htm](https://www.treasurydirect.gov/indiv/products/prod_tips_glance.htm) [<https://perma.cc/JA4J-PSP2>] (last visited Dec. 1, 2021).

<sup>33</sup> *Treasury Securities and Programs*, *supra* note 27.

<sup>34</sup> See GRANT A. DRIESSEN, CONG. RSCH. SERV., R40767, HOW TREASURY ISSUES DEBT 4 (2016) (“If Treasury borrowing requirements or financing policy decisions change, the types of securities, the length of maturity periods, and offering amounts could be altered.”).

<sup>35</sup> Yadav, *supra* note 4, at 1180–81.

<sup>36</sup> *Id.* at 1180.

<sup>37</sup> DRIESSEN, *supra* note 34, at 3.

<sup>38</sup> Yadav, *supra* note 4, at 1200.

<sup>39</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1; see also Ken Griffin, Founder and CEO, Citadel LLC, Remarks Before the Fed. Rsrv. Bank of N.Y., 2015 Roundtable on Treasury Markets and Debt Management 2 (Nov. 20, 2015), <https://www.treasury.gov/about/organizational->



customer market involves trading among end-users of Treasury securities—such as mutual funds, asset managers, and banks.<sup>40</sup> Dealers act as market makers for over-the-counter (OTC) customer trades, in which “participants trade with one another on a bilateral basis rather than on an organized exchange.”<sup>41</sup> Customer trades increasingly occur on electronic trading venues.<sup>42</sup>

In contrast, the interdealer market for on-the-run Treasury securities—that is, the most recently issued bonds or notes<sup>43</sup>—involves dealers trading among themselves.<sup>44</sup> That market has in recent years become “almost completely electronic.”<sup>45</sup> Notably, the interdealer market is “not dominated by the banks,” but by principal trading firms (PTFs) that are both relative newcomers in the Treasury market and “extraordinarily good at making two-way markets” in Treasury securities.<sup>46</sup> As the traditional large bank dealers have reduced their market-making presence, PTFs (including firms such as Citadel Securities) have arrived “to fill the void” and provide needed liquidity.<sup>47</sup> In fact, PTFs now account for twenty-one percent of all Treasury bond

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structure/offices/Documents/11.20.2015-Ken-Griffin-Treasury-Roundtable-Remarks.pdf [https://perma.cc/L2L7-N56M].

<sup>40</sup> See Yadav, *supra* note 4, at 1201.

<sup>41</sup> Dupont & Sack, *supra* note 22.

<sup>42</sup> See Yadav, *supra* note 4, at 1201.

<sup>43</sup> See, e.g., *On-the-Run Treasuries*, CORP. FIN. INST. (last visited Dec. 1, 2021), <https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/on-the-run-treasuries/> [https://perma.cc/F7WG-FZPX]. By contrast, off-the-run Treasury securities are prior issuances, which are less liquid. See *id.*

<sup>44</sup> Griffin, *supra* note 39, at 2.

<sup>45</sup> *Id.*

<sup>46</sup> *Id.*

<sup>47</sup> Press Release, Coal. Greenwich, As U.S. Treasury Dealers Step Back from Market-Making, Alternative Liquidity Providers Emerge (Oct. 13, 2015), <https://www.greenwich.com/press-release/us-treasury-dealers-step-back-market-making-alternative-liquidity-providers-emerge> [https://perma.cc/3AGJ-KUD3]; see also Logan, *supra* note 19 (describing the interdealer market as “generally comprised of dealers and principal trading firms . . . trading with one another in the most liquid securities and largely on electronic order books”).

trades and sixty-one percent of electronic trades on interdealer trading platforms.<sup>48</sup>

Aside from secondary market trading, Treasury securities also underlie robust futures and repurchase (“repo”) markets.<sup>49</sup> Treasury futures are “standardized contracts for the purchase and sale of U.S. government notes or bonds for future delivery.”<sup>50</sup> The Treasury futures markets have been operating for nearly fifty years under a comprehensive regulatory regime overseen by the Commodity Futures Trading Commission (CFTC).<sup>51</sup> All futures are exchange-traded and are subject to central clearing through a regulated clearinghouse.<sup>52</sup>

Unlike the futures market, significant portions of the repo market are traded OTC<sup>53</sup> and remain largely opaque. In a repo transaction, one party sells securities to another and agrees to repurchase them at a set price in the future, often

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<sup>48</sup> Christopher Wittall, *Drumbeat Grows for Mandatory US Treasuries Clearing*, INT’L FIN. REV. (Aug. 28, 2021), <https://www.ifre.com/story/3019795/drumbeat-grows-for-mandatory-us-treasuries-clearing-x0z9yv6vfk> [<https://perma.cc/EX9Z-3J4U>].

<sup>49</sup> *The Basics of U.S. Treasury Futures*, CME GRP. (Jan. 24, 2019), <https://www.cmegroup.com/trading/interest-rates/basics-of-us-treasury-futures.html#> [<https://perma.cc/4R69-HV8R>].

<sup>50</sup> *Id.*

<sup>51</sup> Futures are regulated by the Commodity Futures Trading Commission. U.S. DEP’T OF THE TREASURY ET AL., JOINT STAFF REPORT: THE U.S. TREASURY MARKET ON OCTOBER 15, 2014, at 2 n.1 (2015) (“[T]he CFTC regulates the futures markets, including the Treasury futures markets, and many of its participants.”). In 1975, the CFTC approved the first futures contract on U.S. government debt: the Chicago Mercantile Exchange (“CME”) ninety-day Treasury bill contract. *History of the CFTC: CFTC History in the 1970s*, COMMODITY FUTURES TRADING COMM’N, [https://www.cftc.gov/About/HistoryoftheCFTC/history\\_1970s.html](https://www.cftc.gov/About/HistoryoftheCFTC/history_1970s.html), [<https://perma.cc/5A8D-PG59>] (last visited Dec. 1, 2021).

<sup>52</sup> *Introduction to Futures: Definition of a Futures Contract*, CME GRP. <https://www.cmegroup.com/education/courses/introduction-to-futures/definition-of-a-futures-contract.html#> [<https://perma.cc/3GK4-N4UK>] (last visited Dec. 1, 2021).

<sup>53</sup> See Adam Copeland et al., *How Competitive Are U.S. Treasury Repo Markets?*, LIBERTY ST. ECON. (Feb. 18, 2021), <https://libertystreeteconomics.newyorkfed.org/2021/02/how-competitive-are-us-treasury-repo-markets/> [<https://perma.cc/F8NU-UN3H>].

the next day.<sup>54</sup> A “reverse repo” is the other side of the same trade: a party purchases securities and agrees to sell them back at a set price on a particular day.<sup>55</sup> Distilled to “its financial essence, a repo is a collateralized loan.”<sup>56</sup> Treasury repo transactions are a valuable source of short-term funding for market participants,<sup>57</sup> and can also help the Federal Reserve System “achieve its monetary objectives.”<sup>58</sup>

### III. MARKET STRUCTURE CHALLENGES

The Treasury market—despite its long history and critical role in the U.S. economy and global financial system—is not immune to dislocation. That has become clear in recent years, as this vital market has experienced multiple tests of its structural resiliency during periods of surging volatility and constrained liquidity.

The first significant “wake-up call” sounded on October 15, 2014, when Treasury prices experienced a massive—and abrupt—intraday yield change.<sup>59</sup> Treasury bill yields plummeted thirty-seven basis points before quickly surging

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<sup>54</sup> Dupont & Sack, *supra* note 22, at 797.

<sup>55</sup> *Id.*

<sup>56</sup> *Repurchase and Reverse Repurchase Transactions*, FED. RSRV. BANK OF N.Y., <https://www.newyorkfed.org/aboutthefed/fedpoint/fed04.html> [<https://perma.cc/4RFA-DMTW>] (last visited Dec. 1, 2021).

<sup>57</sup> See R. Jay Kahn & Luke M. Olson, *Who Participates in Cleared Repo?*, OFF. FIN. RSCH. BRIEF SERIES, July 8, 2021, at 1, 1; see also Letter from Adam C. Cooper, Senior Managing Dir. and Chief Legal Officer, Citadel, to David R. Pearl, Exec. Sec’y. U.S. Dep’t of the Treasury, RE: Request for Information on the Evolution of U.S. Treasury Market Structure 4 (Apr. 22, 2016), <https://s3.amazonaws.com/citadel-wordpress-prd102/wp-content/uploads/2016/09/26121850/Citadel-Response-to-the-Treasury-RFI-April-22-2016.pdf> [<https://perma.cc/KE2C-KLST>] (explaining that the Treasury repo market is “commonly used by market participants to finance inventory”).

<sup>58</sup> Lael Brainard, Bd. of Governors of the Fed. Rsrv., Remarks at The Evolving Structure of the U.S. Treasury Market, Fourth Annual Conference: The Structure of the Treasury Market: What Are We Learning? 1 (Dec. 3, 2018), <https://www.bis.org/review/r181206g.pdf> [<https://perma.cc/7CVV-CDFC>].

<sup>59</sup> *Id.*

back upward, producing volatility in related assets such as U.S. dollar swaps and equities.<sup>60</sup> As an International Monetary Fund report noted, the initial plunge in Treasury yields “was larger than on September 15, 2008, when Lehman Brothers filed for bankruptcy.”<sup>61</sup> While the cause of the October 2014 Treasury market volatility remains a matter of debate, the situation contributed to two observed effects: “unusually high volatility” and “strains in liquidity conditions,”<sup>62</sup> placing the world’s most important financial market<sup>63</sup> in a potentially precarious state.

Even greater turmoil arrived in March of 2020, when global financial markets experienced “an extraordinary shock, triggered by the coronavirus pandemic.”<sup>64</sup> Spiraling uncertainty, rising investor pessimism, and spiking volatility across asset classes caused “a surge in demand for cash.”<sup>65</sup> As investors rushed to sell Treasury securities (and other assets), the “flood” of sales swamped dealers’ ability to absorb the trades on their balance sheets,<sup>66</sup> causing bid/ask spreads to stretch “to almost 30 times their normal levels.”<sup>67</sup> This effect, coupled with broader liquidity problems, caused “settlement failures” in Treasury securities to rise “significantly” during

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<sup>60</sup> INT’L MONETARY FUND, GLOBAL FINANCIAL STABILITY REPORT, APRIL 2015: NAVIGATING MONETARY POLICY CHALLENGES AND MANAGING RISKS 32 (2015), <https://www.imf.org/en/Publications/GFSR/Issues/2016/12/31/Global-Financial-Stability-Report-April-2015-Navigating-Monetary-Policy-Challenges-and-42422> (on file with the Columbia Business Law Review).

<sup>61</sup> *Id.*

<sup>62</sup> U.S. DEP’T OF THE TREASURY ET AL., *supra* note 51, at 3.

<sup>63</sup> *See supra* note 1 and accompanying text (describing the global importance of the U.S. Treasury market).

<sup>64</sup> Logan, *supra* note 19.

<sup>65</sup> *Id.*

<sup>66</sup> Darrell Duffie, *Still the World’s Safe Haven? Redesigning the U.S. Treasury Market After the COVID-19 Crisis* 5–6 (Hutchins Ctr. Working Paper No. 62, 2020), [https://www.brookings.edu/wp-content/uploads/2020/05/WP62\\_Duffie\\_v2.pdf](https://www.brookings.edu/wp-content/uploads/2020/05/WP62_Duffie_v2.pdf), [https://perma.cc/ZEL9-THUG].

<sup>67</sup> Logan, *supra* note 19.

that month.<sup>68</sup> Taking these factors together, “measures of [Treasury] market function deteriorated at unparalleled speed not seen since the Global Financial Crisis” of 2007-2009.<sup>69</sup> The Federal Reserve was forced to take extraordinary measures to restore smooth market functioning, including by purchasing \$1.6 trillion in Treasury securities between March and June of 2020.<sup>70</sup>

Simply put, the pandemic-driven volatility of March 2020 significantly tested the Treasury market, as a combination of investor panic, trading disruption, and liquidity constraints put into “brutal view” the structural vulnerabilities of this vital market.<sup>71</sup> Volatility resulting from the COVID-19 pandemic caused “the functioning of the Treasury markets [to be] significantly disrupted.”<sup>72</sup> As the market turmoil in March 2020 made plain, the centrality of the Treasury market as a benchmark for a wide array of other assets can result in spillover risks when the Treasury market is under stress.<sup>73</sup> Had the Federal Reserve not taken extraordinary measures to shore up the Treasury market, continued dislocation “could have led to an even deeper and broader seizing-up of credit and ultimately worsened the economic hardships that many Americans [were] experiencing” during the COVID-19 pandemic.<sup>74</sup> And even with the Federal Reserve’s

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<sup>68</sup> Duffie, *supra* note 66, at 15.

<sup>69</sup> Logan, *supra* note 19.

<sup>70</sup> *Id.*; see also PROGRAM ON INT’L FIN. SYS., MANDATORY CENTRAL CLEARING FOR U.S. TREASURIES AND U.S. TREASURY REPOS 11 (2021), <https://www.pifsinternational.org/wp-content/uploads/2021/11/PIFS-Mandatory-Central-Clearing-for-U.S.-Treasury-Markets-11.11.2021.pdf> [<https://perma.cc/Z5S4-88LH>] (“The Federal Reserve intervened with massive purchases of Treasuries that successfully quelled the sell-off.”).

<sup>71</sup> Yadav, *supra* note 4, at 1230–36.

<sup>72</sup> U.S. DEPT OF THE TREASURY ET AL., *supra* note 2, at 7.

<sup>73</sup> See Logan, *supra* note 19.

<sup>74</sup> *Id.* In addition to purchasing Treasuries, the Federal Reserve offered “unconstrained short-term financing for dealers’ Treasury inventories and exempted Treasuries and reserves from a key capital requirement.” Duffie, *supra* note 66, at 2.

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intervention, Treasury market liquidity did not normalize until mid-April 2020.<sup>75</sup>

We have now had two clear warnings about the potentially dire financial consequences that can follow dislocation and liquidity constraints in the Treasury market. And as the COVID-19 pandemic makes clear, new and unpredictable challenges are inevitable. The key lesson from the events of 2014 and 2020 is that the Treasury market, like any other, requires structural safeguards to mitigate the risk of liquidity traps, counterparty defaults, and surging volatility. Given that Treasury securities have a face value of nearly \$22 trillion<sup>76</sup>—not to mention the likely incalculable value of other financial instruments tied to them—the potential damage of spillover instability in the Treasury market cannot be overstated.

#### IV. STRUCTURAL RECOMMENDATIONS

While the Treasury securities market continues to be “one of the backbones of American prosperity,”<sup>77</sup> the events of October 2014 and March 2020 highlight the opportunities for structural reform. Importantly, such reform is attainable. Strengthening the Treasury market requires not a wholesale rewrite, but a handful of targeted updates to specific aspects of the market that have evolved over time. The proposals that follow are designed to safeguard the Treasury market’s preeminent role in the U.S. economy and the global financial system in the years to come.<sup>78</sup> They would do so by applying structural features that have a tried-and-true record of success in other advanced financial markets: (1) robust public reporting of Treasury securities trades; (2) trading-venue oversight; (3) safeguards for operational resiliency; and (4) expanded central clearing of trades.

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<sup>75</sup> Duffie, *supra* note 66, at 12.

<sup>76</sup> SIFMA, *supra* note 21.

<sup>77</sup> Griffin, *supra* note 39, at 6.

<sup>78</sup> See *supra* note 1 and accompanying text (describing the global importance of the U.S. Treasury market).

## A. Robust Public Reporting

We live in a data-driven world, in which companies, and even individuals, can consume massive amounts of information in a short period of time. In the financial markets, access to such data can allow entities to make informed decisions on a faster basis and may forestall panic if markets have a better understanding of developments as they are occurring. As a result, robust public reporting of transactions is a key source of market transparency and a “hallmark of virtually every major market, including U.S. equities, options, futures, corporate bond, municipal bond, and OTC derivatives.”<sup>79</sup> In contrast to these markets, however, more than fifty percent of U.S. Treasury securities trades are not publicly reported, leaving the Treasury market to operate “without meaningful post-trade transparency.”<sup>80</sup>

Enhancing public access to Treasury market trade data could help all investors rationally address factors driving price transitions and changing liquidity conditions before crises develop. Robust public reporting of financial transactions would provide a host of benefits, such as enhancing competition, improving liquidity, aiding risk management, reducing transaction costs, and increasing investor confidence.<sup>81</sup> It has also been shown to reduce

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<sup>79</sup> CITADEL SEC., ENHANCING COMPETITION, TRANSPARENCY, AND RESILIENCY IN U.S. FINANCIAL MARKETS: POLICY RECOMMENDATIONS FOR THE U.S. SECURITIES AND EXCHANGE COMMISSION, 9 (2021), <https://s3.amazonaws.com/citadel-wordpress-prd101/wp-content/uploads/sites/2/2021/05/03130457/EnhancingCompetitionTransparencyandResiliencyinUSFinancialMarkets.pdf> [https://perma.cc/6533-ZP3G].

<sup>80</sup> *Id.*

<sup>81</sup> See GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 16; CITADEL SEC., *supra* note 79; see also Griffin, *supra* note 39, at 6 (“Post-trade transparency is critical to healthy, functioning markets.”); Luis A. Aguilar, *Statement on Making the Municipal Securities Market More Transparent, Liquid, and Fair*, SEC. & EXCH. COMM’N (Feb. 13, 2015), <https://www.sec.gov/news/statement/making-municipal-securities-market-more-transparent-liquid-fair.html> [https://perma.cc/9JQR-QXWN] (stating that relatively low transparency in municipal securities markets has reduced liquidity); Michael A. Goldstein,

systemic risk and fortify markets.<sup>82</sup> Establishing robust public reporting requirements for the Treasury securities and repo markets would thus “allow new information to be efficiently assimilated” and “contribut[e] to resiliency in times of stress.”<sup>83</sup>

This would not be a heavy lift. In fact, the infrastructure necessary to create a robust public reporting system for the cash Treasury market has been in place for years.<sup>84</sup> Since July 2017, FINRA members have been required to report their trades in “all marketable U.S. Treasury Securities” to FINRA’s Trade Reporting and Compliance Engine (TRACE).<sup>85</sup> While Treasury trade data that is reported to TRACE is not currently made public,<sup>86</sup> in March of 2020, FINRA began publicly disclosing the aggregated volume of Treasury trades submitted to TRACE during the prior week.<sup>87</sup> In addition, TRACE already facilitates the public reporting of corporate-

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Edith S. Hotchkiss & Erik R. Sirri, *Transparency and Liquidity: A Controlled Experiment on Corporate Bonds*, 20 REV. FIN. STUDIES 235, 237 (2007) (discussing positive effects of transparency in corporate-bond market bid-ask spreads and liquidity).

<sup>82</sup> See Heath P. Tarbert & Daniel J. Grimm, *The CFTC’s Swap Data Overhaul*, 20 FLA. ST. U. BUS. REV. 1, 25–26 (2021) (describing the importance of public transparency in reducing systemic risk in OTC swaps markets).

<sup>83</sup> Cooper, *supra* note 57, at 12.

<sup>84</sup> See, e.g., Michael J. Fleming, *Advent of Trade Reporting for U.S. Treasury Securities*, LIBERTY ST. ECON. (Jan. 18, 2017), <https://libertystreeteconomics.newyorkfed.org/2017/01/advent-of-trade-reporting-for-us-treasury-securities/> [<https://perma.cc/8XTB-XJG3>].

<sup>85</sup> *Frequently Asked Questions (FAQ) About the Trade Reporting and Compliance Engine (TRACE)*, FINRA, <https://www.finra.org/filing-reporting/trace/faq> [<https://perma.cc/F9MD-GCBQ>] (last visited Dec. 2, 2021). Marketable Treasury securities are those that can be traded on secondary markets after issuance. Dupont & Sack, *supra* note 22, at 795.

<sup>86</sup> See Yadav, *supra* note 4, at 1223.

<sup>87</sup> Press Release, FINRA, FINRA Launches New Data on Treasury Securities Trade Volume (Mar. 10, 2020), <https://www.finra.org/media-center/newsreleases/2020/finra-launches-new-data-treasury-securities-trading-volume> [<https://perma.cc/ZE4K-RANM>].



bond trades within fifteen minutes.<sup>88</sup> Robust public reporting of all Treasury trades would require only a modest extension.<sup>89</sup> And taking that small step beyond the existing infrastructure to increase the scope and speed of Treasury market reporting would significantly improve transparency at relatively low cost. Financial regulators should likewise consider building a public reporting system for Treasury repos.<sup>90</sup> Such a system would yield benefits similar to those arising from public reporting of cash Treasuries, and further mitigate situations in which “regulators do not have comprehensive data” on Treasury repo trades.<sup>91</sup>

## B. Trading-Venue Oversight

Over the past two decades, the interdealer market for U.S. Treasury securities has experienced a significant increase in electronic trading, “leading to better pricing and deeper liquidity.”<sup>92</sup> The rise in electronic trading has also “contributed to a marked shift in the composition of participants in the interdealer” market,<sup>93</sup> increasing competition.<sup>94</sup> Prior to 1992, only primary dealers could participate in the interdealer market.<sup>95</sup> From 1992 onward, netting members<sup>96</sup> of the Government Securities Clearing

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<sup>88</sup> See GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 16.

<sup>89</sup> See *id.*

<sup>90</sup> Mary Jo White, Chair, SEC. & EXCH. COMM’N, Prioritizing Regulatory Enhancements for the U.S. Treasury Market, Keynote Address, The Evolving Structure of the U.S. Treasury Market Second Annual Conference (Oct. 24, 2016), <https://www.sec.gov/news/speech/white-keynote-us-treasury-market-conference-102416.html> [<https://perma.cc/F9HY-4ZU2>].

<sup>91</sup> *Id.*

<sup>92</sup> Cooper, *supra* note 57, at 2.

<sup>93</sup> U.S. DEPT OF THE TREASURY ET AL., *supra* note 51, at 36.

<sup>94</sup> Cooper, *supra* note 57, at 2.

<sup>95</sup> U.S. DEPT OF THE TREASURY ET AL., *supra* note 51, at 36.

<sup>96</sup> “Netting’ is a process by which an exposure or obligation is reduced by combining two or more positions.” *Netting*, CORP. FIN. INST., <https://corporatefinanceinstitute.com/resources/knowledge/deals/netting/> [<https://perma.cc/25FD-2T5H>] (last visited Dec. 2, 2021). Netting is often performed by clearinghouses and can provide liquidity by making

Corporation (now called the Fixed Income Clearing Corporation, or FICC)<sup>97</sup> were given access to the interdealer markets.<sup>98</sup> In the mid-2000s, market-access liberalization continued, with PTFs entering interdealer platforms as new liquidity providers<sup>99</sup> and growing to play a dominant role on electronic interdealer platforms.<sup>100</sup> That expansion in the market has brought a host of benefits to Treasury investors: For example, by acting as liquidity providers, PTFs help reduce bid/ask spreads and lower prices.<sup>101</sup>

Although the Treasury markets have made significant progress in liberalizing market access, that progress has not been universally embraced. Instead, certain trading platforms remained designed to protect entrenched interests.<sup>102</sup> In contrast, other advanced financial markets offer important lessons on the value of openness. To ensure ample liquidity (and reduce volatility), trading venues for other major U.S. securities and derivatives markets are subject to non-discriminatory access requirements that preclude similar

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settlement processes more efficient and less cash-dependent. See Michael Fleming & Frank Keane, *The Netting Efficiencies of Marketwide Central Clearing* 2, 5 (Fed. Rsrv. Bank of N.Y., Working Paper No. 964, 2021).

<sup>97</sup> The present-day FICC was established in 2003 as a subsidiary of the Depository Trust & Clearing Corporation (“DTCC”), and acts as the central counterparty for trading in U.S. government securities. DTCC, MORE CLEARING, LESS RISK: INCREASINGLY CENTRALLY CLEARED ACTIVITY IN THE U.S. TREASURY CASH MARKET 5 (2021), <https://www.dtcc.com/-/media/Files/PDFs/DTCC-US-Treasury-Whitepaper.pdf> 4 [<https://perma.cc/T6M3-S3V2>]. Following the 2007-2009 financial crisis, FICC was designated as a systemically important financial market utility under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act. See *Systemically Important Financial Market Utilities (SIFMUS)*. DTCC, <https://www.dtcc.com/about/managing-risk/sifmu> [<https://perma.cc/U4JX-2XZM>] (last visited Dec. 2, 2021).

<sup>98</sup> U.S. DEPT OF THE TREASURY ET AL., *supra* note 51, at 36.

<sup>99</sup> *Id.*

<sup>100</sup> Wittall, *supra* note 48.

<sup>101</sup> See Griffin, *supra* note 39, at 5 (discussing the rise of electronic trading and noting that it has “revolutionized the end investor’s ability to transact at far lower prices. This . . . drives down the cost of capital and, in the case of the Treasury market, drives down the cost of issuance.”).

<sup>102</sup> Cooper, *supra* note 57, at 7.

impediments to competition.<sup>103</sup> For example, evidence gathered by the Bank of England suggests that improving access to trading venues in U.S. interest-rate swap markets is “the cornerstone of real market structure change,”<sup>104</sup> resulting in swap-market end-users saving million per day on transaction costs.<sup>105</sup>

Building the Treasury market of the future requires continued progress on non-discriminatory access to trading venues. At least two straightforward reforms are needed. First, an important step toward non-discriminatory access is simply to require venues to disclose their access requirements, which will force anti-competitive measures out into the open.<sup>106</sup> Justice Brandeis famously wrote that “sunlight is . . . the best of disinfectants.”<sup>107</sup> That adage holds true for today’s Treasury market, and merely revealing discriminatory policies may lead to their elimination.

Second, all trading venues for Treasury securities that function as alternative trading systems (ATSs) should be required to register with the Securities and Exchange Commission (SEC)—just as ATSs for equities and other instruments do—which will subject them to fair-access and related requirements under what is known as Regulation

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<sup>103</sup> *Id.* at 8 (discussing impartial access requirements imposed by the Securities and Exchange Commission and the CFTC).

<sup>104</sup> Mark Spanbroek, *Non-discriminatory Access to MiFID II Derivatives Trading Venues: Critical for Market Transparency and Competition*, FUTURES INDUS. ASS’N (Feb. 18, 2016), <https://www.fia.org/epta/resources/non-discriminatory-access-mifid-ii-derivatives-trading-venues-critical-market> [<https://perma.cc/JP5N-3YQF>].

<sup>105</sup> Evangelos Benos, Richard Payne & Michalis Vasios, *Centralized Trading, Transparency and Interest Rate Swap Market Liquidity: Evidence from the Implementation of the Dodd-Frank Act 23* (Bank of England, Staff Working Paper No. 580, 2018).

<sup>106</sup> See Griffin, *supra* note 39, at 5 (“All access arrangements should be public, all fee arrangements should be public, and there should be a level and open playing field for all.”); Cooper, *supra* note 44, at 8, 13–14 (“[E]ach trading venue should be required to have a publicly available rulebook that clearly describes order types and trading protocols”).

<sup>107</sup> LOUIS D. BRANDEIS, OTHER PEOPLE’S MONEY AND HOW THE BANKERS USE IT 92 (1914).

ATS.<sup>108</sup> While the SEC has recently proposed a rulemaking to close existing exemptions from Regulation ATS for trading venues that handle only government securities,<sup>109</sup> the proposed rule as presently conceived may not cover trading venues that rely on request-for-quote (RFQ) or streaming quote systems.<sup>110</sup> If finalized in its current form, then, the rule will retain exemptions from ATS registration for many Treasury market dealer-to-client trading venues.<sup>111</sup> Instead, the final rule should be fortified to ensure that those venues are also subject to Regulation ATS.<sup>112</sup> Doing so will lead to better execution and lower costs, not only for market participants but also for end users such as pension funds, 401(k) managers, and other interests.<sup>113</sup>

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<sup>108</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 17.

<sup>109</sup> See Regulation ATS for ATSS that Trade U.S. Government Securities, NMS Stock, and Other Securities; Regulation SCI for ATSS that Trade U.S. Treasury Securities and Agency Securities; and Electronic Corporate Bond and Municipal Securities Markets, Exchange Act Release No. 90,019, 85 Fed. Reg. 87,106, 87,106 (proposed Dec. 31, 2020) (to be codified at 17 C.F.R. pts. 240, 242, 249). The proposal also addresses exemptions to SEC Regulation Systems Compliance and Integrity (“SCI”). See *id.* at 87,106–07 (proposed Dec. 31, 2020) (to be codified at 17 C.F.R. pts. 240, 242, 249).

<sup>110</sup> See Elad L. Roisman, Comm’n, Sec & Exch. Comm’n, Remarks at U.S. Treasury Market Conference, (Sept. 29, 2020), <https://www.sec.gov/news/speech/roisman-us-treasury-conference-2020-09-29> [<https://perma.cc/97XR-TC87>] (“While our ATS proposal is an important step in strengthening the oversight of certain Treasury trading venues, this oversight framework may not extend to all trading venues that utilize . . . [RFQ] or streaming quote protocols. This is obviously a gap.”); see also G30, *Treasury Market*, *supra* note 1, at 17 (“[T]he proposal evidently would not cover multidealer platforms that use . . . (RFQ) or streaming quote protocols[.]”).

<sup>111</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 17.

<sup>112</sup> See Griffin, *supra* note 39, at 5; see also Cooper, *supra* note 57, at 8.

<sup>113</sup> See Benos et al., *supra* note 105, at 2, 23.

### C. Safeguards for Operational Resiliency

As prior market dislocations reveal, there is a strong need to ensure the appropriate operational resiliency to protect Treasury investors from the risk of market shocks. Adoption of the prior proposal—requiring trading venues that function as alternative trading systems to register with the SEC—would subject such trading venues to market-resiliency requirements, in addition to the fair-access rules discussed above.<sup>114</sup> But that is only part of the solution for improving operational resiliency. Trading venues for Treasury securities must also adopt safeguards against new types of risk, including the risk of technological errors.

While the growth of electronic trading has significantly increased Treasury market liquidity, it also comes with risks that must be addressed responsibly.<sup>115</sup> Chief among those is the risk of erroneous order placement. It is critical that electronic trading venues be able to cancel erroneous orders quickly upon receipt, in order to prevent spillover effects that can follow if those erroneous orders enter the market.<sup>116</sup> For example, in 2012, the electronic-trading firm Knight Capital experienced a “significant error” in its electronic order-routing system for equities, causing Knight to acquire an “unintended multi-billion dollar portfolio of securities.”<sup>117</sup> When the dust settled, Knight had incurred a \$460 million loss.<sup>118</sup> But perhaps even more importantly, the errors in Knight’s technology systems did not merely decimate the firm; they imposed instability and price volatility on the broader stock market.<sup>119</sup>

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<sup>114</sup> See *supra* note 108 and accompanying text.

<sup>115</sup> Griffin, *supra* note 39, at 5 (“There is no doubt operational risk exists in a world of electronic trading.”).

<sup>116</sup> *Id.*

<sup>117</sup> Knight Cap. Americas LLC, Exchange Act Release No. 70694, 2013 WL 5631976, at 1, 4 (Oct. 16, 2013).

<sup>118</sup> *Id.* at 4.

<sup>119</sup> *Id.* at 6 (stocks that Knight was trading experienced price swings exceeding ten percent).

The SEC has recognized the detrimental effects of such errors in the securities markets. Since 2014, the SEC has required that electronic trading venues for equity securities have appropriate risk controls geared toward markets that are increasingly electronic.<sup>120</sup> For its part, the CFTC recently finalized a set of risk principles for electronic trading that require venues to take steps to address market disruptions and system anomalies.<sup>121</sup> One example is the use of “kill switches,” which permit electronic trading venues to quickly halt trading when they receive erroneous orders.<sup>122</sup> Kill switches help prevent technological errors from producing widespread market disruption.<sup>123</sup> If they had been in place during 2012, they “would have promptly halted the erroneous trading by Knight Capital,” thus avoiding or reducing the turmoil that followed.<sup>124</sup>

Although the equities and derivatives markets now require such measures,<sup>125</sup> there are no comparable requirements for venues where Treasury securities trade. Risk control mechanisms that can prevent or cancel errant orders would seem to offer the same considerable benefits in those venues. And again, borrowing an existing, well-established tool from the equities and derivatives markets would be a low-cost reform to help strengthen and modernize the Treasury market.

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<sup>120</sup> See *Division of Trading and Markets: Responses to Frequently Asked Questions Concerning Regulation SCI*, SEC. & EXCH. COMM’N (Sept. 2, 2015), <https://www.sec.gov/divisions/marketreg/regulation-sci-faq.shtml> [<https://perma.cc/X27W-DEYQ>] (last updated Aug. 21, 2019).

<sup>121</sup> See *Electronic Trading Risk Principles*, 86 Fed. Reg. 2048 (Jan. 11, 2021) (to be codified at 17 C.F.R. pt. 38).

<sup>122</sup> Griffin, *supra* note 39, at 5–6.

<sup>123</sup> See Sarah N. Lynch & Herbert Lash, *Stock Exchanges Are Working on a ‘Kill Switch’ To Stop Trading During Emergencies*, BUS. INSIDER (Sept. 12, 2013, 6:43 PM), <https://www.businessinsider.com/stock-exchanges-kill-switch-2013-9> (on file with the Columbia Business Law Review).

<sup>124</sup> Griffin, *supra* note 39, at 6.

<sup>125</sup> See *Division of Trading and Markets: Responses to Frequently Asked Questions Concerning Regulation SCI*, *supra* note 120; see also RULEBOOK § 6130 (The Nasdaq Stock Mkt. 2021); LISTED CO. MANUAL § 7.19 (N.Y. Stock Exch. 2021).

## D. Expanded Central Clearing

As the complexity and speed of financial transactions have increased, so have the risks of a defaulting counterparty to a transaction. Counterparty credit risk is a particularly serious concern in the Treasury market, and settlement failures dramatically increased for uncleared positions during the market turmoil of March 2020.<sup>126</sup> Central clearing is critical to reducing systemic risk—and is arguably the most significant reform proposed in this Article.<sup>127</sup> Central clearing occurs when a clearinghouse stands between trading parties and “acts as the buyer for every seller and the seller for every buyer.”<sup>128</sup> Placing a clearinghouse between trading parties can prevent losses from “cascading through the wider system if one of the counterparties to a transaction defaults before the trade is completed.”<sup>129</sup>

In many other advanced financial markets, central clearing of financial transactions has long been instrumental in reducing counterparty credit risk.<sup>130</sup> This core benefit was on full display in the derivatives markets in March 2020, when central clearing shored up faith in the markets and

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<sup>126</sup> See Duffie, *supra* note 66, at 15; see also *supra*, Part III.

<sup>127</sup> See PROGRAM ON INT’L FIN. SYS., *supra* note 70, at 28 (stating that policymakers should focus on establishing mandatory central clearing for the Treasury market to “mitigate[e] the risk of . . . cascading failures” given “the systemic importance of Treasury markets.”).

<sup>128</sup> *What is Clearing?*, CME GRP., <https://www.cmegroup.com/education/courses/clearing/what-is-clearing.html>. (on file with Columbia Business Law Review) (last visited Dec. 2, 2021). Clearing reduces counterparty credit risk because the clearinghouse will step in to ensure trades are completed in the event of a counterparty default. See *id.*

<sup>129</sup> Wittall, *supra* note 48.

<sup>130</sup> See U.S. DEP’T OF THE TREASURY ET AL., *supra* note 2, at 29 (“Central clearing is widely used in financial markets to reduce risk and improve efficiency,” including in U.S. markets for “equities, exchange-traded derivatives, and certain standardized swaps.”); see also *Financial Clearing Houses*, CFA INST., <https://www.cfainstitute.org/en/advocacy/issues/central-clearing-houses> [<https://perma.cc/S8WW-NSDE>] (last visited Dec. 2, 2021) (describing central clearing in stock, mutual fund, ETF, bond, option, and futures transactions).

helped cushion the impact of historic volatility sparked by the COVID-19 pandemic.<sup>131</sup> Indeed, there is little or no record of any major clearing member defaults during that period.<sup>132</sup> The effectiveness of clearinghouses in reducing systemic risk in the derivatives market during the 2020 pandemic-induced crisis stands in contrast with the 2008 financial crisis, in which uncleared derivatives amplified risk by, among other things, making it difficult to assess counterparty credit risk.<sup>133</sup> Clearing, by contrast, supports “transparent risk management processes” that reduce this risk.<sup>134</sup>

The U.S. Treasury securities market lags behind its peers in this regard. Unlike many equities, options, futures, and swaps markets,<sup>135</sup> it does not impose any broad-based clearing requirements.<sup>136</sup> Although dealer-to-dealer trades are subject to clearing in some circumstances (notably through FICC),

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<sup>131</sup> Heath P Tarbert, *The Enduring Legacy of the Dodd-Frank Act’s Derivatives Reform*, 6 J. FIN. REG. 159, 166 & n.34, 168 (2020).

<sup>132</sup> See INT’L SWAPS AND DERIVATIVES ASSOC., COVID-19 AND CCP RISK MANAGEMENT FRAMEWORKS 2–3 (2021), <https://www.isda.org/a/3jjTE/COVID-19-and-CCP-Risk-Management-Frameworks-January-2021.pdf> [<https://perma.cc/73U3-JD4R>] (identifying “three small member” defaults or close-outs but explaining that “none affected market stability” and that clearinghouses “were able to withstand the most volatile market period since 2008”).

<sup>133</sup> See Heath Tarbert, Opinion, *Volatility Ain’t What It Used To Be*, WALL ST. J. (Mar. 23, 2020, 7:08 PM) (on file with the Columbia Business Law Review).

<sup>134</sup> PROGRAM ON INT’L FIN. SYS, *supra* note 70, at 31.

<sup>135</sup> See, e.g., *Equities Clearing Services*, DTCC, <https://www.dtcc.com/clearing-services/equities-clearing-services> [<https://perma.cc/4NVV-TB37>] (last visited Dec. 2, 2021) (“DTCC’s National Securities Clearing Corporation . . . clears and settles virtually all broker-to-broker equity, corporate and municipal bond and unit investment trust . . . transactions in the U.S. markets[.]”); *What is OCC?*, OCC <https://www.theocc.com/Company-Information/What-Is-OCC> [<https://perma.cc/9URH-ZR5K>] (last visited Dec. 2, 2021), (describing OCC as an equities clearing association); *Clearing: Products and Markets*, ICC, <https://www.theice.com/clearing/products-markets> [<https://perma.cc/GBT9-HUJ3>] (last visited Dec. 2, 2021) (“We clear multi-asset futures, options and OTC products across a variety of markets[.]”).

<sup>136</sup> See GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 1, 10; Yadav, *supra* note 4, at 1244–45.



“[t]here is essentially no central clearing of dealer-to-client trades of Treasuries.”<sup>137</sup> That is a particularly notable deficiency in light of the rise in electronic trading and the improved Treasury market liquidity advanced by PTFs. Without a broad-based central clearing requirement, “[m]ost trades involving PTFs” are simply left to “settle bilaterally.”<sup>138</sup> Likewise, Treasury repo markets—while subject to higher levels of central clearing than dealer-to-client securities trades—similarly do not have broad clearing requirements.<sup>139</sup>

In addition to the systemic benefits of reducing counterparty credit risk, central clearing comes with another advantage: multilateral netting. Netting settlement obligations through a clearinghouse can improve liquidity because it “reduce[s] the money and securities that must change hands,” which can “free up space on dealers’ balance sheets for additional trades that could help keep the market liquid.”<sup>140</sup> Freeing up balance sheets through netting can “enhance capacity to make markets during both normal times and stress events.”<sup>141</sup> Data suggest that multilateral netting through central clearing of Treasury securities trades could

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<sup>137</sup> GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1; *see also id.* at 10 (“In the dealer-to-client segment of the Treasury market, trades of Treasury securities have never been centrally cleared.”).

<sup>138</sup> Wittall, *supra* note 48; *see, e.g.*, GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1 (explaining that while trades between dealers are usually centrally cleared, “trades involving PTFs are not centrally cleared but instead are settled bilaterally with the” interdealer-broker”); DTCC, *supra* note 97 (“[T]he Treasury market’s evolution over the past 20 years has resulted in an increased share of outright purchases and sales of treasuries being . . . bilaterally cleared and settled.”).

<sup>139</sup> *See* GROUP OF THIRTY WORKING GROUP ON TREASURY MARKET LIQUIDITY, *supra* note 1, at 10.

<sup>140</sup> Marta Chaffee & Sam Schulhofer-Wolf, *Chicago Fed Insights: Is a Treasury Clearing Mandate the Path to Increased Central Clearing?*, FED. RSRV. BANK OF CHI. (June 23, 2021), <https://www.chicagofed.org/publications/blogs/chicago-fed-insights/2021/treasury-clearing-mandate> [<https://perma.cc/375Q-HMQJ>].

<sup>141</sup> U.S. DEP’T OF THE TREASURY ET AL., *supra* note 2, at 30.

have tempered COVID-driven market disruption by “lower[ing] dealers’ daily gross settlements obligations by roughly \$330 billion (60%)” in the weeks surrounding March 2020, and by “nearly \$800 billion (70%) when trading was at its highest.”<sup>142</sup> Freeing up this significant amount of capital through clearing-induced position netting would have injected much-needed liquidity into the market at a critical time.<sup>143</sup>

At a high level, requiring mandatory clearing of securities and repo trades and enabling multilateral netting are straightforward reforms. But those reforms also require careful attention to the resulting clearinghouses to ensure both fair and objective criteria for direct clearinghouse membership and an effective client clearing model for indirect access.<sup>144</sup> As for direct membership, regulators should ensure that membership criteria are objective and are not used to artificially limit the population of clearing members.<sup>145</sup> After all, because any clearinghouse ultimately relies on the mutualization of losses, its success lies in the strength and number of sound clearing members. As for indirect membership, regulators should similarly ensure that market

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<sup>142</sup> Fleming & Keane, *supra* note 96, at 2.

<sup>143</sup> See Logan, *supra* note 19 (explaining, in the context of pandemic-linked volatility, that “[i]ncreased central clearing [in the Treasury market] can help market participants manage settlement risk and facilitate more efficient balance sheet usage.”); see also Duffie, *supra* note 66, at 16 (“Central clearing . . . reduces the amount of dealer balance-sheet space necessary to maintain liquid markets. This arises from improved netting.”).

<sup>144</sup> For example, the CFTC requires registered derivatives clearing organizations (“DCOs”) to comply with Core Principles for clearing entities, which include possessing adequate financial resources, well-functioning risk controls, and system safeguards that provide for business continuity and resilience. Derivatives Clearing Organization General Provisions and Core Principles, 85 Fed. Reg. 4800 (Jan. 27, 2020) (to be codified at C.F.R. pts. 1, 39, 140).

<sup>145</sup> Nellie Liang & Pat Parkinson, *Enhancing Liquidity of the U.S. Treasury Market Under Stress* 10 (Hutchins Ctr., Working Paper No. 72, 2020), <https://www.brookings.edu/research/enhancing-liquidity-of-the-u-s-treasury-market-under-stress/> [<https://perma.cc/4XB7-X4QN>] (arguing that Treasury market clearing membership requirements must not “unnecessarily impede membership by smaller dealers or impose unnecessarily constraints on client clearing activity by smaller dealers.”).

participants that wish to access the clearinghouse indirectly as a client are able to do so on fair and non-discriminatory terms.<sup>146</sup>

## V. CONCLUSION

Since the Founding, the Treasury market has played—and continues to play—an unparalleled role in the U.S. economy and the global financial system.<sup>147</sup> We would expect the Treasury market to have strong structural features, if not the most transparent and robust of any financial market. Yet, despite the strong leadership of the Treasury Department and the Federal Reserve Bank of New York, the Treasury market lacks some of the basic structural features that other advanced markets have adopted. This Article contends that aberration can be largely addressed by implementing four reforms with well-established benefits: robust public reporting of trades, non-discriminatory market access, appropriate oversight over trading venues, and expanded central clearing.

As our young nation fought for its independence, Alexander Hamilton argued that strong national markets would be central to that fight. He wrote that it is “by introducing order into our finances—by restor[ing] public credit—not by gaining battles, that we are finally to gain our object.”<sup>148</sup> But even as Hamilton sought to develop a modern financial system, he also acknowledged the value of lessons from history, emphasizing alongside James Madison that “[e]xperience is the oracle of truth.”<sup>149</sup> As we continue developing and modernizing the critical U.S. Treasury market, we must also build on the experience gained in other

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<sup>146</sup> See FIA PRINCIPAL TRADERS GROUP, CLEARING A PATH TO A MORE RESILIENT TREASURY MARKET (2021) 9, [https://www.fia.org/sites/default/files/2021-07/FIA-PTG\\_Paper\\_Resilient%20Treasury%20Market\\_FINAL.pdf](https://www.fia.org/sites/default/files/2021-07/FIA-PTG_Paper_Resilient%20Treasury%20Market_FINAL.pdf) [https://perma.cc/3SR8-JWED].

<sup>147</sup> See *supra* note 1 and accompanying text.

<sup>148</sup> Letter from Alexander Hamilton to Robert Morris, *supra* note 11.

<sup>149</sup> THE FEDERALIST NO. 20 (James Madison and Alexander Hamilton).

advanced financial markets. Future generations of Americans deserve no less.