CHARTERING INTO FINTECH WATERS: THE IMPACT OF FINANCIAL TECHNOLOGIES ON BANKING REGULATIONS

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I. Introduction

The rise of financial technology ("FinTech") represents a fundamental change in the way countries and organizations operate: with enhanced products and services, increased efficiency, and reduced costs, competitiveness and innovation is at an all-time high.[1] FinTech is the catch-all term for technologies that digitalize, streamline, and disrupt traditional financial services using software, algorithms, and applications.[2] FinTech is desirable as an alternative to

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[1] *See* Aaron C. F. Salerno, *REGULATING THE FINTECH REVOLUTION: HOW REGULATORS CAN ADAPT TO TWENTY-FIRST CENTURY FINANCIAL TECHNOLOGY*, 75 N.Y.U. ANN. SURV. AM. L. 365, 366 (2020) (emphasizing that "[t]he development of FinTech has transformed financial services and the global economy. Although interest from academics . . . policymakers, [and media outlets] is relatively recent, FinTech has always been a key element of the post-Industrial Revolution economy."). The FinTech revolution "has created numerous challenges to regulators trying to effectively manage and preserve stability in the marketplace." *Id.* *See also* Douglas W. Arner et al., *Fintech, Regtech, and the Reconceptualization of Financial Regulation*, 37 NW. J. INT'L L. & BUS. 371, 374 (2017) [hereinafter *Fintech, Regtech, and Reconceptualization*] (stating that competition from FinTech companies is expected to put US $4.7 trillion of revenues at risk for traditional financial institutions); *The fintech revolution*, THE ECONOMIST (May 9, 2015), *archived at* https://perma.cc/KJ3P-GW28 (noting that FinTech firms have attracted over $12 billion in investments in 2014, up from $4 billion the year before, with the bigger effect from the fintech revolution likely forcing incumbents to cut costs and improve the quality of their service to keep up with these new technologies).

[2] *See* Stephanie Walden, *What Is Fintech And How Does It Affect How I Bank?*, FORBES (Aug. 3, 2020), *archived at* https://perma.cc/4W7R-K455 (stating that

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traditional financial structures due to the amount of open information on the internet, low costs associated with having no physical infrastructure, and changing demographics providing access to millions of users in younger generations.[3] Since the 2008 Financial Crisis, banks and other financial institutions are incorporating FinTech usage at an increasing rate.[4]

FinTech stands for financial technology as it "…is a catch-all term for technology used to streamline, digitize, augment, or disrupt traditional financial services."). *See also* Julia Kagan, *Financial Technology – Fintech*, INVESTOPEDIA (Aug. 27, 2020), *archived at* https://perma.cc/PYT4-CQV5 (defining what is Fintech).

> Financial technology (Fintech) is used to describe new tech that seeks to improve and automate the delivery and use of financial services. At its core, fintech is utilized to help companies, business owners and consumers better manage their financial operations, processes, and lives by utilizing specialized software and algorithms that are used on computers and, increasingly, smartphones. Fintech, the word, is a combination of "financial technology".

Id. See also Patrick Schueffel, *Taming the Beast: A Scientific Definition of Fintech*, 4 J. INNOVATION MGMT. 32, 45–46 (2016) (describing that FinTech is broad enough to capture the essential quality of the object, i.e. it is a new sector of the financial industry that applies technology to improve financial activities not previously done before, yet it is also narrow enough to differentiate these objects from other financial technologies); *FinTech*, FIN. STABILITY BD. (Oct. 21, 2021), *archived at* https://perma.cc/T57F-QEZH (defining FinTech as "… technologically enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on financial markets and institutions and the provision of financial services. FinTech innovations are affecting many different areas of financial services.").

[3] *See* BD. OF GOVERNORS OF THE FED. RSRV. SYS., CONSUMERS AND MOBILE FINANCIAL SERVICES 2016, 4 (2016) (showing that in younger adult demographics the use of mobile financial services is higher). According to the demographics presented, after every year of the survey, older consumers have consistently been less and less likely to use mobile banking than younger consumers of the survey. *Id. See also What is cloud computing?*, MICROSOFT AZURE (Oct. 15, 2021), *archived at* https://perma.cc/DC3Q-G7X2 (stating the reduced costs associated with cloud computing. For example, cloud computing eliminates the expense of buying hardware and software and setting up and running the data storage at on-site datacenters. With cloud computing there is no more physical racks of servers, constant use of electricity for power and cooling, and on-site IT experts for managing the infrastructure. Reducing a lot of expenses for physical infrastructure).

[4] *See Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 381 (explaining that while successful FinTech start-ups are not brand new technologies in any sense, like Bloomberg in the 1980s and PayPal in the late 1990s, their numbers, status, and

Additionally, the COVID-19 pandemic spurred innovation in technology through the transformation of online platforms and online sales, with changes also occurring in technology regulations.[5] Companies and governmental entities are currently determining the best way to regulate FinTech without stifling innovation or harming investors and consumers along the way.[6] While there are many

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prominence have increased immensely since 2008). The major drivers of the post-2008 evolution of RegTech is traditional financial institutions, particularly large global banks, stemming from their appetite for efficient tools with which to deal with new massive complex regulatory and compliance demands. *Id.* at 384–85. *See also* Salerno, *supra* note 1, at 368 (stating that "[t]he 2008 Global Financial Crisis (GFC) marked a notable shift in FinTech's history and the commencement of a new era--the FinTech Revolution . . . characterized by an increase in the use of financial technology by non-licensed and non-traditional financial companies to compete directly with incumbent licensed financial institutions."); Douglas W. Arner et al., *THE EVOLUTION OF FINTECH: A NEW POST-CRISIS PARADIGM?*, 47 GEO. J. INT'L L. 1271, 1291 (2016) [hereinafter *THE EVOLUTION OF FINTECH*] (emphasizing that FinTech is a core driver of I.T. spending by financial institutions, especially since 2008, as financial institutions have needed to build much better compliance systems to deal with the massive volume of post-crisis regulatory changes; approximately one-third of Goldman Sachs' 33,000 staff are engineers, more than the number at the tech giants like LinkedIn, Twitter or Facebook); *Fintech is here to stay, says JPMorgan chief Jamie Dimon*, FINEXTRA (Apr. 7, 2021), *archived at* https://perma.cc/7AJJ-J43V [hereinafter FINEXTRA] (reporting that JPMorgan's Chase Chief Executive Officer Jamie Dimon claims FinTech in banking is here to stay and that focusing investments in AI and machine learning tools will accelerate a shift to cloud-based banking).

[5] *See* Rachel O'Brien, *Fintech Trends And Regulations To Watch In 2021*, LAW360 (Jan. 3, 2021), *archived at* https://perma.cc/887D-HUYQ (mentioning that in 2021 there will only be an increase in the financial technology developments due to the COVID-19 pandemic, and that the world is not going to go back to a pre-pandemic style of doing business and operating due to new habits and technology). On a federal level, enforcement actions from the U.S. Securities and Exchange Commission points to the SEC expanding its specialized finhub unit to be a new dedicated office, addressing regulatory and compliance efforts in the space. *Id. See, e.g.*, Philip Rowan et al., *COVID-19 spurred a rise in FinTech. Now regulators are catching up.*, WORLD ECON. F. (Oct. 28, 2020), *archived at* https://perma.cc/S5PV-LCXM (finding in a study that COVID-19 has made FinTech regulation more of a priority to regulators than pre-pandemic times).

[6] *See* Gregory D. Omer, *Modernization of Fintech Regulation: Analyzing State Regulatory Solutions for Banks and Nonbanks*, 72 CONSUMER FIN. L.Q. REP. 295, 305 (2018) (emphasizing that certain state-based regulatory initiatives facilitating

benefits associated with FinTech, the innovative and traditionally disruptive technology brings up the question of how FinTech fits within existing banking regulatory frameworks.[7] Currently, banks are dealing with a brunt of these regulatory actions and many states are taking different approaches to incorporate FinTech.[8]

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innovation in FinTech companies will certainly involve governmental challenges, such as passing federal legislation to equalize the playing field for state and national banks offering cloud based FinTech banking services). *See also* Elise Hansen, *Regulators Urge Diligence In Bank-Fintech Partnerships*, LAW360 (Aug. 27, 2021), *archived at* https://perma.cc/UAW9-6L2C (emphasizing that financial regulators repeatedly warn banks about the risks of third-party partnerships, the Financial Industry Regulatory Authority earlier this month stated it will continue to penalize member firms that fail to catch regulatory violations committed by their third-party vendors, holding the banks responsible); Al Barbarino, *Fed Proposes Guidance For Third-Party, Fintech Relationships*, LAW360 (July 14, 2021), *archived at* https://perma.cc/3LFD-CNJQ (stating that the "new proposal from the Federal Reserve's board and two other banking regulators aims to create consistent guidance on how banks should manage third-party relationships, including those with fintech companies that the board said may add complexity and heighten risks.").

[7] *See* Omer, *supra* note 6, at 305 (recommending that if states pass legislation and banks offer internet based financial services then state-based regulatory alternatives could facilitate nonbanks and banks in meeting the needs of the rapidly expanding fintech customer base). *See also* Philip Rosenstein, *Major Developments In Fintech Regulation: Midyear Report*, LAW360 (July 29, 2020), *archived at* https://perma.cc/V9EF-KEBM (reporting on the fact that Office of the Comptroller of the Currency ("OCC") stated banks can custody crypto assets and that there are national payments framework that could help regulate FinTechs looking to do business in the payments space on a nationwide basis); Irony Holder, *The Meltdown of IRON*, MEDIUM.COM (June 17, 2021), *archived at* https://perma.cc/WM4H-Z4BP (explaining the failing of a cryptocurrency and the volatility and uncertainty with some new technology).

[8] *See* BD. OF GOVERNORS OF THE FED. RSRV. SYS. ET AL., CONDUCTING DUE DILIGENCE ON FINANCIAL TECHNOLOGY COMPANIES, 1 (2021) (explaining that arrangements with fintech companies can also introduce risks, assessing the benefits and risks posed by these relationships is integral to a community bank's due diligence process). *See also* Hansen, *supra* note 6 (reporting that "[b]anks should also be very attuned to fintechs' track record of legal and regulatory compliance … Community banks should be prepared to review prospective partners' risk and compliance processes for a range of issues, such as privacy, fair lending and anti-money laundering, the agencies said."); Text of Proposed Guidance on Third-Party Relationships, 86 Fed. Reg. 38182, 38168 (July 19, 2021) (creating a guide on how banks can manage third-party risks associated with FinTech); Jon Hill, *Colo. AG Settles Marlette, Avant Fintech Lender Cases*, LAW360 (Aug. 19, 2020), *archived at* https://perma.cc/S9GD-DX95 (highlighting current state lawsuits with FinTech

This Note argues that policymakers should focus their attention on ensuring that interoperability of this technology is feasible by creating and using standard setting organizations ("SSOs"). SSOs provide regulatory harmony among many industries and can create the interoperability that is needed domestically and internationally for FinTech. This Note also argues that regulators need to incorporate regulation technologies ("RegTech") to properly protect U.S. citizens at both the federal and state level, having the necessary regulatory power to intervene when there is clear exploitation by any company or individual. FinTech usage by companies is inevitable as dependence on technology increases, so the sooner RegTech and SSOs are incorporated, the better agencies can regulate in their proper capacities, protecting and serving these U.S. citizens.

II. History

A. An Overview of FinTech

The term "FinTech" was coined as early as 1972 in a memo from a bank vice-president, and possibly dates back as far as 1866, when the Transatlantic Cable paved the way for the rapid transfer of financial information.[9] Around 2015, the term transcended its industry

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companies). Colorado's Attorney General reached a settlement in noteworthy lawsuits accusing two online-lenders of illegally teaming up with banks to elude the state's interest rate cap, settling the case with the state collect more than $1 million. *Id.* *See also Special Purpose Depository Institutions,* WYO. DIV. BANKING (Oct. 15, 2021), *archived at* https://perma.cc/6P5N-ZJN3 (explaining that Wyoming-chartered special purpose depository institutions ("SPDIs") are banks that receive deposits and conduct other activity incidental to the business of banking, including custody, asset servicing, fiduciary asset management, and related activities). However, unlike traditional banks SPDIs will likely focus on digital assets, such as virtual currencies, digital securities and digital consumer assets. *Id.*

[9] *See* Schueffel, *supra* note 2, at 36 (stating that the term Fintech was used as early as 1972). *See also* Salerno, *supra* note 1, at 367 (explaining that as early as 1972 the term FinTech appeared in a scholarly article by a bank's vice president, detailing models used to solve the bank's daily problems); Giorgi Mikhelidze, *A Short History Of Fintech*, HACKERNOON (June 6, 2020), *archived at* https://perma.cc/8LNT-CXAT (teaching that historic events like the 1886 development of the transatlantic cable and the 1918 development of the Fedwire in the U.S. laid the foundation for

usage and reached common language, with a notable spike in usage in 2020–2021.[10] FinTech uses are expansive: there are wealth services, investment services, insurance services, back-end account activity services, and front-end client facing services for banks and companies.[11]

Notably, FinTech includes blockchain technologies, which arrived in 2008 as the ledger behind Bitcoin transactions.[12] A blockchain is an online network that is used for primarily business transactions, with a unique focus on immutability and distribution to promote accuracy and safety.[13] The blockchain is immutable, meaning unchangeable, and once a transaction or file is recorded in a block it

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the first-ever electronic fund transfer system, relying on the revolutionary telegraph and morse code).

[10] *See* Steve Cocheo, *2021 Google Search Trends in Digital Banking, Payments & Fintech*, FIN. BRAND (Mar. 29, 2021), *archived at* https://perma.cc/LB8L-YLBW (providing data from Google Trends that shows the steady increase in Google searches of "fintech"). *See also* Chung-Chi Chen et al., *NLP in FinTech Applications: Past, Present and Future*, NAT'L TAIWAN UNIV. (May 2020), *archived at* https://perma.cc/H7GG-F56G (providing data on the trends of Google searching FinTech from 2009-2019).

[11] *See* Walden, *supra* note 2 (explaining the proposed benefits of FinTech ranging from expedited processes to payment processing to tax calculations to robo-investing). *See also What Is Financial Technology or Fintech And Its Benefits?*, AUTOMEME (Oct. 13, 2021), *archived at* https://perma.cc/94SF-QR6A (emphasizing the proposed benefits of FinTech with improved security, convenience, upgraded payment systems, increased of revenue and more).

[12] *See* Robert Sheldon, *A timeline and history of blockchain technology*, TECHTARGET (Aug. 9, 2021), *archived at* https://perma.cc/4A3N-XXLY (explaining the history of blockchain technology, notably Bitcoin's emergence in 2008). *See also* Alyssa Schroer, *These Fintech Examples Are Having a Big Impact on Banking — and It's Getting Bigger*, BUILT IN (May 9, 2021), *archived at* https://perma.cc/4T6R-WVZB (detailing the many FinTech platforms that are for banking purposes); Nick Darlington, *Blockchain For Beginners: What Is Blockchain Technology? A Step-by-Step Guide*, BLOCKGEEKS (Aug. 6, 2021), *archived at* https://perma.cc/2A6P-P64S (providing an overview on Blockchain in the form of a guide).

[13] *See What is blockchain technology?,* IBM (2021), *archived at* https://perma.cc/H9M8-833H (defining Blockchain as "a shared, immutable ledger that facilitates the process of recording transactions and tracking assets in a business network."). *See also* Luke Conway, *Blockchain Explained*, GREY ARROW (Dec. 12, 2020), *archived at* https://perma.cc/LW35-P9FU (detailing that "[b]lockchain is a specific type of database … blockchains store data in blocks that are then chained together. As new data comes in it is entered into a fresh block. Once the block is filled with data it is chained onto the previous block … in chronological order.").

cannot change the previous block behind it in the chain; although some contend it's possible that if all participants agree to change all the blocks they can, however, this is incredibly unlikely and requires significant control over an entire blockchain system.[14] Additionally, blockchain exists as a distributed digital ledger, a digital record of transactions or data stored in multiple places on multiple computer network, this means that a distributed ledger is decentralized and eliminates the need for a central authority or intermediary to process, validate, or authenticate transactions.[15] Overall, blockchains are beneficial because they are trustless and only execute transactions when programmed conditions are met by both parties, unstoppable once the commands are executed, immutable so records cannot be changed or tampered with, and decentralized so no single entity maintains the network.[16] Banking institutions incorporate blockchain

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[14] *See* Darlington, *supra* note 12 (describing how blockchain technologies use data mining in order to get new chains formed, those chains being immutable and decentralized while operating on a distributed ledger). *See also* Mayank Sahu, *What Makes a Blockchain Network Immutable? Immutability Explained*, UPGRAD (Oct. 1, 2020), *archived at* https://perma.cc/P2DY-ESDR (describing the immutable nature of blockchain). *See also* Gideon Greenspan, *The Blockchain Immutability Myth*, COINDESK (May 9, 2017), *archived at* https://perma.cc/3VRT-3CZY (hypothesizing that a private blockchain can be changed, making it not immutable to the previous blocks before it).

[15] *See* Darlington, *supra* note 12 (describing the two major properties of blockchain technologies, being immutable and having a distributed ledger). *See also The Difference between Blockchain and DLT*, MARCO POLO NETWORK (Jan. 30, 2018), *archived at* https://perma.cc/FC8B-DNV8 (defining distributed ledger and the reasons for its modern use).

[16] *See* Darlington, *supra* note 12 (describing that some of the proposed benefits of blockchain technologies are that they are trustless, unstoppable, immutable, decentralized, low cost, and transparent). *See also* Fabian Schär, *Decentralized Finance: On Blockchain- and Smart Contract-Based Financial Markets*, 103 FED. RSRV. BANK ST. LOUIS REV. 153, 153 (2021) (stating that blockchain does not rely on intermediaries and centralized institutions in its operation, instead, blockchain is based on open protocols and decentralized applications, also known as DeFi in finance). Blockchain agreements are enforced by computer code, transactions are executed in a secure and verifiable way, and legitimate changes persist on a public blockchain. *Id.* Schär emphasizes that the blockchain architecture creates "an immutable and highly interoperable financial system with unprecedented transparency, equal access rights, and little need for custodians, central clearing houses, or escrow services, as most of these roles can be assumed by 'smart contracts.'" *Id.*

technology to expedite cross-border payments with secure networks and to improve transaction time; for example, Cross River Bank and Affirm are in a partnership where Affirm receives its loans from Cross River Bank and Cross River Bank gets to hold Affirm accountable for any financial or regulatory risk.[17]

B. An Overview of Banking Regulations

In the nearly 1400 years since the first known banknote appeared in seventh century China, banking has developed into one of the most prominent functions of the United States government and economy.[18] The U.S. financial regulatory system is an incredibly

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[17] *See* Alyssa Schroer, *36 Top Fintech Payment Processing Companies*, BUILT IN (July 5, 2022), *archived at* https://perma.cc/Y98R-LFSW (listing 36 FinTech companies that have similar banking capabilities and that are used by banks).

> Ripple uses blockchain to process and secure their RippleNet payment network. With RippleNet, customers have access to a network of more than 200 banks (including American Express, BMO and PNC), and they can make cross-border payments instantaneously. The company's blockchain helps to encrypt each payment and allows for each money transfer to be easily traceable.

Id. Veem, a FinTech company, uses proprietary technology, combining blockchain, treasury, and existing technology to provide safe and trackable payments. *Id. See also Disruptor 50 2021*, CNBC (May 25, 2021), *archived at* https://perma.cc/LW2A-MGUY (explaining that the RippleNet platform or Ripple uses blockchain technology to send money across borders for banks and other financial institutions at expedited speeds). *See also* Andrew Jamison, *Banks And Fintech: A Partnership With A Future*, FORBES (Dec. 3, 2021), *archived at* https://perma.cc/T7FP-KFMH (reporting that one successful example of these complementary forces coming together is Cross River Bank and one of its fintech partners, Affirm). Affirm has gained traction across the U.S. with its buy now, pay later offering, but Cross Riverbank handles the compliance and financial end of the operation. *Id. See also* Kristin Broughton, *Fintech Lender Affirm Leans on Investors to Fund Rapid Growth*, WALL ST. J. (Sept. 23, 2021), *archived at* https://perma.cc/TXP3-U4YA (exemplifying the success in the partnership between Affirm and Cross River Bank).

[18] *See THE EVOLUTION OF FINTECH*, *supra* note 4, at 1277 (stating that metal coins originated in China and the Middle East, where metals were first used in transactions in ancient Mesopotamia and Egypt and were in use no later than the fourth century BC.) Also, the earliest banknotes appeared in China in the seventh century AD. *Id. See also* National Bank Act, 12 U.S.C. § 38 (2011) (codifying the creation of banks in "'[a]n Act to provide a national currency secured by a pledge of

complex structure, including ten federal regulatory bodies and fifty state jurisdictions characterized by overlapping dual federal-state frameworks, each with its own rules and regulatory agencies.[19]

In banking there are three primary federal regulators: (1) the OCC regulating national banks and thrifts; (2) the Federal Reserve regulating state-chartered banks that are members of the Federal Reserve; and (3) the Federal Deposit Insurance Corp. ("FDIC")

United States bonds, and to provide for the circulation and redemption thereof,' approved June 3, 1864, shall be known as 'The National Bank Act.'"); 12 C.F.R. § 5.20(b) (2021) (defining that "[a]ny person desiring to establish a national bank or a Federal savings association must submit an application and obtain prior OCC approval. An existing national bank or Federal savings association desiring to change the purpose of its charter must submit an application and obtain prior OCC approval."); *Banknote,* WIKIPEDIA (Oct. 17, 2021), *archived at* https://perma.cc/2XEL-VWQ2 (explaining that the first known banknote was first developed in China, starting in the 7th century, during the Tang and Song dynasties); REENA AGRAWAL SAHNI ET AL., BANKING REGULATION 2021 253 (Peter Ch. Hsu & Daniel Flühmann eds., 8th ed. 2021) (explaining that the banking industry has for a long time been one of the most highly regulated industries in the United States, based on the special role that banks play in taking deposits, allocating credit, and operating the payment system for the entire United States).

[19] *See* MARC LABONTE, CONG. RSCH. SERV., R44918, WHO REGULATES WHOM? AN OVERVIEW OF THE U.S. FINANCIAL REGULATORY FRAMEWORK (Mar. 2020) (stating that the financial regulatory system has been described as fragmented, with multiple overlapping regulators and a dual state-federal regulatory system). "The system evolved piecemeal, punctuated by major changes in response to various historical financial crises" and political ideologies. *Id. See also* Falguni Desai, *The Fintech Boom And Bank Innovation*, FORBES (Dec. 14, 2015), *archived at* https://perma.cc/X8S3-293J (explaining that "[t]he credit crisis of 2008 and the heavy level of financial services regulation that followed created a perfect vacuum for innovation in banks. Following the credit crisis, banks have been slapped with several new regulations and dealt heavy fines and penalties for non-compliance."). *Id. See also* John Hawke Jr., *Open Forum: The Pre-Emption Distraction*, NAT'L MORTG. NEWS, May 12, 2003, at 1 (stating the complicated nature of banking and the structure created throughout the history of the United States).

> The current bank regulatory structure offends all of our aesthetic and logical instincts. It's complicated, it's irrational, it probably has inefficiencies and it takes a great deal of explaining. It's a product of historical accident, improvisation and expediency, rather than a methodically crafted plan. It reflects the accretion of legislative enactments, each passed at a very different time - and under very different circumstances - in our history.

Id.

regulating state-chartered thrifts and banks that are not members of the Federal Reserve System.[20] Additionally, the Bank Holding Company Act ("BHCA") of 1956 allows the Federal Reserve to place certain restrictions on non-bank affiliates of banks engaged in mutual fund activities, including those that behave as securities.[21]

Banking laws also includes a paramount area called "chartering", that has substantial historical relation to savings and

[20] *See* LABONTE, *supra* note 19, at 12 (listing which regulatory agency governs which type of financial institution). S*ee also Financial Institutions List,* OFF. OF THE COMPTROLLER OF THE CURRENCY, (Sept. 30, 2021), *archived at* https://perma.cc/5S3H-LWYP (listing the regulatory agency for each type of financial institution). *See als*o John L. Douglas & Reuben Grinberg, *OLD WINE IN NEW BOTTLES: BANK INVESTMENTS IN FINTECH COMPANIES*, 36 REV. BANKING & FIN. L. 667, 677 (2017) (stating that the Bank Holding Company Act ("BHCA"), provides the basic framework for investments made by a company that controls a bank, known as bank holding company ("BHC"), all while still governed by the Federal Reserve).

[21] *See* Douglas & Grinberg, *supra* note 20, at 675 (defining that the BHCA will allow BHCs to own or control companies that are engaged in banking and other activities that are so closely related to the business of banking or of managing or controlling banks that they are in proper relation to that banking activity). Additionally, when "a company owns, controls, or has the power to vote less than 5 percent of any class of voting securities of a company or bank, the first company is presumed not to have control over the second." *Id.* at 678. The BHCA states that "[n]o BHC may acquire control of any voting shares of any company that is not a bank or . . . engage in any activities other than those of banking or of managing or controlling banks absent specific authority under the BHCA." *Id.* at 683. *See also* Joe Mahon, *Bank Holding Company Act of 1956*, FED. RSRV. HIST. (Nov. 22, 2013), *archived at* https://perma.cc/8759-SF7H (explaining that "[t]he 1956 act redefined a bank holding company as any company that held a stake in 25 percent or more of the shares of two or more banks. . . . For the purposes of the law, a bank was defined as any institution that takes deposits and makes loans."). *See also* Adam Hayes, *Mutual Fund*, INVESTOPEDIA (June 28, 2022), *archived at* https://perma.cc/RX7T-4NLU (defining that a mutual fund is a financial vehicle that pools assets from shareholders to invest in multiple securities such as stocks, bonds, money market instruments, and other assets depending upon the structure of the mutual fund); Douglas & Grinberg, *supra* note 20, at 695 (quoting Michael S. Barr et al., Financial Regulation: Law and Policy (2016)) (explaining that the OCC places great weight on the introductory phrase in 12 U.S.C. § 24 (Seventh) such that national banks are entitled to exercise "all such incidental powers as shall be necessary to carry on the business of banking.").

deposits.[22] Bank charters give national recognition and authority to a depository institution affording it many benefits over non-chartered state banks.[23] Nationally-chartered banks and federally-insured state-chartered banks are able to lend nationwide, and federally-chartered and insured banks are able to export their home states' interest laws to out-of-state borrowers.[24] The historical intent behind nationally-chartered banks was to replace the state-chartered system in efforts to

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[22] *See* LABONTE, *supra* note 19, at 6 (explaining that a bank selects who it wants as a regulator by selecting its charter, that of either a national bank, state bank, or credit union). *See also* ANDREW P. SCOTT, CONG. RSCH. SERV., R47014, AN ANALYSIS OF BANK CHARTERS AND SELECTED POLICY ISSUES (2022) (characterizing that a bank charter allows a financial institution to perform certain financial services, such as accepting deposits, making loans, and providing a range of fiduciary and financial services to their clients).

[23] *See* Julia Kagan, *Chartered Bank*, INVESTOPEDIA (July 31, 2020), *archived at* https://perma.cc/M4JG-AMLP (illustrating that as a financial institution, a chartered banks primary role is to accept and safeguard monetary deposits from individuals and organizations, as well as to lend money, however, broadly speaking, a chartered bank in operation has obtained a form of government permission to do business in the financial services industry). *See also* National Bank Act, 12 U.S.C. § 38 (2011) (creating the "National Bank Act" to oversee the Federal creation of a banking system for the United States); *Founding of the OCC & the National Banking System,* OFF. OF THE COMPTROLLER OF THE CURRENCY (Oct. 18, 2021), *archived at* https://perma.cc/28S4-95VU [hereinafter *Founding of the OCC*] (explaining that the National Currency Act established the Office of the Comptroller of the Currency (OCC) and banking charters). The OCC is "charged with responsibility for organizing and administering a system of nationally chartered banks and a uniform national currency." *Id. See also* William E. Stern & Alexander J. Callen, *SO, YOU WANT TO BE A BANK? BENEFITS OF OPERATING THROUGH A BANK CHARTER AND CHARTER CHOICE CONSIDERATIONS*, GOODWIN PROCTOR LLP (Oct. 11, 2018), *archived at* https://perma.cc/F44U-YPKQ (explaining that only chartered banks are permitted to take FDIC-insured deposits from the public as well as have access to deposits as a source of funding for their operations, a bank charter also provides access to the national payment system operated by the Board of Governors of the Federal Reserve System). As well as the benefits that "[b]oth federally chartered institutions and FDIC-insured state-chartered banking institutions are permitted to 'export' interest from the state where they are located to borrowers in other states" are all compelling reasons to consider operating through a state-chartered institution. *Id.*

[24] *See* Salerno, *supra* note 1, at 378–79 (explaining how national and state banks use their charter and the limitations that FinTech companies can face).

tie the Union closer during the Civil War.[25] The Supreme Court interpreted the National Bank Act in the 19th century as legislature for protecting national banks from "unfriendly legislation by the states" and "ruinous competition with State banks."[26]

The lack of protections and oversight offered by banking industry regulation was the biggest factor causing the 2008 Great Financial Crash, and the crash was exacerbated due to two laws, the Financial Services Modernization Act of 1999 and the Commodity Futures Modernization Act of 2000.[27] The Financial Services Modernization Act of 1999, also known as the Gramm-Leach-Bliley Act, eliminated the prohibition against the consolidation of deposit

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[25] *See* Brian R. Knight, *Federalism and Federalization of the Fintech Frontier*, MERCATUS CTR. GEORGE MASON UNIV. (Mar. 2017), *archived at* https://perma.cc/9G6V-DN78 (explaining that the National Bank Act and establishing charters was "to help further the Union's war effort by increasing the federal government's control over the banking sector."). *See also Founding of the OCC*, *supra* note 23 (stating that Congress sought to promote economic growth and prosperity through a more orderly and unified national money and banking system, all while forming a stronger sense of American nationalism). *See also* Charles W. Calomiris, *The Evolution of Bank Chartering*, OFF. COMPTROLLER CURRENCY: MOMENTS IN HISTORY, Dec. 2020, at 1, 5 (emphasizing federal banking from "inception can be described as reflecting a philosophy of equal access … recognition that payments systems benefit from uniformity of the unit of account and stability of the medium of exchange value, and a desire to remain competitive with other chartered banks or non-chartered financial institutions."). *See also* Lindsay Sain Jones, *Aligning National Bank Priorities with the Public Interest: National Benefit Banks and a New Stakeholder Approach*, 58 AM. BUS. L.J. 5, 22 (Mar. 23, 2021) (explaining the reason behind passing the National Banking Act). The author discussed that "[w]ith the passage of the National Banking Act, Congress had intended for all state banks to convert their state charters to national charters. When state bankers did not surrender their state charters as expected, however, the dual system created by the National Banking Act persisted." *Id.*

[26] *See* Tiffany v. Nat'l Bank of Mo., 85 U.S. 409, 413 (1873) (quoting that the National Bank Act as established for "providing a currency for the whole country, and in part to create a market for the loans of the general government. It could not have been intended, therefore, to expose them to the hazard of unfriendly legislation by the states or to ruinous competition with state banks."). *See also* Daggs v. Phx Nat'l Bank, 177 U.S. 549, 555 (1899) (affirming the decision of Tiffany).

[27] *See* Erin Coghlan, Lisa McCorkell & Sara Hinkley, *What Really Caused the Great Recession*, INST. RSCH. LAB. & EMP. (Sept. 19, 2018), *archived at* https://perma.cc/DYB9-BZUW (explaining that banks previously did not care if they loaned to borrowers who were likely to default since the banks did not intend to hold onto the mortgage or the financial products they created for very long after loaning such product).

banking and investment banking enacted under Glass-Steagall Act, directly exposing traditional deposit banking to the risky and speculative practices of investment banks and other securities firms by allowing banks to sell risky loans to individuals who could not afford them.[28] The Commodity Futures Modernization Act of 2000 allowed banks to invest in housing-related derivatives like the mortgage-backed derivatives, where the failure to regulate financial derivatives trading and the subsequent explosion of credit default swaps caused a crash in mortgages and the underlying mortgage-backed derivatives tanking the economy.[29] As a result of the financial crash of 2008, policymakers created the largest banking reform in recent years: the Dodd-Frank Act.[30]

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[28] *See id.* (concluding that "when the conventional mortgage market became saturated in 2003, the financial industry began to bundle lower quality mortgages—often subprime mortgage loans—in order to keep generating profits from fees."). *See also* Will Kenton, *Financial Services Modernization Act of 1999*, INVESTOPEDIA (Oct. 29, 2021), *archived at* https://perma.cc/Z4SZ-9D7Q (summarizing that the Financial Services Modernization Act of 1999 and how it led up to the 2008 financial crash).

[29] *See* Coghlan, McCorkell & Hinkley, *supra* note 27 (explaining that "lenders of subprime mortgages had perverse incentives to bundle and pass off risky mortgage-backed securities to other investors in order to profit from high origination fees."). *See also* Kimberly Amadeo, *2008 Financial Crisis*, THE BALANCE (Feb. 10, 2022), *archived at* https://perma.cc/8RE7-48PA (stating that factors like approval for mortgages at 100% of the home's value and banks investing in high-risk investments are causes to the 2008 financial crash). *See also* Paul Blumenthal, *How Congress Rushed a Bill that Helped Bring the Economy to Its Knees*, HUFFPOST (May 11, 2009), *archived at* https://perma.cc/AUK4-BPMD (opining that it is almost universally agreed upon that Congress passing the Commodity Futures Modernization Act was a massive mistake, in that that the failure to regulate financial derivatives trading and the subsequent explosion of credit default swaps contributed to the 2008 financial crash).

[30] *See Dodd-Frank Act*, HISTORY.COM (Aug. 21, 2018), *archived at* https://perma.cc/2N9K-89TF (introducing the Dodd-Frank Act as a comprehensive and complex bill that places strict regulations on lenders and banks in an effort to protect consumers and prevent another all-out economic recession after 2008). The Dodd-Frank Act also created several new agencies to oversee the regulatory process and implement certain changes, stating that:

> Banks are required to come up with plans for a quick shutdown if they approach bankruptcy or run out of money. Financial institutions must increase the amount of money they hold in

Critically, the Dodd-Frank Act allowed the Federal Reserve to become the primary regulator of all non-bank financial firms, created the Volcker Rule, and allowed the Office of the Comptroller of the Currency ("OCC") to be the primary regulator for federally chartered thrift institutions (savings banks or savings associations).[31] The Volcker Rule generally prohibits banking entities from engaging in proprietary trading or investing in or sponsoring hedge funds or private equity funds, for the purpose of reducing risk of loss in funds.[32] One

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> reserve to account for potential future slumps. Every bank with more than $50 billion of assets must take an annual "stress test," given by the Federal Reserve, which can help determine if the institution could survive a financial crisis. The Financial Stability Oversight Council (FSOC) identifies risks that affect the financial industry and keeps large banks in check. The Consumer Financial Protection Bureau (CFPB) protects consumers from the corrupt business practices of banks. This agency works with bank regulators to stop risky lending and other practices that could hurt American consumers. It also oversees credit and debit agencies as well as certain payday and consumer loans. The Office of Credit Ratings ensures that agencies provide reliable credit ratings to those they evaluate. A whistle-blowing provision in the law encourages anyone with information about violations to report it to the government for a financial reward.

Id.

[31] *See* LABONTE, *supra* note 19, at 14 (stating that pursuant to the Dodd-Frank Act, the Office of Comptroller of Currency is the primary regulator for federally chartered thrift institutions). Additionally, Labonte explains that the Dodd-Frank Act made the Federal Reserve the primary regulator of all non-bank financial firms that are designated as significant to the greater financial system in the United States by the Financial Stability Oversight Council. *Id.* at 15. The Dodd-Frank Act also enhanced the regulation abilities by the Federal reserve of bank holding companies with more than $50 billion in assets and certain designated nonbanks. *Id. See also* Kelly Anne Smith, *How The Dodd-Frank Act Protects Your Money*, FORBES (July 20, 2020), *archived at* https://perma.cc/2NAK-VMG8 (explaining that the Dodd-Frank Act Volcker Rule, "bars banks from engaging in proprietary trading, meaning agents or units of a bank cannot buy or sell securities, derivatives, commodity futures or options in the banks' accounts."). *See also* 12 U.S.C. § 53 (2011) (codifying the Dodd-Frank act as the Wall Street Reform and Consumer Protection Act).

[32] *See Volcker Rule*, BD. GOVERNORS FED. RSRV. SYS. (Jan. 30, 2020), *archived at* https://perma.cc/SBC5-3TN4 (defining the Volcker Rule in detail). *See also* J. Paul Forrester, et al., *The Final Volcker Rule—Impact on Securitization Transactions (Digest Summary)*, CFA INST. (Nov. 2014), *archived at* https://perma.cc/KA6Y-A9V5 (defining the Volcker rule which places explicit

of the main purposes of banking is to deposit funds in order to keep them safe and secure, which is why, in reaction to the financial crisis of 2008, more regulations were placed on these depository institutions to protect consumers.[33]

C. Emergence of FinTech Since 2008

The 2008 financial crisis prompted the largest regulatory response in recent history with the creation of the Dodd-Frank Act, Basel III, and the Emergency Economic Stabilization Act, all while catalyzing technological innovation among private companies and consumers.[34] The Dodd-Frank Act properly amended securities law, created the Consumer Financial Protection Bureau, and created the Volcker Rule putting in place proper protections.[35] Basel III was an international effort that outlined the approaches of the Basel

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restrictions for banking-companies engaging in trading and on acquiring or retaining an ownership interest or having certain relationships with a hedge fund or a private equity fund).

[33] *See* LABONTE, *supra* note 19, at 12 (explaining that "virtually all depository institutions are federally insured, so both state and federal institutions are subject to at least one federal primary regulator (i.e., the federal authority responsible for examining the institution for safety and soundness and for ensuring its compliance with federal banking laws)."). Further explaining that depository institutions are categorized under three types of charter—commercial banks, thrifts (also known as savings banks), and credit unions. *Id.* *See also* Salerno, *supra* note 1, at 379 (explaining that states have traditionally played a leading role in regulating lending, according to what they determine is appropriate, including interest and fee limitations,). *See also* Knight, *supra* note 25, at 3 (emphasizing that new methods and market participants are generally obtuse to the existing regulatory boxes, the changes in these spaces are straining existing regulatory assumptions, including the issue of whether and how the states or federal government should regulate financial technology companies).

[34] *See THE EVOLUTION OF FINTECH,* at 1288–89 (emphasizing that clearly the regulatory responses to the Great Financial Crash, such as the Dodd-Frank Act or Basel III, are more than necessary in light of the social and economic impact of the financial crisis and certaintly make it less likely that the next possible great financial crisis will be caused by the same factors). *See also* Sean Ross, *What Major Financial Sector Laws Followed the 2008 Crisis?*, INVESTOPEDIA (Mar. 10, 2022), *archived at* https://perma.cc/WK6P-NE7A (explaining how the Emergency Economic Stabilization Act provided $700 billion in bailout relief.).

[35] *See* Ross, *supra* note 34 (providing a summary on the changes that Dodd-Frank brought to the country).

Committee's response to the 2008 financial crash, such as agreements that require banks to have a certain amount of capital to withstand times of stress.[36] The Emergency Economic Stabilization Act, passed in October of 2008, provided the Treasury with approximately $700 billion to bail out banks by purchasing "troubled assets," accounting for mostly bank shares and mortgage-backed securities that caused the financial crash.[37]

The fallout from the 2008 Financial Crisis severely damaged the public perception of banks and incumbent financial institutions, traditionally associated with stability and trust: where in 2009 Americans only had a 22% confidence in banks and in 2012 a 21% confidence.[38] By 2015, when Americans had a 28% confidence in banks, they had over 53% confidence in technology companies such as PayPal, Amazon, Google, and Apple.[39] The shift and evolution of regulatory banking law created market products, such as FinTech, that

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[36] *See* BASEL COMM. BANKING SUPERVISION, BANK INT'L SETTLEMENTS, HIGH-LEVEL SUMMARY OF BASEL III REFORMS (2017) (describing solutions to banking issues for example, increasing the level required of capital held by the banks, ensuring that banks are sufficiently resilient to withstand losses in times of major market disruption and stress). Additionally, Basel III suggested "enhancing risk capture by revising areas of the risk-weighted capital framework that proved to be acutely miscalibrated, including the global standards for market risk, counterparty credit risk and securitization." *Id.*

[37] *See* Ross, *supra* note 34 (explaining the result of the Emergency Economic Stabilization Act where the Troubled Asset Relief Program ("TARP"), where ultimately the U.S. government spent over $426.4 billion bailing out institutions, including American International Group Inc., Bank of America, Citigroup, JPMorgan, and General Motors, however, the Treasury was able to recover $441.7 billion from TARP recipients).

[38] *See* Salerno, *supra* note 1, at 371 (emphasizing that "[t]he collapse of Lehman Brothers–then the fourth-largest investment bank experiencing the largest bankruptcy in U.S. history–shattered public perception of the financial industry."). *See also* Andrew Dugan, *Confidence in U.S. Banks Low but Rising*, GALLUP (June 22, 2015), *archived at* https://perma.cc/FN37-9VUF (portraying the trendline and trends related to U.S. citizens and their confidence in banks).

[39] *See* Niall McCarthy, *Americans Trust Tech Firms More Than Banks For Finance*, FORBES (June 25, 2015), *archived at* https://perma.cc/2VA4-R6C3 (explaining the high level of trust in the financial services of PayPal, Amazon, Google and Apple as compared to America's largest banks which do not score as high. The financial services of all these firms have secured confidence from more than 50% of Americans which is more than the largest banks).

focus on protecting consumers and banks, while simultaneously seeking to avoid a repeat of the crash's atrocities.[40]

The financial crash transformed the way financial institutions operated, requiring them to incorporate FinTech to improve their risk-taking, spectrum of their operations, and profitability.[41] The emergence of FinTech post-2008 was characterized by the swift rate at which technology advanced and the change in the identity of financial service providers.[42] From 2008 to 2014 investments in FinTech tripled in the United States, rising from $928 million to $2.97 billion; venture capital backed FinTech IPO investments increased

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[40] *See THE EVOLUTION OF FINTECH*, *supra* note 4, at 1273 (stating that the 2008 Global Financial Crisis was a turning point and is part of the reason FinTech is now evolving into a new paradigm). This evolution creates challenges for regulators and market participants alike, particularly in balancing the potential benefits of innovation with the potential risks of hurting the consumer or economy with possibly risky technology). *See also Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 381 (emphasizing that although successful FinTech start-ups, later becoming recognized companies, are by not new only that their numbers and attention have increased immensely since 2008). *See also* Salerno, *supra* note 1, at 370 (explaining the transformation impact of the GFC). Detailing that:

> The 2008 GFC had a large, transformational impact on the FinTech market that set the stage for the FinTech Revolution. During this period, new actors rapidly emerged as a wave of new investments, talent, and opportunities entered the market. Three factors heavily influenced this shift: (1) changes in public perception of the financial industry, (2) new labor market shifts to technology firms, and (3) reduced barriers of entry into the FinTech market.

Id.

[41] *See THE EVOLUTION OF FINTECH, supra* note 4, at 1286 (stating that in 2008 the financial crisis could "represent a turning point and may have catalyzed the growth of the FinTech 3.0 era."). Since 2008 "a newer generation of highly educated fresh graduates faced entry into a difficult traditional job market. Their educational background often equipped them with the tools to understand financial markets, and their skills found a fruitful outlet in FinTech 3.0." *Id.* at 1288. Lastly, "the financial services industry since 2008 has been affected by a 'perfect storm,' financial, political, and public in its source, allowing for a new generation of market participants to establish a new paradigm known today as FinTech." *Id.* at 1291.

[42] *See* LIVEA ROSE PAUL & LIPSA SADATH, A SYSTEMIC ANALYSIS ON FINTECH AND ITS APPLICATIONS 2 (2021) (explaining how the expedited rate at which the technology developed and the change in the identity of financial service providers were the key characteristics of the third and most significant phase of FinTech spurring from the Great Financial Crash in 2008).

from $3 billion in 2015 to over $168 billion by 2021, an almost 1,800% increase.[43] FinTech's exponential growth since 2008 left regulators and private companies playing catch-up, highlighting the need for a set of standards to govern these modern innovations.[44]

D. *An Overview of Standard Setting Organizations*

A standard setting organization is an entity engaged in developing, revising, amending, interpreting, or otherwise maintaining standards applicable to a specific industry; SSOs aim to create new standards with transparency, openness, and inclusivity as their foundation.[45] SSOs aim to harmonize industry, with the idea that

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[43] *See* Philippe Gelis & Timothy Woods, *The Rise of FinTech in Finance*, KANTOX (2014), *archived at* https://perma.cc/9DJS-N2NY (emphasizing that since 2008 investment globally in the expanding FinTech sector has more than tripled, increasing from $928 million to $2.97 billion, forecasted to reach up to $8 billion by 2018). *See also* Dan Allred et al., *State of Fintech*, SILICON VALLEY BANK (2021), *archived at* https://perma.cc/685N-LQ3S (depicting on page 18 the growth of US VC-Backed Fintech IPOs from 2015 to 2021). *See also Where The Top 3 US Banks Are Betting On The Future of Fin Services*, CB INSIGHTS (Apr. 21, 2021), *archived at* https://perma.cc/8UGB-YBVM (illustrating that "Goldman Sachs and Citigroup are among the most active investors (largely due to their investment arms — GS Growth and Citi Ventures), participating in 69 and 51 fintech deals from 2018 through 2020, respectively. As a result, the two banks continue to invest in a wide range of fintech sectors.").

[44] *See Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 382 (stating that in the near future, the application of technology to monitoring and compliance offers immense cost savings to established financial companies and potentially massive opportunities to emerging FinTech start-ups, IT firms, and advisory firms). *See also THE EVOLUTION OF FINTECH*, *supra* note 4, at 1294 (further stating that the "lack of regulatory compliance may be active, as when a technology company does not believe it should be subject to rules and regulations meant for banks, or passive, as when a technology company is not aware of the rules and regulations that may apply."); Jeff Cox, *Misbehaving banks have now paid $204B in fines*, CNBC (Oct. 30, 2015), *archived at* https://perma.cc/U8YG-RDR8 (explaining that "U.S. banks have crossed a significant post-financial crisis milestone, tallying over $200 billion in fines paid out regarding questionable behavior. . . . Regulators have been out for blood against banks for conduct both before the crisis and since. . . . Many of the most recent cases have shifted to currency market manipulation.").

[45] *See Standard Setting Organization [SSO] Law and Legal Definition,* USLEGAL (2021), *archived at* https://perma.cc/FQU4-WKHN (defining that "[a] standard setting organization (SSO) means an entity that is primarily engaged in activities

openness and inclusivity foster and protect innovation and consumers.[46] Defined broadly, they are any set of technical specifications that provides or is intended to provide a common design for a product or process.[47] SSOs can be either national or international:

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such as developing, coordinating, promulgating, revising, amending, reissuing, interpreting, or otherwise maintaining hundreds of thousands of standards applicable to a wide base of users outside the standards developing organization."). *See also* Christopher S. Gibson, *Globalization and the Technology Standards Game: Balancing Concerns of Protectionism and Intellectual Property in International Standards*, 22 BERKELEY TECH. L. J. 1403, 1412 (2007) (emphasizing that "[a]t the level of formally approved standards, this consensus through accredited national or international standard-setting or (SSOs), unaccredited industry-based groups often referred to as often referred to as 'consortia,' or direct government involvement. Standard setting can occur at the national, regional, or international levels."). Also emphasizing that standards in information and communication technologies are "self-regulated in the sense that technologies become standard through de facto dominance in the marketplace or voluntary consensus achieved in one of the many varied standard-setting bodies." *Id.* *See also* 42 U.S.C. § 1320(d)(8) (2011) (codifying SSOs as "a standard setting organization accredited by the American National Standards Institute, including the National Council for Prescription Drug Programs, that develops standards for information transactions, data elements, or any other standard that is necessary to, or will facilitate, the implementation of this part.").

[46] *See* ALDEN F. ABBOTT, THE HARMONIZATION OF INTELLECTUAL PROPERTY RIGHTS AND COMPETITION POLICY: A UNIFIED APPROACH TO ECONOMIC PROGRESS, 7 (Fed. Trade Comm'n, 2005) (explaining that hundreds of private SSOs have promulgated thousands of standards that have improved daily life, facilitated trade among nations, and promoted efficiencies and innovation in industry). *See also* Shatakshi Johri, *HARMONIZATION OF THE ROLE OF STANDARD SETTING ORGANIZATIONS WITH THEIR COMPETITION VIGOUR IN INDIA: A COMPARATIVE STUDY*, 25 SUPREMO AMICUS 481, 481 (2021) (explaining that Standard Setting Organizations carefully select certain technical specifications and declare them as industry standards).

[47] *See* Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1896 (2002) (explaining that SSOs are any set of technical specifications that either provides or is intended to provide a common design for a product or certain process). *See also* Douglas Kantor, *Open Standards Advance Fintech*, MORNING CONSULT (Nov. 4, 2020), *archived at* https://perma.cc/NJP6-VN9N (explaining that if there were an inclusive and open process for setting standards in FinTech, it would protect and foster this innovation, collaboration, and competition amongst companies nationally and internationally); Gibson, *supra* note 45, at 1408 (explaining that "[f]or international standard setting in the ICT sector, the goal of promoting innovation must be squared with the goal of expanding international trade through harmonization.").

on the international banking front, in 1974 the Basel Committee on Banking Regulations and Supervisory Practices ("BCBS") became the primary global SSO for regulating banks, providing a non-binding forum for cooperation on supervisory matters.[48]

1. A Brief History of FinTech and SSOs

In recent decades, SSO responses to FinTech and banking regulations support that the current transformation of the financial sector requires an orderly transition; sustainably using the emerging FinTech in our global economy.[49] In August of 2017, the BCBS

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[48] *See* GLOB. P'SHIP FIN. INCLUSION, GLOBAL STANDARD-SETTING BODIES AND FINANCIAL INCLUSION THE EVOLVING LANDSCAPE 18 (2016) (explaining that the Basel Committee on Banking Supervision issues standards and guidance developed by consensus among members, and while they have no legal force, the expectation is that individual national authorities will implement them). The BCBS also established a "benchmark for assessing the quality of jurisdictions' supervisory systems and for identifying future work to achieve a baseline level of sound supervisory practices, including in the context of assessments conducted by the World Bank and IMF under the Financial Sector Assessment Program (FSAP) . . . ". *Id. See also* Takayuki Usui, *Corporate Governance of Banking Organizations in the United States and in Japan*, 28 DEL. J. CORP. L. 563, 564 (2003) (emphasizing that global unification among banking regulations has been promoted by worldwide financial institutions, however, corruption and fears about ensuing political unrest in the financial services industry is part as to why the Basel Committee on Banking Supervision was formed); Will Kenton, *Basel Committee on Banking Supervision*, INVESTOPEDIA (Aug. 31, 2021), *archived at* https://perma.cc/94CN-G44A (defining the Basel Committee on Banking Supervision).

> The BCBS has developed a series of highly influential policy recommendations known as the Basel Accords. These are not binding and must be adopted by national policymakers in order to be enforced, but they have generally formed the basis of banks' capital requirements in countries represented by the committee and beyond.

Id.

[49] *See* FERNANDO RESTOY, BANK INT'L SETTLEMENTS, REGULATING FINTECH: WHAT IS GOING ON, AND WHERE ARE THE CHALLENGES? 5 (2019) (emphasizing that judacious supervisors and the international standard-setting bodies need to closely monitor the process of regulating FinTech and act promptly in order to shape the transformation of the financial sector). *See also* GLOB. P'SHIP FOR FIN. INCLUSION, *supra* note 48, at 95 (stating that "[r]egulators and supervisors are in the early stages of learning about and assessing the new and shifting risks associated with digital financial inclusion and of adjusting their regulatory and supervisory approaches to

published a report on the potential implications of FinTech for banks, describing scenarios with FinTech risk and opportunities.[50] The BCBS report identified banking risks associated with the emergence of FinTech such as strategic risk, operational risk, cyber security risk, and compliance risk.[51] Strategic risk is founded upon the concern that innovative FinTech can deliver more efficient services for a lower price point than traditional banks, operational risks include FinTech causing informational technology ("IT") infrastructure shortcomings while being used in limited experience bank companies, cyber security risks include vulnerabilities in FinTech and bank interconnectivity, and compliance risks over data privacy in FinTech and banking.[52] The BCBS report also identified opportunities for banks to adopt FinTech for use with artificial intelligence ("AI"), machine learning, advanced data analytics, distributed ledger technology, cloud computing, and

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address and accommodate these developments."); *Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 405 (emphasizing that harmony through the integration of national, European, and global financial monitoring systems could be beneficial. Institutions are faced with varied regulatory demands across jurisdictions so standardized and harmonized reporting could be beneficial for both institutions and regulators).

[50] *See* DTCC, FINTECH AND FINANCIAL STABILITY 15 (2017) (emphasizing that in August 2017, the Basel Committee on Banking Supervision published a consultative document on the implications of fintech for banks and their supervisors, describing future potential scenarios and highlights associated risks and opportunities for FinTech). *See also* BASEL COMM. BANKING REGUL., SOUND PRACTICES: IMPLICATIONS OF FINTECH DEVELOPMENTS FOR BANKS AND BANK SUPERVISORS 6 (2017) (reporting on findings related to banks incorporating fintech usage). It was recommended that:

> Bank supervisors should cooperate with other public authorities responsible for oversight of regulatory functions related to fintech, such as conduct authorities, data protection authorities, competition authorities and financial intelligence units, with the objective of, where appropriate, developing standards and regulatory oversight of the provision of banking services, whether or not the service is provided by a bank or fintech firms.

Id.

[51] *See* BASEL COMM. BANKING REGUL., *supra* note 50, at 5 (listing the risks for banks such as strategic risk, operational risk, cyber-risk, and compliance risk).

[52] *See id.* at 27–28 (explaining what the strategic risk, operational risk, cyber security risk, and compliance risk are).

application programming interfaces.[53] Since banks have the responsibility to keep their customers information and funds secure, the most common uses for AI in banking are fraud detection, underwriting, and risk management of client information and funds.[54] Lastly, the FDIC created the FDITECH, a laboratory-type office to better understand and adopt FinTech in the United States, learning how it can be incorporated into banking practices, and forming a sandbox at the federal level for banking standards and FinTech

III. Facts

A. The Current FinTech Landscape

Today's FinTech market is an incredibly diverse economic industry, largely divided into five areas: (1) finance and investment, (2) internal operations and risk, (3) payments and infrastructure, (4) data security and monetization, and (5) customer interface.[55] Currently

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[53] *See id.* at 5 (listing the possibilities for banks to use FinTech such as artificial intelligence, machine learning, advanced data analytics, distributed ledger technology, cloud computing and application programming interfaces, which present opportunities but also pose their own inherent risks).

[54] *See* Fitzwilliam Anderson, *How Banks Can Best Leverage Artificial Intelligence in 2022*, PROVE (Mar. 15, 2022), *archived at* https://perma.cc/AT9H-GGQE (claiming the "most popular use cases for artificial intelligence in customer banking will continue to be fraud detection and prevention… [then] underwriting and risk management support. More sophisticated banks are likely to adopt AI in order to evaluate whether a user is legitimate or a fraudster based on individual behaviors."). *See also* Suparna Biswas et al., *AI-bank of the future: Can banks meet the AI challenge?*, MCKINSEY & CO. (Sept. 19, 2020), *archived at* https://perma.cc/YE3X-FLQU (summarizing that internally, the artificial intelligence-first institution will be optimized for operational efficiency through extreme automation of manual tasks and the replacement or augmentation of human decisions by advanced diagnostic engines in diverse areas of bank operations).

[55] *See THE EVOLUTION OF FINTECH*, *supra* note 4, at 1291 (explaining that FinTech today comprises five major areas: finance and investment, internal operations and risk, payments and infrastructure, data security and monetization, and customer interface). *See also* Tracy Mayor, *Fintech, explained*, MIT SLOAN (Feb. 4, 2021), *archived at* https://perma.cc/4Y7D-A4YE (informing that "FinTech is any company using technology to support financial services of any type, . . . which can include regulatory tech, lending, payments, saving, investing, insurance, robo-advice, accounting, risk management, claims processing, and insurance underwriting.") (quoting Matthew Rhodes-Kropf, Managing Partner, Tectonic Ventures).

there are over ten thousand FinTech startups, including dozens of "unicorns," private companies valued at over $1 billion, and several "dragons," companies with at least a $12 billion valuation net total investment.[56] Instead of being bought or partnering with banks, some FinTech companies became full service banks or limited purpose banks, called "Neobanks."[57] Neobanks are FinTech firms that offer internet-only financial services without any physical branches, often saving on the physical costs of banking, allowing lower fees.[58] In January 2022, the OCC conditionally approved neobank SoFi Bank, the banking arm of FinTech company SoFi, to provide a fully digital,

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[56] *See Number of fintech startups worldwide from 2018 to 2021, by region*, STATISTA (Nov. 2021), *archived at* https://perma.cc/Y6CZ-H2N9 (noting that as of November 2021, there were 10,755 FinTech startups in the United States, the region with the most globally at the time, while in comparison, there were 9,323 such startups in Europe, the Middle East, and Africa and only 6,268 in the Asia Pacific region). *See also* Financial Services, *Global Fintech Unicorns See Covid-19's Impact*, CB INSIGHTS (May 22, 2020), *archived at* https://perma.cc/YB4F-96GL (informing that as of April 22, 2020, there was a total of 67 unicorns globally worth a combined $253B); Dan Allred et al., *supra* note 43, at 9 (portraying that there were seven dragons, companies with at least $12B valuation net of total venture capital investment, created in 2021); Gené Teare, *These Were The 10 Most Funded Fintech Startups In 2021, A Year When The Sector Led*, CRUNCHBASE NEWS (Dec. 30, 2021), *archived at* https://perma.cc/3E8D-TVSQ (listing the top 10 FinTech startups in 2021, including Klarna, a buy now, pay later, merchant platform that raised two funding rounds totaling up to $1.6 billion, moving its valuation from $31B to $45.5B within one fiscal quarter).

[57] *See* Stephanie Walden & Mitch Strohm, *What Is A Neobank?*, FORBES ADVISOR (June 24, 2021), *archived at* https://perma.cc/X9KY-QMWE (explaining that Neobanks are FinTech corporations that offer apps, software, and other technologies to streamline online and mobile banking; these FinTech companies usually specialize in particular financial products, like offering a checking and savings accounts). *See also* Arun Padmanabhan, *Explained: Neobanks, the next evolution of banking*, ECON. TIMES (Oct. 7, 2021), *archived at* https://perma.cc/7KUE-WE8Q (defining Neobanks as financial technology companies that give customers a cheaper alternative to traditional banking, basically digital banks without any physical branches, offering services that traditional banks do not do).

[58] *See* Justin Pritchard, *What Are Neobanks?*, THE BALANCE (Jan. 29, 2022), *archived at* https://perma.cc/C2JE-FRYS (explaining that Neobanks are a type of financial technology firm that offer internet only financial services, those that lack physical locations or branches throughout the states; Neobanks appeal to tech-savvy consumers who do not mind money management through a mobile app).

mobile-first national lending platform for consumers across the country, now under the federal banking regulators purview.[59]

Digital payments comprise the largest area within FinTech, retaining a total transaction value of over $6.7 trillion in 2021, followed by neobanking with $2.5 trillion in transaction value.[60] Popular FinTech companies include Stripe, Kraken, and Chime; these companies make up a total of $129.5 billion in valuation.[61] Stripe's technology works as a payment system for small businesses, Kraken is a popular crypto platform, and Chime is the largest digital bank in the U.S., offering no-fee checking accounts, debit cards, and overdraft protection.[62] However, not all FinTech companies want to be traditional banks, like Kraken Bank; even though it received one of Wyoming's "special purpose depository institution" charters, the cryptocurrency firm isn't considered a traditional bank.[63] Instead of using deposits to fund investments, Kraken Bank offers cryptocurrency exchange and safekeeping services, profiting from fees

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[59] *See* News Release 2022-4, *OCC Conditionally Approves SoFi Bank, National Association*, OFF. OF THE COMPTROLLER OF THE CURRENCY (Jan. 18, 2022), *archived at* https://perma.cc/T6W7-U93R (explaining that regulating the large FinTech company SoFi within the federal bank regulatory purview will subject it to extensive supervision and the full spectrum of bank regulations, including the Community Reinvestment Act, leveling the playing field and ensuring that SoFi's deposit and lending activities are conducted safely for the consumer).

[60] *See FinTech Highlights*, STATISTA (Oct. 2021), *archived at* https://perma.cc/DP74-P3U3 (highlighting the market's largest segment will be in the form of digital payments, amassing a total transaction value of $6,752,388MM in 2021). *See also Neobanking Highlights*, STATISTA (Oct. 2021), *archived at* https://perma.cc/R8X7-GHBM (emphasizing that the transaction value in the Neobanking sector is projected to reach over $2,544,325MM in 2021).

[61] *See* Eliza Haverstock, *The 11 Biggest Fintech Companies In America 2021*, FORBES (June 8, 2021), *archived at* https://perma.cc/AUF2-WLGG (listing the top eleven largest FinTech companies of 2021, including Stripe, Kraken, and Chime in this list).

[62] *See id.* (explaining the FinTech companies, their individual traits, and funding).

[63] *See* George Selgin, *Keeping fintech's promise: A modest proposal*, THE HILL (May 10, 2021), *archived at* https://perma.cc/6C3R-6TEB (reporting that despite the name, Kraken Bank, the San-Francisco based cryptocurrency firm isn't a traditional bank, it received one of Wyoming's 'special purpose depository institution' charters in September of 2020).

it charges, as well as its charter doesn't allow it to make loans.[64] However, banks can invest their own capital in FinTech, use the platforms developed by FinTech companies, develop solutions to banking needs like contactless payment, acquire ownership of FinTech companies, or join with other banks to develop FinTech solutions.[65]

B. The Status Quo of FinTech and Banking Regulations

Though FinTech companies are not directly regulated by one specific federal regulatory agency, they do not operate entirely outside the regulatory framework.[66] FinTech companies are indirectly

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[64] *See id.* (reporting that instead of using deposits to fund risky investments, Kraken Bank offers cryptocurrency exchange and safekeeping services, profiting from the fees it charges. Kraken's charter does not allow it to make loans, as compared to a traditional bank).

[65] *See* Victor Murinde et al., *The impact of the FinTech revolution on the future of banking: Opportunities and risks*, 81 INT'L REV. FIN. ANALYSIS 1, 14 (2022) (explaining the many dimensions of interaction between FinTech and banking). Listing the many possibilities for FinTech and Banking such as:

> a) Investment, where banks invest part of their own capital to a FinTech start-up, either as a VC, through a VC or direct investment; b) Collaboration, where banks for example use platforms developed by a FinTech firm or provide the network where new technological solutions can be tested and implemented or enter a joint venture with a FinTech firm or refer some of their customer to a FinTech firm for a specific financial service; c) In-house development of products where banks themselves develop FinTech solutions such con- tactless payments, robo-advisors for investment and others; d) M&A, where banks acquire a FinTech firm to get a faster access to new technologies; e) FinTech programs where banks either join with other banks and stakeholders a specific program with a goal to develop a FinTech solution or lead such a program.

Id.

[66] *See* Murinde et al., *supra* note 65, at 11 (emphasizing that although disruption caused by new technology is not novel for regulators, occurring at an unprecedented rate is innovation, and the influence of FinTech on financial activities has increased since the global financial crisis). The current dilemma regulators face is to strike the balance between maximizing the benefits that FinTech offers while protect the financial system and consumers from the possible underlying risks that these financial innovations entail. *Id.* *See also* Ctr. For Regul. Strategy Americas, *The evolving Fintech regulatory environment Preparing for the inevitable*, DELOITTE (Jan. 15, 2017), *archived at* https://perma.cc/37HG-QKCF (articulating that today,

supervised through their interactions with financial institutions.[67] While FinTech might be innovative, the OCC encourages banks to use due diligence when considering or working with FinTech companies.[68] Just as state banks are subject to state laws, national banks are subject to the National Bank Act.[69]

FinTech companies are not directly supervised, examined, or regulated by any one single federal banking regulatory agency, however, FinTech companies, including marketplace lenders and payment companies, are subject to certain federal regulations from a variety of the current regulators).

[67] *See* Salerno, *supra* note 1, at 378 (stating that banks which underwrite and take deposits from FinTech firms have passed along regulatory requirements to their FinTech partners, those of Know Your Customer (KYC) regulations imposed by the U.S. Financial Crimes Enforcement Network (FinCEN); this indirectly forces some FinTech firms to comply). *See also* Andrew Lorentz & Thomas Kost, *Fintech Laws and Regulations 2021 USA*, GLOB. LEGAL INSIGHTS (Aug. 25, 2021), *archived at* https://perma.cc/UXS4-364A (highlighting that regulators are requiring banks to practice effective risk management when contracting with third parties with which the banks have business arrangements, the OCC which has the most developed framework in managing this relationship, summarized its guidance on third-party risk management by recently updating supplementary FAQs, explicitly addressing banks' business arrangements with FinTech companies).

[68] *See Third-Party Relationships: Conducting Due Diligence on Financial Technology Companies: A Guide for Community Banks*, OFF. COMPTROLLER CURRENCY (Aug. 27, 2021), *archived at* https://perma.cc/4GT8-BU22 (pointing out that due diligence matters in risk management so banks can remain competitive and meet consumers' needs). *See also* BD. GOVERNORS FED. RSRV. SYS. ET AL., CONDUCTING DUE DILIGENCE ON FINANCIAL TECHNOLOGY COMPANIES (2021). Defining the scope of due diligence:

> Due diligence is an important component of an effective third-party risk management process, as highlighted in the federal banking agencies' respective guidance. During due diligence, a community bank collects and analyzes information to determine whether third-party relationships would support its strategic and financial goals and whether the relationship can be implemented in a safe and sound manner, consistent with applicable legal and regulatory requirements.

Id.

[69] *See* SAHNI ET AL., *supra* note 18 (commenting that the National Bank Act restricts the activities of national banks to those specifically authorized by the statute, including activities incidental to the business of banking; while state banks are subject to state laws, their activities conducted in a principal capacity are also limited to those permissible for national banks under federal law, unless there is FDIC approval). *See also* Douglas & Grinberg, *supra* note 20, at 705 (emphasizing that states have the power to define the permissible activities for their banks, and many

This indirect supervision of FinTech and banks has been the subject of controversy, on July 31, 2018 the OCC announced a new framework for granting special purpose national bank charters ("SPNB") to FinTech companies that are involved in core baking functions, like making savings and deposits; oppositionist claimed this was outside the bounds of OCC's statutory authority.[70] The OCC

have used this power, going beyond the floor set by the federal government, to authorize activities and investments for their banks that are beyond those authorized for national banks, like granting insurance brokerage powers for their banks, and some even permit broad real estate development powers). However, most states have statutes for their banks that are mostly parallel to those afforded national banks, commonly referred to by many statutes as a 'wild card' provision, allowing state banks to engage in any activity permissible to that of a national bank. *Id.*

[70] *See* OFF. OF THE COMPTROLLER OF THE CURRENCY, CONSIDERING CHARTER APPLICATIONS FROM FINANCIAL TECHNOLOGY COMPANIES (2018) (defining special purpose banks for the country as the sole federal regulator for bank charters). Defining the act:

> A special purpose national bank is a national bank that engages in a limited range of banking or fiduciary activities, targets a limited customer base, incorporates nontraditional elements, or has a narrowly targeted business plan. Special purpose national banks include those banks whose operations are limited to certain activities, such as credit card operations, fiduciary activities, community development, or cash management activities. Special purpose national banks also include national banks that engage in limited banking activities, including one or more of the core banking functions of taking deposits, paying checks, or lending money.

Id. *See also* Salerno, *supra* note 1, at 387 (addressing that the special purpose national bank provision would allow qualifying FinTech firms to enjoy every power that is granted by the National Bank Act, resolving the legal ambiguity at the federal level while also allowing FinTech firms to lend across the nation unfettered by state-by-state licensure laws). *See also* 12 C.F.R. § 5.20 (2017) (describing the OCC's statutory chartering authority and the procedures and requirements governing the OCC's review and approval of an application to establish a national bank, including a bank with a special purpose). Applicants need to tailor the contents of the application to be consistent with the business model of the proposed special purpose bank. *Id.* *See also* OFF. OF THE COMPTROLLER OF THE CURRENCY, EXPLORING SPECIAL PURPOSE NATIONAL BANK CHARTERS FOR FINTECTH COMPANIES (2016) (explaining the OCC's chartering authority includes the authority to charter special purpose national banks).

proposal spurred controversy and was challenged in many courts.[71] These lawsuits alleged non-depository institutions were not engaged in the "business of banking" and therefore could not be chartered without explicit authorization from Congress.[72] The District Court for the Southern District of New York agreed that the OCC proposal would cause preemption of state law and reduce the states' regulatory power, to the detriment of New York consumers.[73] However, the

[71] *See* Conf. of Bank Supervisors v. Off. of the Comptroller of the Currency, 313 F. Supp. 3d 285, 293 (D.D.C. Apr. 30, 2018) (arguing that the OCC does not have the statutory authority for the Nonbank Charter Decision, nor have statutory authority for a corresponding regulation, failing to follow rulemaking procedures; further that the Nonbank Charter Decision was arbitrary and capricious, violating the Tenth Amendment.). *See also* Knight, *supra* note 25, at 78 (detailing that if the OCC regulates FinTech companies the same way that it regulates banks then the FinTech companies, especially newer and smaller firms that are still finding their way, may not remain able to keep up with the numerouse regulations). Additionally, the Conference of Bank Supervisors argues that, given the fact that many FinTech lenders offer higher-interest products to consumers, the regulatory pressure against higher rates may make the potential charter unworkable for many of these FinTech lenders. *Id.*

[72] *See* Lacewell v. Off. of the Comptroller of the Currency, No. 18 Civ. 8377, 2019 U.S. Dist. LEXIS 182934, at *4 (S.D.N.Y. Oct. 21, 2019) (noting that the District Court denied "OCC's motion to dismiss in part, holding that the National Bank Act's "business of banking clause, read in the light of its plain language, history, and legislative context, unambiguously requires that, absent a statutory provision to the contrary, only depository institutions are eligible to receive national bank charters from OCC.") (internal quotations omitted). *See also* Lacewell v. Off. of the Comptroller of the Currency, 999 F.3d 130, 137 (2d Cir. 2021) (reversing the district court and emphasizing that "[i]n the press release announcing its decision, the OCC stated that it [would] begin accepting applications for national bank charters from non-depository financial technology (fintech) companies engaged in the business of banking.") (internal quotations omitted).

[73] *See Lacewell*, 999 F.3d at 142 (arguing that a national FinTech charter would lead to preemption of state-law and therefore reduce the NYDFS's regulatory power, to the detriment of New York State consumers, and that the NYDFS faces the prospect of losing revenue it currently levies against non-depository FinTechs, which may choose to convert to a federal SPNB charter instead of staying under the state purview). *See also Acts of Congress Held Unconstitutional in Whole or in Part by the Supreme Court of the United States*, JUSTIA (Mar. 31, 2022), *archived at* https://perma.cc/4XVE-UMDS (listing unconstitutional acts of Congress); John Dinan, *Contemporary Assertions of State Sovereignty and the Safeguards of American Federalism,* 74 ALB. L. REV. 1637, 1660 (2011) (listing the states that challenged the Affordable Care Act). *See also* Osborn v. Bank of the U.S., 22 U.S. 738, 822 (1824) (holding that Ohio's tax on a federally chartered United States bank was unconstitutional).

Second Circuit Court of Appeals dismissed the lawsuit claiming the New York Division of Financial Services had no standing due to a lack of actual injury at the time of the suit; it was untimely, making it not constitutionally ripe for the Second Circuit to decide the matter.[74]

Two similar actions challenging the OCC's authority to grant SPNB charters were previously dismissed in the District Court of the District of Columbia because the court found the Conference of State Bank Supervisors ("CSBS") lacked standing and its claims were unripe as well.[75] Most recently, the CSBS dropped its lawsuit against

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[74] *See Lacewell*, 999 F.3d at 149–50 (holding that the National Bank Act claims are not able to be litigated, lacking ripeness). Additionally, the Court stated:

> Accordingly, for substantially the same reasons set forth above with respect to Article III standing, we hold that DFS's APA claims are not constitutionally ripe. In particular, we reiterate that, even if non-depository fintechs have engaged in preliminary discussions with the OCC regarding (or submitted draft applications for) SPNB charters, DFS is still asking us to "entangl[e] [ourselves] in abstract disagreements over matters that are premature for review because the injury is merely speculative and may never occur.

Id. *See also* Lujan v. Def. of Wildlife, 504 U.S. 555, 575 (1992) (holding prohibitions of litigation of the following: general grievances, litigating the rights of 3rd parties outside of certain exceptions, and litigation arising from a statutory claim if the plaintiff's interest does not fall within the zone of interest the statute was designed to protect).

[75] *See Conf. of Bank Supervisors*, 313 F. Supp. 3d at 301 (holding that the case is not ripe yet in its claims).

> For these reasons, the prudential ripeness doctrine counsels in favor of allowing time to sharpen this dispute before deciding it. Indeed, there may ultimately be no case to decide at all if the OCC does not charter a Fintech. Therefore, even if CSBS had successfully alleged an injury in fact, this case is prudentially unripe.

Id. *See also* Vullo v. Off. of the Comptroller of the Currency, 378 F. Supp. 3d 271, 299 (S.D.N.Y. 2019) (holding that this type of case does not violate the Tenth Amendment).

> For this reason, the Court finds that DFS fails to state a Tenth Amendment claim. To violate the Tenth Amendment, an action must "exceed the National Government's enumerated powers"; it must categorically lie beyond federal authority. Hence an action that violates the Tenth Amendment is one that Congress cannot choose to take. A claim that turns on whether Congress articulated

the OCC as CSBS's main complaint was resolved outside the courtroom.[76] Figure Technologies, Inc. was seeking a SPNB charter from the OCC, however, to avoid further litigation, Figure Technologies, Inc. agreed to apply to the FDIC for deposit insurance and to apply for approval from the Federal Reserve Board to become a bank holding company; these requirements extraneous to the OCC's requirements.[77]

In order to protect innovation, consumers, and other FinTech users such as banks, certain states created regulatory sandboxes, or "innovation hubs," aiming to promote an orderly application of new technologies in the financial industry through safe state facilitators.[78] In March of 2018, Arizona became the first state to launch a FinTech-related regulatory sandbox, while, most recently, North Carolina is the latest state to follow suit.[79] The North Carolina Sandbox Act of 2021

> its choice with sufficient clarity simply does not implicate the Tenth Amendment.

Id. (internal citation omitted).

[76] *See* Al Barbarino, *Bank Regulator Group Ends Fintech Charter Suit Against OCC*, LAW360 (Jan. 18, 2022), *archived at* https://perma.cc/LM6P-7PJB (informing that the Conference of State Bank Supervisors dropped the lawsuit it had against the OCC after Figure Technologies Inc. made significant amendments to its charter application for Figure Bank, rendering the lawsuit moot).

[77] *See id.* (informing that in December of 2021, Figure Technologies significantly amended its Figure Bank SPNB application by seeking additional regulatory approvals at the federal level, seeking now a bank full-service charter status, the action taken by Figure Technologies resolved the chief complaints of the CSBS, a national organization representing bank regulators from all 50 states).

[78] *See* Anthony C. Kaye, *Wyoming creates fintech sandbox*, BALLARD SPAHR LLP (June 5, 2019), *archived at* https://perma.cc/VJ54-EUCW (publicizing that earlier this year Wyoming became the second state in the nation to create a FinTech sandbox, by enacting the 'Financial Technology Sandbox Act'). *See also* Nuno Saldanha de Azevedo, *SupTech: A potential supervisory tool of European Banking Supervisors*, (Aug. 16, 2020) (LLM dissertation, Queen Mary University of London) (on file with author) (emphasizing that other countries have incorporated sandboxes into their governmental approaches). Supervisory technology ("SupTech") is only enhanced in the EU, specifically, by the creation of regulatory sandboxes, the increasing investments in FinTech, and the experiences of banking supervisors of other countries. *Id.*

[79] *See Things to know about Arizona's FinTech Sandbox*, GREATER PHOENIX ECON. COUNS. (Apr. 8, 2021), *archived at* https://perma.cc/VPG7-64JE (recognizing that with the Arizona FinTech Sandbox, startups, entrepreneurs, and established financial companies are allowed to launch products on a limited, temporary scale for

aims to "facilitate the development of innovative financial or insurance products or services utilizing new or emerging technology" through the creation of a sandbox program that reduces liability and formalizes exemptions from regulations that would normally serve as entry barriers to new technology in the state.[80]

C. A Current Overview of RegTech

In response to the financial crisis of 2008, large financial institutions invested heavily in FinTech equipped with regulatory capabilities, called RegTech, to aid with compliance and risk management of their banking activities.[81] RegTech facilitates the

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consumers to test the software before it is opened to the public market – FinTech companies can do this without incurring additional regulatory burdens or costs). *See also* Richard B. Levin et al., *Hardly Child's Play: North Carolina Joins the Growing Number of States With a FinTech Regulatory Sandbox*, NAT'L L. REV. (Oct. 19, 2021), *archived at* https://perma.cc/J382-J845 (reporting that the North Carolina Governor Roy Cooper signed the North Carolina Regulatory Sandbox Act of 2021 ('NC Sandbox Act') into state-law – implementing the North Carolina Sandbox Act; North Carolina is the 10th state in the nation to launch a regulatory type sandbox for FinTech innovation or insurance technology (InsureTech) creation).

[80] *See* Levin, *supra* note 79 (explaining that the North Carolina Sandbox Act aims to facilitate the safe development of innovative financial insurance products, or services utilizing new or emerging technology within the state). *See also North Carolina creates regulatory sandbox*, BUCKLEY LLP (Oct. 21, 2021), *archived at* https://perma.cc/8GJR-W9WU (reporting that with the North Carolina Regulatory Sandbox Act of 2021 companies have 24-months from the date of approval to test a product or service on consumers in the state, without being subject to state laws and regulations that normally would regulate such products or services).

[81] *See* Salerno, *supra* note 1, at 389 (explaining that regulatory technology ("RegTech") offers a solution in risk management and compliance systems, which large financial institutions in response to the post greater financial crisis regulatory requirements, began to heavily invest in; those have been the main driver in the development of RegTech). *See also Fintech, Regtech, and Reconceptualization, supra* note 1, at 382 (detailing that RegTech represents more than just an efficient tool, it is a pivotal technology leading to a paradigm-shift in financial regulation, RegTech represents the next logical evolution of financial services regulation, potentially developing into a foundational base supporting the entire financial services sector). *See also THE EVOLUTION OF FINTECH*, *supra* note 4, at 1313 (describing that the increased use of technology within the financial services industry gives regulatory bodies an opportunity to access a level of granularity in risk

integration of new processes, distribution channels, products, and business organizations to help banks comply with regulatory requirements and manage risk more effectively and efficiently.[82] Trunomi is a customer consent and data rights management company offering a platform where customers and banks can track financial information.[83] In doing so, Trunomi can ensure that banks do not abuse their sharing powers and customers do not make fraudulent transactions.[84] Not only does RegTech offer large financial institutions enhanced oversight capabilities, but it also offers regulators a new model of interacting with the regulated market

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assessments that did not previously exist for regulators). *See also* BASEL COMM. BANKING REGUL., *supra* note 50, at 23 (defining the major capability of RegTech as providing banks with more effective ways to improve their compliance and risk management, which means coping with change in the regulatory environment and driving down the costs involved in meeting the corresponding compliance and risk management requirments).

[82] *See Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 383–84 (emphasizing that financial institutions and the financial industry are applying technology, at an ever increasing rate, to meet the demands of all regulators, especially demands upon the large financial institutions in developed markets arising from new post-financial crisis regulations). Additionally, "global firms are now developing global centralized risk management and compliance functions in order to address the changed regulatory and compliance environments." *Id.* at 385. *See also* Patrick Laurent & Francois-Kim Huge, *RegTech Business Cases 2021,* DELOITTE (May 2021) (highlighting how RegTech allows new processes, distribution channels, products, and business organizations that can also help banks comply with regulatory requirements and manage risk more effectively and efficiently). With major categories including regulatory reporting, risk management, identity management & control, compliance, and transaction monitoring. *Id.*

[83] *See* Bevin Wallace, *Trunomi Hires New Chief Architect, Furthers KYC, Data Sharing Automation Efforts in the First Quarter*, BUS. WIRE (Apr. 28, 2015), *archived at* https://perma.cc/3997-XXGX (highlighting that "Trunomi, a provider of consent-based Know Your Customer (KYC) data-sharing technology … [provides] [s]olutions [which] include mobile account opening, [KYC], data personalization and the delivery of new value-added services that all rely on the access to and analysis of Customer Personal Information." *Id.*

[84] *See* Sam Daley, *What Is Regtech? These 12 Companies Will Help You Understand.*, BUILT IN (May 9, 2021), *archived at* https://perma.cc/S4AW-TBUZ (listing 12 RegTech companies and their uses, such as Trunomi). *See also Consent & Permissions*, TRUNOMI (2022), *archived at* https://perma.cc/4K4R-RSV2 (emphasizing that Trunomi's technology focuses heavily on capturing, recording, and proving customer consent and data permissions for data privacy compliance).

participants to ensure stability within the financial marketplace.[85] Just as FinTech is utilized by the private sector to transform the financial services market, RegTech offers regulators a new capability of adapting the existing regulatory framework to respond to the challenges posed by rapid and continuous financial innovation.[86]

D. The Current SSO Landscape

Standard setting organizations aim to promote the integration of financial inclusion objectives into worldwide standards.[87] With new

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[85] *See* BASEL COMM. ON BANKING REGUL., *supra* note 50, at 23 (observing that RegTech could result in new processes, distribution channels, products, or business organizations that help banks and large financial institutions comply with regulatory requirements and manage risk more efficiently; while some RegTech firms offer compliance and risk management solutions to banking institutions through outsourcing or insourcing these processes). *See also Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 383 (emphasizing that the emergence of RegTech is largely attributable to regulators' efforts to enhance the efficiency of supervisory tools to foster competition and uphold their mandates of financial stability of market integrity).

[86] *See Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 382 (emphasizing that in the near future, the application of technology to monitoring and compliance offers immense cost-savings to established financial companies, as well as massive opportunities to emerging FinTech start-ups, IT firms, and advisory firms). *See also* BASEL COMM. BANKING REGUL., *supra* note 50, at 24 (explaining that RegTech could "address a wide array of requirements related to regulatory reporting, financial crime, operational risk (including cyber-security and fraud detection), consumer protection and data protection regulation. Examples in these domains include BearingPoint's Abacus solution for compliance with the European supervisory reporting requirements, and Trulioo's and Qumran's 'know your customer' solutions.").

[87] *See* GLOB. P'SHIP FIN. INCLUSION, *supra* note 48, at xi (explaining that the GPFI aims to promote the integration of financial inclusivity objectives through standards and guidance that can be applied effectively at a country level, applicable for every country). Additionally stating, "[t]he World Bank Group has taken steps to help standardise the treatment of financial inclusion as a crosscutting theme." *Id.* at xvi.

> Digital financial inclusion can be a game changer for unserved and under-served low-income households as well as micro- and small enterprises. The regulatory, supervisory, and standard-setting challenges—and likewise the solutions—include those we currently face, and others we can only imagine as billions of new digital finance users go online. We have the

actors in the fast-growing FinTech realm, international standard setting organizations introduce high-level principles for specific institutions, in part, requesting that software and data technology norms remain open sourced to the public.[88] Currently, the federal government is exploring new FinTech possibilities within banking regulations as well as solutions to financial disruptions to help build resilience and stability in the financial industry for our global economy.[89]

> opportunity—and indeed the responsibility—to prepare for both the risks and the rewards of the digitisation of financial services.

Id. at 1.

[88] *See* Fernando Restoy, *Fintech regulation: how to achieve a level playing field*, BANK INT'L SETTLEMENTS (Feb. 2021), *archived at* https://perma.cc/8ER2-CPR8 (explaining that "[i]nternational standard-setting bodies have introduced high-level principles for specific financial institutions (such as banks, insurance companies and market infrastructures) that deal with specific aspects of the wider concept of operational resilience, such as outsourcing, business continuity and cyber security."). However, there are no comparable international standards for payment service providers. *Id.* at 15. Additionally, stating, "[o]f special relevance to the provision of technology-intensive financial products and services are the existing rules related to the provision of services by third parties. In several jurisdictions, including the United States, requirements are substantially more detailed in the case of banks than for other firms." *Id.* *See also* Tosha Ellison et al., *The 2021 State of Open Sources in Financial Services*, FINTECH OPEN SOURCE FOUND. (Oct. 2021) (summarizing that FINOS is made up of over 45 member organizations, developing software and standards for data and data technologies, cloud services, financial desktop applications, and more. It is unique among open-source foundations in that it is an open community for financial services and fintech firms to address industry challenges instead of being horizontal across industries). *See also* Charles Taylor et al., *Institutional Arrangements for Fintech Regulation and Supervision*, INT'L MONETARY FUND (Feb. 2019) (highlighting that domestic and international coordination takes various forms, among domestic agencies this typically makes use of existing senior-level structures; if FinTech issues arise, they can be referred to a subcommittee or result in the creation of a taskforce to develop possible solutions, while international coordination arrangements range from bilateral agreements coordinated by the standard-setting bodies).

[89] *See* Fin. Inst. Letter, *FDITECH Launches Tech Sprint to Measure and Test Bank Operational Resiliency*, FED. DEPOSIT INS. CORP. (Aug. 16, 2021), *archived at* https://perma.cc/T22A-565V (notifying that the FDIC's tech lab, FDITECH, is launching a 'tech sprint,' which will challenge participants to identify solutions that can be used by institutions, no matter the size, to measure and test their resilience to a major financial disruptions). *See also* Fin. Inst. Letter, *FDITECH Selects Six Teams in Sprint for Banks to Measure and Test Resiliency*, FED. DEPOSIT INS. CORP.

IV. Analysis

A. The Need to Be Ahead of the Curve: Incorporating RegTech into the Regulatory Toolbelt

Regulatory interest in the FinTech sector is at a pivotal point.[90] Regulators must understand that RegTech offers significant opportunities to help prevent future market disruptions and opportunities to help banks incorporate FinTech going forward.[91] For decades, the financial sector was the largest spender on IT, investing heavily in both regulatory and compliance technology.[92] With

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(Oct. 4, 2021), *archived at* https://perma.cc/S2RP-9J42 (mentioning FDITECH will look to the six teams chosen to develop consistent data and measures that all banks can use to assess their resilience to a major disruption, this work will lay the foundation to build and evaluate future efforts to promote better resiliency in the banking space).

[90] *See THE EVOLUTION OF FINTECH, supra* note 4, at 1314 (emphasizing that regulators can and should interact with FinTech companies). Regulatory interest in the FinTech sector is coming to a turning point, where regulators are no longer only seeking to prevent the previous financial crisis; they are instead looking at how to support future market developments while maintaining financial stability too. *Id.* Benefits for regulators to interact early with new FinTech start-ups, even if they are not yet significant or able to currently comply with the rules can help the start-up navigate compliance. *Id.*

[91] *See* Murinde et al., *supra* note 65, at 11 (explaining that regulation is a challenging task for regulators because challenges posed by FinTech companies surpass the existing capacity of the financial authorities, whereas the speed of technological innovations makes regulators timely response difficult, in addition, these innovations may present challenges when it comes to maintaining transparency and traceability).

[92] *See THE EVOLUTION OF FINTECH*, *supra* note 4, at 1291 (emphasizing that banks are spending incredible amounts in IT).

> Internal financial operations and risk management … have been a core driver of IT spending by financial institutions, especially since 2008, as financial institutions have sought to build better compliance systems to deal with the massive volume of post-crisis regulatory changes. As one example, approximately one-third of Goldman Sachs' 33,000 staff are engineers, more than LinkedIn, Twitter or Facebook.

Id. See also Salerno, *supra* note 1, at 392 (highlighting that regulators can improve efficiency in their market regulation). Furthermore, regulators should make a

emerging technology and updated regulatory law on the rise, this trend is incredibly likely to continue.[93] The regulatory onus and level of scrutiny by regulators dramatically increased in the wake of the 2008 financial crash.[94] Correctly, regulators moved towards a risk-based approach, where access to data was key to prudential supervision.[95] Yet, now is the time for regulators to use the tools available to them, in order to help banks and consumers remain compliant, or else risk falling short of their legally-mandated obligations under federal law.[96] Regulators need to use RegTech to govern the market and it's actors, from artificial intelligence and deep learning, to automation of market supervision, consumer protection, and prudential regulation:

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steadfast effort to engage with FinTech players on issues where either side feels efficiency can be improved. *Id.* For example, regulators can promote the development and use of uniform compliance systems, such as open-source tools like that of standard setting organizations, while companies may propose new, more cost-effective ways to collect data. *Id.*

[93] *See* FINEXTRA, *supra* note 4 (reporting that JPMorgan's CEO Jamie Dimon claims banking FinTech is here to stay, banking products such as payments, deposits and loans are moving out of the banking system to neobanks and non-banks alike, where banks need to invest in AI and machine learning tools and accelerate a shift to cloud-based banking).

[94] *See Fintech, Regtech, and Reconceptualization*, supra note 1, at 374 (emphasizing that 2008 represented a turning point in the development of RegTech and Fintech).

> The 2008 crisis … reforms have transformed the way in which financial institutions operate, combining to reduce their risk-taking, the spectrum of their operations, and their profitability. The mass of new post crisis regulation has dramatically increased the compliance burden on financial institutions . . .. over $200 billion globally since the crisis.

Id. at 377.

[95] *See id.* at 413 (stating how consumer protection is needed the more technology increases and data protection is a huge aspect of FinTech and RegTech). For regulators, data security and use will be more important than ever before for protecting consumers with the use of FinTech, prudential regulation will then focus on algorithm compliance, and financial stability will also be concerned with financial and information networks. *Id.*

[96] *See id.* at 397 (emphasizing that with the exponential amount of information reported to regulators and new technology, such as artificial intelligence and deep learning, there is great potential for more to be done in terms of automating market supervision, consumer protection, and prudential regulation from the regulatory perspective).

immediate action must be taken at the federal level due to the exponential growth of FinTech.[97]

Regulating FinTech promotes market stability: users gain the ability to analyze solvency, liquidity, and risk in real time, and regulators are better able to predict and cure potential market disruptions.[98] Although banks and other marketplace participants must conform to federal regulations governing daily business operations, many new market competitors are only governed on a state-by-state basis, leading to conflict of governing regulations.[99]

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[97] *See Fintech, Regtech, and Reconceptualization*, *supra* note 1, at 398 (highlighting the gap between the regulators and the current technology used). The gap is large and needs to be closed, "the regulators themselves provide an example of the gap between IT-enabled systems in the industry and the lack of IT- enabled solutions among regulators." *Id.* This large gap is one regulators are now becoming increasingly aware of due to the plain necessity of dealing with the masses of reports and data that post-great financial crash regulatory changes have required the industry deliver to them. *Id.*

[98] *See id.* at 383 (highlighting the potential benefits that RegTech has to offer market regulators). RegTech, however, offers more, it offers the potential of continuous monitoring capacity, providing close to real-time insights, deep learning and artificial intelligence filters into the functioning of the markets nationally and globally. *Id.* at 382. The technological capabilities of RegTech could allow regulators to look forward to identify violations in advance rather than simply taking enforcement action after the fact of some harm done to a consumer. *Id.* *See also* Azevedo, *supra* note 78, at 18 (explaining that other regulatory authorities have incorporated RegTech into their regulatory tool belts).

> As regards to market surveillance, one good example of the application of SupTech to this supervisory task comes from the Australian Securities and Investments Commission (ASIC) which has developed a SupTech system – known as Market Analysis and Intelligence system – which provides real-time data feed on the transactions taken into the primary and secondary capital markets, including equity or derivatives products.

Id. *See also* Murinde et al., *supra* note 65, at 19 (claiming that FinTech solutions can potentially create opportunities for the banking sector in liquidity, and in the improvement of the information collection and management regarding bank customers).

[99] *See* LABONTE, *supra* note 19, at 8 (identifying that the OCC is the primary regulator of national banks, U.S. federal branches of foreign banks, as well as all federally chartered thrift institutions). *See also* Douglas & Grinberg, *supra* note 20, at 706 (highlighting the boundaries for state banks and FinTech usage). "State-chartered banks have the power to invest in controlled and non-controlled

This incongruency in banking and FinTech regulation places new market entrants at an undue disadvantage when compared to their incumbent competitors and must be eliminated if the U.S. wishes to continue being a world leader in innovation.[100]

B. From Inoperability to Interoperability: Using SSOs to Create an Equal Playing Field for Regulators

With the market-based approach to banking used by the United States, many standard setting organizations lack the central authority needed at a federal level to be enforceable.[101] Arguably, regulatory harmony is needed now more than ever; SSOs provide that harmony to regulators across state and federal levels through improved standards in the financial services market, safeguarding the stability of the financial system and protecting consumers.[102] Crucially, federal

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companies, operating subsidiaries, bank service companies, and in financial subsidiaries under the same terms and conditions as are applicable to national banks." *Id.* "While the Small Business Investment Company Act extends to state banks the power to invest in SBICs and use them as a vehicle for additional FinTech investments." *Id.* *See also* Knight, *supra* note 25, at 4 (describing the possible avenues for FinTech actors to enter the market, while conforming to state or federal banking regulations).

[100] *See* Douglas & Grinberg, *supra* note 20, at 687 (explaining the differences in state and federal regulations as the Federal Reserve takes a very restrictive view of the second BHC authority provision, limiting it to the investments deemed permissible for national banks under 12 U.S.C. § 24, which permits investments in various government and agency securities). "However, because under the Small Business Company Investment Act, national banks (and state banks) may invest in Small Business Investment Companies, parallel investment authority is available for BHCs." *Id.* at 687–88. *See also* Knight, *supra* note 25, at 64 (explaining that securitization can be an important source of funding of loans, especially for many small businesses, while that inconsistency in allowable interest rates, finance charges, and terms can hamper this securitization of loans).

[101] *See* Gibson, *supra* note 45, at 1413 (calling attention to the fact that, "[t]he U.S. system for standard setting has been characterized by a decentralized, pluralistic, and market-based approach with a high degree of competition among numerous SSOs and consortia. One set of commentators emphasize the high degree of disarray in the absence of a strong central coordinating agent.").

[102] *See* Salerno, *supra* note 1, at 392 (bringing to light that since other nations that have created harmonization in regulatory efforts the U.S. should do the same).

> Governments around the globe have already begun to take steps toward developing smart regulatory systems to balance innovation

regulators must collaborate with state jurisdictions to implement standardized compliance methods, work to harmonize reporting standards, and exchange information between regulators with overlapping jurisdictions so there is a proper diffusion of FinTech regulation implementation.[103] As a joint effort, these ideals can be accomplished through federal congressional action, codifying standard setting organizations into federal law for implementation and monitoring standards.[104]

The current lack of harmony among banking laws creates a nonexclusive approach to enforcement, inviting inconsistent treatment to banks subject to the interpretation of each attorney general, potentially giving rise to fifty different interpretations of law.[105] With

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> and the preservation of market soundness. By drawing on these experiences, U.S. regulators can better integrate FinTech into the American financial regulatory framework, thereby ensuring the U.S.'s economic competitiveness and ability to realize the full benefits of financial innovation.

Id.

[103] *See* Murinde et al., *supra* note 65, at 19 (explaining that there is an urgent need for discussions among national and international policymakers to establish a global regulatory framework and response to the emergence of FinTech; regulatory approaches tailored to the distinct FinTech characteristics, like use and potential in each jurisdiction, should be required too).

[104] *See* GLOB. P'SHIP FIN. INCLUSION, *supra* note 48, at 96 (explaining the need for standards in regulating technology, specifically FinTech).

> Technical standards can help regulators to navigate the entry of new providers and new technologies and to enable interoperability of payment systems while attending to safety and security of financial transactions. Adherence to technical standards by financial service providers (including providers of financial sector infrastructure) can offer regulators assurances of adequate levels of safety and security of financial transactions and can enable interoperability.

Id. *See also* Omer, *supra* note 6, at 302 (explaining that the passage of federal legislation could provide harmony to banking laws by preemption, ones that could potentially be used to create SSO). "The most obvious obstacle is the need to pass federal legislation to expand the existing federal preemption authority available to state banks". *Id.*

[105] *See* Knight, *supra* note 25, at 83 (emphasizing that the interpretation of laws can create different outcomes). "The enforcers of regulations, such as the states' attorneys general and banking commissioners, are not immune to the temptation to

a slurry of differing banking law interpretations, the U.S. faces regulatory inefficiencies, varying degrees of authoritative encroachment, and stifled democratic redress for financially-focused entities like investors and banks.[106] Codifying standard setting organizations focused on FinTech banking will solve the federal and state conflict as the federal law will preempt state law.[107] However, statutory creation of federal standard setting organizations will

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capture benefits while exporting costs." *Id.* at 82. "Although attorneys general and commissioners may be sensitive to the political preferences of their state, they are less concerned with the perception of out-of-state residents, who lack a direct means of applying political pressure to check the enforcers' actions." *Id.* *See also* Omer, *supra* note 6, at 296 (highlighting that the fifty-state compliance burden impacts state-chartered banks conducting interstate internet FinTech banking operations all the while putting them at a disadvantage to national banks conducting the same type of operations within those states).

[106] *See* Omer, *supra* note 6, at 303 (explaining that "many states have the ability to implement some level of uniformity and reciprocity through interstate compacts and the state rulemaking process."). *See also* Salerno, *supra* note 1, at 391–92 (emphasizing that there are ways to harmonize state regulatory methods in FinTech usage). Regulators can reduce reporting costs and improve efficiency for the financial services sector through simplification and harmonization initiatives, for example, regulators could collaborate with other jurisdictions to harmonize these reporting standards, implement standardized compliance methods, and share information between the regulators of overlapping jurisdiction, just as an SSO would provide. *Id.*

[107] *See* Knight, *supra* note 25, at 83 (bringing to light that "enforcement by federal actors, at least regarding those elements of a transaction that are particularly sensitive to state-by-state regulation, should provide more consistency and allow real redress by those affected even if imperfect. This is not to say that federal enforcement is guaranteed to be good enforcement."). *See also* GLOB. P'SHIP FIN. INCLUSION, *supra* note 48, at 101 (recommending that digital financial inclusion takes systemic focus on the characteristics and risks of FinTech companies). Explaining that:

> At the country[-wide] level, the establishment of well-defined, formal processes for coordination on financial inclusion issues could foster the development of formal mechanisms for technical cooperation and coordination among supervisors, and between supervisors and non-financial authorities where relevant, to facilitate not only information exchange but also arrangements for joint supervisory actions.

Id. at 102.

inevitably create a power-shift, and states that do not agree to federal oversight may litigate over the legitimacy of the statute.[108]

C. The Need for Harmonization of Special Purpose National Bank Charters for Non-Depository Institutions

Allowing qualified FinTech firms to enjoy the powers granted by the National Bank Act, through the special purpose national bank charters, led to an excess of litigation wherein states and organizations sued the federal government over a lack of clarity in the implementation of the OCCs regulatory rules and law.[109]

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[108] *See* JUSTIA, *supra* note 73 (listing unconstitutional acts of Congress, for example "[a]llowing a pretrial freeze of legitimate, untainted assets violates a criminal defendant's Sixth Amendment right to counsel of choice."). *See also* Dinan, *supra* note 73 (listing the numerous states that challenged the constitutionality of the Affordable Care Act).

> In response to the congressional debate about and passage of the ACA, fifteen states in 2010 and 2011 adopted statutes or constitutional amendments challenging the legitimacy of the individual mandate: Arizona, Georgia, Idaho, Louisiana, Missouri, Oklahoma, Utah, and Virginia in 2010 and Florida, Indiana, Kansas, Montana, New Hampshire, North Dakota, and Tennessee in 2011.

Id. *See also* Osborn v. Bank of U.S., 22 U.S. 738, 870 (1824) (holding that Ohio's tax on a federally chartered United States bank was unconstitutional).

[109] *See* Barbarino, *supra* note 76 (explaining that CSBS has had a checkered history with the OCC). "The CSBS first filed a suit objecting to the OCC's authority to grant charters to fintechs in 2017, a claim that was tossed by a D.C. federal judge for a second time in September 2019. The judge noted then the claims were "unripe" because no fintech firm had yet applied for the special status." *Id.* "Despite this, the OCC added in the announcement that it maintains it 'has the authority to charter an uninsured institution, including one that takes deposits.'" *Id.* *See also* 12 C.F.R. § 5.20 (2020) (describing the OCC's statutory chartering authority and the procedures and requirements governing the OCC's review and approval of an application to establish a national bank, including a bank with a defined special purpose); Conf. of Bank Supervisors v. Off. of Comptroller of Currency, 313 F. Supp. 3d 285, 291 (D.D.C. Apr. 30, 2018)

> The National Bank Act governs any decision to grant national bank charters to FinTechs or other firms that do not accept deposits. Under the Act, 'the Comptroller shall examine into the condition' of charter applicants and determine whether each

Simultaneously, some take the viewpoint that developed FinTech companies are avoiding state laws and standards by only implementing federal laws set by the Federal Reserve, the FDIC, and the OCC.[110] These challenges emphasize the need for harmony within the federal agencies in order to enforce federal law: the federal government has a legally-mandated duty to provide guidance to the country without harming consumers, banks, or innovation.[111] To the extent such lawsuits from states do present a serious threat to proper regulation, Congress should respond to these attacks by granting the OCC explicit authority through preempting any further legal challenges in their legislation or by creating federal SSOs.[112]

> applicant's condition entitle[s] it to engage in the business of banking.

Id.

[110] *See* Salerno, *supra* note 1, at 387 (emphasizing that due to the requirements and costs to obtain and maintain such charters, the OCC's proposal may only be available to larger, more financially established FinTech firms and this could disadvantage smaller companies, disturbing the balance of the marketplace in supporting innovation). One proposed solution is to incorporate a tier-based system to FinTech chartering application, such modification would allow smaller FinTech firms to receive the benefits of a national charter while being exempt from certain regulatory requirements until they grow and assume more regulatory oversight. *Id. See also* Knight, *supra* note 25, at 6 (highlighting that transactions subject to state-by-state regulation are less efficient and less equitable than they could be as compared to federal regulation, this lack of efficiency and equitability could justify harmonizing or displacing existing state regulations, either through states themselves creating laws or preemptive federal regulations, like standard setting organizations).

[111] *See* Murinde et al., *supra* note 65, at 11 (highlighting that at present, the fragmented and decentralized character of the FinTech industry makes the identification of relevant players more difficult and fosters regulatory ambiguity). Additionally, Murinde explains that "although a generic regulatory framework may be possible, regulatory approaches tailored to the distinct FinTech characteristics, use and potential in each jurisdiction may be required." *Id.* at 19.

[112] *See* Knight, *supra* note 25, at 34 (explaining the ways Congress can enact federal preemption laws). "Congress has not created a uniform and preemptive federal regulatory regime for money transmitters. Congress has, however, acknowledged that greater uniformity of state law governing money service businesses, including money transmitters, would help combat money laundering and protect the payment system." *Id. See also* Sain Jones, *supra* note 25, at 24 (highlighting that "unless the National Banking Act or the federal regulations promulgated pursuant thereto has addressed an issue, banks will follow the governance rules of the states selected in their charters."). *See also* Rosenstein, *supra* note 7 (explaining the impact of FinTech on bank charters). "A federal payments charter is an option that would

1. Legal Limitations and Potential Conflicts with Special Purpose National Bank Charters

Despite support from FinTech companies, the OCC's authority on special purpose national bank charters continues to be the subject of criticism, and the setbacks that the OCC is dealing with will persist.[113] Though special purpose national bank charters issued by the OCC to non-depository institutions, including trust banks, credit card banks, and bankers' banks are well established, current issues highlight what happens when FinTech companies attempt to seek formalized special purpose bank charters.[114] While litigation will continue until this matter is resolved, a possible solution to avoid litigation at this time and still receive a special purpose national bank charter is to apply for FDIC and Federal Reserve approval, just as Figure Technology did.[115]

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boost innovation, competition and ultimately benefit consumers with lower costs, better speed, better service[.]" *Id.* (quoting Nick Catino, the head of policy and campaigns at global payments company TransferWise).

[113] *See* Barbarino, *supra* note 76 (emphasizing that for the lawsuit against the OCC to be dropped, the FinTech company had to comply with external rules not placed on them by the OCC). "The Conference of State Bank Supervisors dropped the December 2020 lawsuit after Figure Technologies Inc. made amendments to its charter application for Figure Bank, National Association that rendered the lawsuit moot, the OCC said in Friday's announcement." *Id. See also* Salerno, *supra* note 1, at 389 (bringing to light the difficulties the OCC has had in their federal regulatory abilities). "This issue will likely be litigated for many years to come—although there is reason to believe the OCC may ultimately triumph. The Supreme Court has already found the phrase 'business of banking' to be ambiguous and, if the Comptroller's interpretation is reasonable, such interpretation would be accorded 'controlling weight.'" *Id.* (quoting Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc., 467 US 837, 844 (1984)).

[114] *See* OFF. OF THE COMPTROLLER OF THE CURRENCY, *supra* note 70, at 3 (explaining that the OCC's chartering authority includes the authority to charter special purpose national banks. In fact, many special purpose national banks are operating today–primarily used by trust banks and credit card banks).

[115] *See* Barbarino, *supra* note 76 (reporting that Figure Technologies, Inc. is going to file for additional regulatory approval). Figure Technologies banking charter application will help ensure that the innovative activities of the bank are done in a safe, sound, and responsible manner, and on a levelled playing field while fully within the bank regulatory perimeter granted by the federal government. *Id.*

However, while the OCC is the federal agency with the sole discretion to approve special purpose national bank charters, it is well within the ability of the courts to decide this matter as well for the nation.[116] As such, active steps need to be taken toward harmonization efforts, either through SSOs, congressional action, regulatory pacts, or cases being litigated on the merits of the claim if the future of banking and FinTech is to take hold.[117] If left unresolved, then FinTech innovation, and ultimately U.S. citizens, are left at risk of significant harm, leaving banks at risk of falling short of their legally-mandated obligations to protect investors, while regulators will be forced to play a constant game of catch-up.[118]

V. Conclusion

Over a decade into the rise of FinTech, the question of how the U.S. regulatory system will accommodate new and emerging innovations in the financial services industry remains to be answered. The challenge now lies in resolving the growing tension between constructing a framework clear enough to maintain market, consumer, and investor confidence, while constructing a framework that is also simultaneously flexible, forward-looking, and innovative. Regulators are currently evaluating the best way to support market-based developments while keeping consumer protection, market competition, and systemic stability in mind. Due to the rapid growth and innovative market penetration of FinTech, regulators and the federal government need to take active steps to adapt a regulatory

[116] *See* 12 C.F.R. § 5.20 (codifying the OCC's statutory chartering authority and the procedures and requirements governing the OCC's review and approval process of an applicant establishing a national bank, including a bank with a statutorily defined special purpose).

[117] *See* Knight, *supra* note 25, at 77–84 (explaining that with the differences between federal and state FinTech regulations that there are different bodies who can write the laws, who can enforce the laws, and what the courts can do about it).

[118] *See* Omer, *supra* note 6, at 305 (bringing to light potential issues with the federal authority of the OCC). *See also* Salerno, *supra* note 1, at 386 (explaining that there needs to be proper incorporation of FinTech). Salerno also claims that U.S. regulators can integrate FinTech into the American financial regulatory framework, better ensuring the U.S.'s economic competitiveness and ability to realize the full benefits of financial innovation is never stifled. *Id.* at 392.

system to meet the challenges of an increasingly decentralized and innovative financial market.