USA

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Approaches and developments

Evolutionary approach to regulatory innovation

The U.S. financial regulatory framework is fragmented, with oversight and regulation divided and shared among various federal and state agencies, each with a specific mission, mandate and regulatory philosophy. As described in more detail below in "Regulatory bodies", federal and state banking regulators (including, among others, the U.S. Office of the Comptroller of the Currency (**OCC**) and the New York Department of Financial Services (**NYDFS**)), anti-money laundering (**AML**) authorities (*e.g.*, the Financial Crimes Enforcement Network (**FinCEN**)), the U.S. Securities and Exchange Commission (**SEC**), the U.S. Commodity Futures Trading Commission (**CFTC**) and others are currently in the process of defining the regulatory landscape for new technologies in the United States and, indirectly, exerting significant influence over the landscape around the globe. That said, there is no definitive consensus across the various agencies, and it is unlikely that such a consensus will form in the foreseeable future. Instead, fragmentation means that regulatory change will occur, but it will more likely happen incrementally through an evolution of each agency's exercise of jurisdiction over those it regulates directly rather than through a revolutionary shift from one paradigm to another. In most cases, within a given regulator, the shift is incremental and will only sometimes influence the approach of other regulators. Infrequently, a regulator may choose a more dramatic approach. While still nascent, the OCC – the regulator of the largest banks in the U.S. – has announced a major initiative, still in preliminary stages, to integrate digital means into its regulatory framework for national banks.

The adoption of the cluster of new technologies commonly known as "Fintech" is no exception. Rather than adopt entirely new regulatory frameworks, federal and state regulators in the United States have largely sought to apply existing regulatory principles to Fintech, with varying levels of success. One particular and fundamental challenge is that many new financial technologies are built on the premise that greater decentralisation of institutions and infrastructure will lead to greater efficiency and utility in the marketplace. But such decentralisation is at odds with many traditional regulatory regimes, which rely upon a relative few, well-regulated intermediaries, such as banks, brokers, exchanges and central clearing houses, and depository institutions to act as gatekeepers so as to ensure the integrity of the system as a whole.

Examples of regulatory evolution

Finding a way to translate long-standing (and sometimes overlapping) regulatory regimes into new, disintermediated financial technologies is the most basic and important challenge facing U.S. Fintech developers. Two specific examples in the custody space highlight the issues and challenges in achieving this goal:

Custody of crypto-assets that are or could be securities subject to the SEC's jurisdiction

Brokers and investment advisers who hold client assets consisting of securities are subject to regulations regarding the custody of those assets, including that they be maintained in a good control location that provides the requisite assurance that the securities are safe and secure. A confounding challenge for market participants and regulators has been identifying custody solutions that not only satisfy, but can be demonstrated to satisfy, this standard where the asset in custody is digital.

Senior SEC officials, including Chairman Jay Clayton, have expressed concerns about the custody of crypto-assets that are or may be securities, particularly for retail investors, and have indicated a preference to push custody of those assets into non-broker-dealer custodians. Thus, although only a registered broker-dealer is permitted under U.S. law to effect transactions in crypto-assets that are characterised as securities, the SEC will not permit registered broker-dealers to hold such assets for customers.

The only solution – other than requiring customers to hold crypto-assets in e-wallets – triggers regulatory complications. Without an exception or exemption, providing custody of customer securities is, in the view of the SEC, a broker-dealer activity that requires registration with the SEC as a broker-dealer and authorisation by the Financial Industry Regulatory Authority (**FINRA**)[1] to conduct business as a carrying broker. Banks or trust companies that provide custodial services in conjunction with deposit-taking or fiduciary activities generally would enjoy a statutory exception from broker-dealer registration with respect to crypto-assets that constitute securities. Under a statutory carve-out from the exception, however, a bank or trust company may not be employed in conjunction with a registered broker-dealer to permit the bank or trust company to perform the role of carrying broker-dealer with respect to the crypto-assets. It is unclear whether these issues have been fully thought through by the regulators.

The SEC and FINRA have provided some guidance on this issue in a joint statement released in July 2019.[2] The joint statement on broker-dealer custody of digital assets sets out three scenarios under which a broker-dealer could satisfy Rule 15c3-3 of the Securities Exchange Act of 1934 (the **Exchange Act**), commonly known as the Customer Protection Rule, none of which involve the broker-dealer acting as a custodian of digital assets.[3]

Noting the SEC's lag in directing the industry,[4] SEC Commissioner Hester Peirce recently pointed out that the SEC's silence could stifle innovation and ultimately prove fatal to certain cryptocurrency custody efforts.[5] Peirce further stated that "undue focus on potential harm can result in an [agency] leading with its enforcement powers, and ultimately setting itself up as the industry's adversary", which carries its own risks in that market participants may be afraid to ask necessary questions and avoid speaking frankly with the regulator.[6]

Custody of virtual currencies associated with futures contracts overseen by the CFTC

Similarly, the CFTC initially expressed concerns regarding custody of Bitcoin by entities other than state or federally regulated banks or trust companies as a result of physical settlement of Bitcoin futures contracts.[7] Thus, while the CFTC did not move to block listings of *cash* settled Bitcoin futures,[8] efforts by exchanges to list *physically* settled Bitcoin futures were stalled until the middle of 2019 as exchanges sought to resolve regulatory objections.[9] Although the CFTC has not commented publicly on any proposed listing, former CFTC Chairman J. Christopher Giancarlo indicated that the CFTC felt bound by its statute and existing regulations to ensure that exchange customers have the option to custody assets (including physically delivered Bitcoin) with a bank or trust company rather than the exchange's clearinghouse if they so choose.[10] For this reason, Bakkt, a nascent Bitcoin futures exchange developed in partnership with the Intercontinental Exchange (**ICE**),

established a New York-chartered trust company in August 2019 to satisfy CFTC objections to its efforts to list one-day, physically settled Bitcoin futures cleared through ICE.[11] To date, the CFTC has approved only a handful of Bitcoin trading platforms, including Bakkt, CME, Erisx Ledgerx, and Bitnomial.[12]

Together, these examples illustrate a broader trend. Although regulators are generally open to the adoption of new financial technologies, they remain wary of taking firm positions unless the risks of potential failures or gaps posed by new technology that could cause market disruption, compliance lapses or customer harm have been fully contained.

While the SEC remains divided as to the optimal regulatory approach to Fintech, the CFTC and other regulators have been more aggressive in their willingness to entertain new products and technologies. In a recent interview from January 2020, CFTC Chairman Heath Tarbert opined that the U.S. should take the lead in cryptocurrency market innovation.[13] In addition, the CFTC staff continues to take a "principles-based" approach to regulation. Tarbert explained that this would allow the market to develop "under sound regulation but with market participants, not the regulator, determining which specific arrangements are commercially viable".[14]

Fintech offering in the United States

Although some applications are more developed than others, Fintech is making inroads into virtually every aspect of the financial marketplace, often raising significant regulatory challenges in the process.

Rise of the machines

Automatic trading systems in futures markets

Mirroring trends in the cash equity markets, automated trading systems (**ATS**) have come to dominate futures markets over the past decade, particularly with respect to financial asset classes such as equity and interest rate futures, which now see as much as 90% of all orders executed by an ATS.[15] The rise of automated trading has created its own set of regulatory concerns. Chief among these are instances of flash crashes and market manipulation resulting from malfunctioning trading algorithms or disruptive trading practices, including spoofing.[16]

The CFTC has considered regulating automated trading, going so far as to propose a rule that would have required automated traders, clearing brokers and exchanges to implement automated trading risk controls, imposed registration obligations on certain proprietary traders engaged in algorithmic trading on an ATS and, notably, would have authorised CFTC staff to obtain proprietary algorithm source code upon request without a subpoena or other legal process, among other things.[17] In November 2016, the CFTC proposed amendments that moderated its original proposal, suggesting the establishment of a trading volume threshold for subjecting industry participants to the rule's most onerous provisions, and requiring CFTC staff to obtain Commission approval for a subpoena or special call in order to access algorithm source code.[18] Thus far, the CFTC has not acted to finalise the rule, however, opting instead to collect data on large trading positions on a daily basis and pursue enforcement actions for flash crashes and spoofing incidents.

Robo-advisers

Automation has also assumed a prominent role among investment advisory products, where automated investment advisory platforms (often called robo-advisers) are gaining significant market share.[19] Assets under automated management are expected to reach $5 trillion to $7 trillion by 2025.[20] Recognising this trend, the SEC Office of Compliance Inspections and

Examinations (**OCIE**) 2020 examination cycle included a focus on investment advisers and broker-dealers that offer investment advice through automated or digital platforms, such as robo-advisers and other firms that interact primarily with clients online. Areas of focus include, but are not limited to: (1) SEC registration eligibility; (2) cybersecurity policies and procedures; (3) marketing practices; (4) adherence to fiduciary duty, including adequacy of disclosures; and (5) effectiveness of compliance programmes.[21] This initiative followed on from 2017 guidance for robo-advisers from the SEC Division of Investment Management, which emphasised the need for clarity and thoroughness in:

(a) disclosures regarding the assumptions underlying any algorithms used, any limitations of such algorithms and the degree of human involvement in the advisory services provided (among other information); and
(b) questionnaires used to elicit a client's financial objectives in order to generate investment advice.[22]

Electronic and virtual currency and payments

Many Fintech developments implicate, directly or indirectly, virtual or cryptocurrencies and the integration of blockchain technology into modern payment systems. The most basic elements of these emerging markets are the exchanges on which virtual currencies are traded and the intermediaries that permit virtual currencies to be exchanged for fiat currencies. Exchanges for virtual currency derivatives that would permit hedging and speculation on a leveraged basis are also being established, but each new category of activity presents a combination of regulatory issues, both new and old.

Spot markets and actual delivery

Many platforms offering spot (*i.e.*, cash-market) virtual currency trading also wish to provide the ability to trade on a leveraged or margined basis, meaning that a trading counterparty (or a person acting in concert with the counterparty) would finance a portion of a customer's virtual currency position. Spot trading of virtual currencies is currently subject to minimal regulation.[23] Section 2(c)(2)(D) of the Commodity Exchange Act (**CEA**) requires leveraged spot trading in commodities to be offered only on a designated contract market (**DCM**) – *i.e.*, a futures exchange registered with the CFTC – unless such leverage is offered and provided only to certain types of sophisticated non-retail investors ("eligible contract participants" (**ECP**)), or there is actual delivery of the commodity within 28 days following execution of the trade.[24] Because virtual currencies have been identified as commodities under the CEA[25] and the virtual currency trading platforms in question are not DCMs, Section 2(c)(2)(D) precludes the platforms from offering leveraged spot trading to retail participants unless they satisfy the actual delivery exception. Leveraged spot trading that does not meet the exception is subject to regulation as if the agreement, contract or transaction was a contract of sale of a commodity for future delivery, *i.e.* a futures contract, including Sections 4(a), 4(b) and 4b of the CEA.

The concept of actual delivery has proven difficult to define in practical terms. This is particularly true with respect to delivery of Bitcoin and similar virtual currencies, which are held in digital wallets controlled by cryptographic private keys. In a June 2016 enforcement action against BFXNA Inc. (**Bitfinex**), the CFTC took the position that settling Bitcoin to a digital wallet is insufficient for actual delivery if the exchange or the seller controls all private keys associated with the wallet.[26] Following *Bitfinex*, the CFTC responded to requests for greater clarity as to its views on actual delivery in the context of virtual currencies by issuing a final interpretation on the subject in March 2020.[27] In this guidance, the CFTC took the

position that actual delivery is not accomplished if the counterparty seller or anyone acting in concert with the seller retains an interest in or control over any portion of the commodity after 28 days have elapsed following the transaction date.[28] Thus, under the guidance, a seller that retains a lien on any portion of the commodity at the expiration of 28 days following the transaction cannot be said to have made actual delivery, even if the buyer receives title to the commodity and is free to lend or resell it subject to the lien.[29] The final interpretative guidance used nearly the same language as the interpretation initially proposed by the CFTC in December 2017[30] – with the only difference being the requirement that the customer "secures" possession and control of the entire quantity of the virtual currency, as opposed to gaining the mere "ability" to take possession and control.[31]

While the CFTC considered whether and how to revise its proposed guidance on the meaning of actual delivery, the U.S. Court of Appeals for the Ninth Circuit heard oral arguments in the appeal of a significant case concerning actual delivery, albeit outside the context of virtual currencies.[32] In *CFTC v. Monex,* the CFTC appealed against a loss in a lower court,[33] arguing that Monex's practice of transferring precious metals bought or sold on margin to a third-party depository and passing title to the buyer was insufficient for actual delivery because customers did not have contractual rights to the metal until they paid for it in full, even if such repayment occurred more than 28 days after execution of the transaction.[34] Monex responded that this view is inconsistent with the CFTC's 2013 interpretation of the term actual delivery in the context of retail commodity transactions generally, as the 2013 interpretation concluded that actual delivery would occur if a seller physically delivered the commodity to an unaffiliated depository and transferred title to the commodity to the buyer.[35] In July 2019, the Ninth Circuit held that the district court erred in dismissing the case and ruled in favour of the CFTC.[36] A unanimous panel held that the term "actual delivery" under the CEA "unambiguously requires the transfer of some degree of possession or control" to customers, and as alleged in the complaint, the defendants' delivery of metal to its customers "amounts to sham delivery, not actual delivery".[37]

Case study: jurisdictional limits to being "located in the United States"

Section 4(a) of the CEA makes it unlawful to execute trades in futures other than on a DCM unless such futures contracts are made on or subject to the rules of a board of trade, exchange, or market that is located outside the United States.[38] This prohibition on off-exchange trading applies equally to leveraged or margined spot trading in any commodity, including virtual currencies,[39] unless there is actual delivery of the commodity within 28 days of execution of the trade, as discussed above.[40] Separately, Section 4(b) of the CEA requires the registration of foreign boards of trade (**FBOT**) that provide direct access for investors in the United States. Registration as an FBOT is contingent on the FBOT being subject to comparable supervision and regulation by the appropriate governmental authorities in the FBOT's home country.[41] Some trading platforms seeking to offer new leveraged spot or derivatives products to retail customers have attempted to avoid direct U.S. regulation by establishing an exchange outside the territorial United States and restricting the ability of individuals located in the United States to access the system.

The CFTC has declined to adopt a bright-line test for determining when a platform is located outside the United States and thus excluded from the prohibition on off-exchange futures trading under CEA Section 4(a).[42] Instead, the CFTC considers the totality of factors presented by the particular platform.[43] In adopting this position in a 2006 policy statement (**2006 Policy Statement**), the CFTC notably emphasised the need to accommodate rapid changes in technology as well as global business structures and relationships, reasoning that

determining an exchange's location on the basis of one specific factor, such as the location of technology used to operate the exchange, could inhibit structural and technological innovation.[44] The CFTC also acknowledged commenters' views that it would make little sense to use the location of an exchange's technological infrastructure, including its matching functions, as a proxy for the location of the exchange itself, as such functionalities are likely to change locations over time and lend themselves to outsourcing to technology vendors.[45] How this guidance will be applied in practice will ultimately be determined through a combination of enforcement actions and informal staff guidance in the form of no-action letters and interpretive statements.

Non-traditional payment systems

Fintech is fostering other types of non-traditional payment systems that promise to be more efficient or useful than traditional methods. Prepaid and non-prepaid debit cards, credit cards, automated clearinghouse (**ACH**) system credit and debit transfers, and cheques compose a core set of non-cash payment types commonly used today by consumers and businesses in the United States. These payment types are used both in traditional ways, such as in-person purchases and payroll deposits, and in relatively new ways, such as mobile and e-commerce payments.[46] Since 2000, consumers and businesses in the United States have substantially changed their payment choices, with cheque payments being surpassed by card payments and electronic transfers via the ACH system. In 2018, the number of ACH debit transfers exceeded the number of cheque payments, 16.6 billion to 14.5 billion. Even as the number of cheque payments declined 7.2% per year between 2015 and 2018, total core non-cash payments grew 6.7% per year in the same period.[47] Fifty-one per cent of mobile banking users deposited a cheque using their mobile phone in 2014, up from 38% in 2013.[48] Card payments through chip-authenticated systems, including digital wallets, made up more than half of all credit card transactions by 2018.[49] As already noted, virtual currencies including Bitcoin and others have also begun to shape the payments landscape in the U.S.[50]

While such transactions are susceptible to a variety of different characterisations, when conducted by an organisation other than a U.S. bank, most states require licensing under a regime focused on the protection of local consumers and ensuring that money laundering risks are minimised. Such activities also require registration as a "Money Services Business" (**MSB**) with FinCEN, as well as the establishment of a comprehensive AML programme subject to compliance with FinCEN's regulations.

Regtech developments

New technology has made financial market surveillance more pervasive and more effective. The adoption of powerful new surveillance tools by regulators and self-regulatory organisations has effectively raised the bar for all participants in the financial markets.

The SEC and the CFTC (and the exchanges they regulate) have developed sophisticated systems to monitor their markets and automatically identify trading behaviour that is abnormal and suggestive of prohibited activity. For example, the CFTC recently realigned its Market Surveillance Branch to be housed within its Division of Enforcement. This reorganisation was intended to allow the CFTC to use its sophisticated market surveillance technology to analyse trade data and respond to outlying events that warrant further enforcement inquiry.

FINRA report regarding technology-based innovations for regulatory compliance in the securities industry

Exchanges and other self-regulatory organisations are following a similar course. For example, in September 2018, FINRA published a report on technology-based innovations

for regulatory compliance (**Regtech**) in the securities industry.[51] The report summarised how Regtech tools are being applied in the following five areas:

- surveillance and monitoring;
- customer identification and AML compliance;
- regulatory intelligence;
- reporting and risk management; and
- investor risk assessment.

The FINRA report noted that while Regtech tools may facilitate the ability of firms to strengthen their compliance programmes, they may also raise new challenges and regulatory implications for firms to consider. For example, Regtech applications may use highly complex and sophisticated AI algorithms, which are designed to learn and evolve based on data patterns. However, compliance and business professionals may not have the technical skills to understand in detail how these algorithms function, posing challenges to firms' governance, supervision, risk management and training infrastructure and practices.

Monitoring employees of regulated firms

Regulated firms are also increasingly using technology to monitor employees' business communications (*e.g.*, emails, instant messages, and phone conversations). The SEC's OCIE has also recognised this trend and responded by issuing examination observations in December 2018[52] on the use of electronic messaging. These observations identified examples of practices that the OCIE staff believes may assist advisers in meeting their recordkeeping obligations under the Investment Advisers Act of 1940, including:

(a) Contracting with software vendors to monitor employee social media posts, emails or websites, archiving such business communications to ensure compliance with record retention rules and identifying any changes to content, and comparing messages to a lexicon of key words and phrases.
(b) Regularly reviewing popular social media sites to determine whether employees are using the media in violation of the adviser's policies.
(c) Running regular Internet searches or setting up automated alerts to notify the adviser when an employee's name or the adviser's name appears on a website to potentially identify unauthorised advisory business being conducted online.
(d) Establishing a confidential means by which employees can report concerns about a colleague's electronic messaging, website or use of social media for business communications.

All U.S. financial regulators are closely focused on implementation of reasonable supervisory systems and procedures for reviewing electronic communications. FINRA, for example, has urged member firms to consider using a combination of lexicon-based and random reviews of electronic correspondence[53] and has fined member firms as much as $2 million for failing to maintain reasonably designed supervisory systems and procedures for reviewing electronic communications.

Digital legal identity

Separately, the U.S. Department of the Treasury is advocating an initiative that would facilitate the adoption of trustworthy digital legal identity (**DLI**) products and services in the financial services sector. By employing electronic means to unambiguously assert and authenticate a real person's unique legal identity, DLI products and services would improve the trustworthiness, security, privacy and convenience of identifying individuals and entities in the Fintech space, thereby strengthening the processes critical to the movement of funds, goods and data as the global economy moves deeper into the digital age.[54] Trustworthy

digital identity systems could be a critical compliance tool to aid Treasury's FinCEN in its enforcement of AML and sanctions regulations, as they would significantly improve customer identification and verification for onboarding and authorising account access, general risk management and the anti-fraud efforts of Fintech companies.[55]

Use of Regtech in the AML space

In addition, on May 24, 2019, FinCEN announced that it would begin holding monthly "Innovation Hours" designed to offer financial institutions as well as Fintech and Regtech companies the opportunity to present to FinCEN their innovative products, services, and approaches designed to enhance AML efforts.[56] The programme is intended to improve public- and private-sector understanding of the opportunities and challenges associated with AML innovation.

Regulatory bodies

The U.S. financial regulatory landscape is highly fragmented and includes overlapping jurisdiction, with oversight of various parts of the financial system divided among a variety of federal and state regulators.

Federal banking regulators

Federal regulation of banking institutions is divided among several agencies, chief among these being the Federal Reserve Board (**FRB**), the Federal Deposit Insurance Corporation (**FDIC**), and the OCC. Each agency serves as the primary federal prudential regulator for certain types of banking entities. One or more other agencies may serve in a secondary regulatory role with respect to that institution.

The FRB was established by the Federal Reserve Act of 1913. Key banking statutes administered by the FRB include the Bank Holding Company Act of 1956 and the International Banking Act of 1978. The key entities under the FRB's jurisdiction include bank holding companies (*i.e.*, parent companies of insured depository institutions) and their non-bank subsidiaries, foreign banking organisations operating in the United States (including through a state-licensed branch or agency) and state-chartered banks that are members of the Federal Reserve System (which provides payment and other services to member institutions). It also has backup supervisory authority with respect to systemically important financial market utilities, including key clearing agencies and derivative clearing organisations, such as the Depository Trust Company, the Chicago Mercantile Exchange and the Options Clearing Corporation. The FRB also governs the Federal Reserve System, which together with the Federal Reserve Banks, constitutes the central bank of the U.S.

The FDIC was established by the Banking Act of 1933 and is governed by the Federal Deposit Insurance Act of 1950, as amended, among other legislation. The FDIC is the primary regulator for state-chartered banks that are FDIC-insured but are not members of the Federal Reserve System. The FDIC also administers the federal deposit insurance fund and serves as the receiver of failed depository institutions and is also responsible for the resolution of systemically significant financial institutions.

The OCC was established as an independent bureau of the U.S. Treasury under the National Currency Act of 1863 and administers the National Bank Act, among other laws governing national banks. The OCC charters and regulates national banks, which include the largest U.S. banks, federal savings banks and federally licensed branches of foreign banks.

SEC and FINRA

The SEC was created by the Exchange Act. Its mission is to protect investors, maintain fair, orderly and efficient markets and facilitate capital formation. The SEC holds primary responsibility for enforcing U.S. federal securities laws and regulating the U.S. securities

industry. Its primary mission is to protect investors, promote fairness in the securities markets and share information about companies and investment professionals to help investors make informed investment decisions regarding securities transactions. The SEC regulates entities that serve as the infrastructure for securities markets, including exchanges, clearing agencies, transfer agents, central securities depositories as well as regulated intermediaries of the securities industry, including broker-dealers and investment advisers.

The Exchange Act delegates certain regulatory authority over securities broker-dealers to FINRA as a self-regulatory organisation.[57]

CFTC and NFA

The CFTC is the primary regulator of the U.S. derivatives markets and market participants. The CFTC directly regulates entities that serve as the infrastructure for the futures, options and swaps markets, including exchanges, clearinghouses, swap execution facilities and swap data repositories. The CFTC also regulates derivatives market intermediaries, including futures commission merchants (**FCM**), introducing brokers (**IB**), swap dealers, retail foreign exchange dealers, commodity pool operators and commodity trading advisers.

The CEA delegates certain regulatory authority over to the National Futures Association (**NFA**) as a self-regulatory organisation.[58]

FinCEN/Office of Foreign Assets Control (**OFAC**)

The U.S. Department of Treasury's FinCEN is the federal government's primary AML and counter-terrorist financing agency. FinCEN is one of the federal regulators responsible for enforcing the Bank Secrecy Act (**BSA**), the United States' primary AML statute. FinCEN also issues the BSA's implementing regulations, which detail the required AML programmatic requirements for covered Fintech companies. The U.S. Department of Treasury's OFAC is the primary administrator and enforcement agency of U.S. economic sanctions. Any U.S. person or Fintech conducting business from, through or within the United States is subject to OFAC's jurisdiction for violations of U.S. sanctions.

Consumer Financial Protection Bureau (**CFPB**)

The CFPB administers and enforces federal consumer financial laws. The CFPB has supervisory authority with respect to such laws over banks, thrifts and credit unions with assets over $10 billion, as well as their affiliates. The CFPB also has supervisory authority over non-bank mortgage originators and servicers, payday lenders and private student lenders of all sizes, among other institutions.

State regulators

State laws and regulations currently provide the primary regulatory framework for many types of banks and non-bank financial services firms deploying new and innovative technologies and products. With 50 separate legal regimes to consider, this framework can be quite fragmented. Specifically, state banking departments and financial regulatory agencies oversee and have their own laws for consumer finance companies, MSBs, debt collection businesses and mortgage loan originators, among other types of financial entities. Regulations under these frameworks can include broadly varying firm licensing requirements, safety and soundness regulations (including permissible investments and required reserves), product limitations, interest rate limits (*e.g.*, usury laws), examinations and enforcement authority for violation of state and federal laws.

There are increasing efforts, however, at greater harmonisation and cooperation among state regulators. One such example is the Conference of State Bank Supervisors (**CSBS**) Fintech

Industry Advisory Panel (**Advisory Panel**), which is designed to support and coordinate state regulators' increased efforts to engage with financial services companies involved in Fintech. The Advisory Panel engages with the CSBS Emerging Payments and Innovation Task Force and state regulators to identify actionable steps for improving state licensing, regulation and non-depository supervision and for supporting innovation in financial services. In February 2019, the Advisory Panel released a series of action items to implement feedback received from the 33 companies, including creating uniform definitions and practices, increasing transparency and expanding the use of common technology among all state regulators.[59]

Supra-national bodies

Although each regulatory agency carries out its mandate pursuant to its own statutory and regulatory framework, these regulatory regimes are frequently influenced by the guidance of supra-national standard-setting bodies, including the G20, the Financial Stability Board (**FSB**), the Basel Committee on Banking Supervision (**BCBS**), the International Organization of Securities Commissions (**IOSCO**) and the Committee on Payments and Market Infrastructure (**CPMI**). Many of these supra-national bodies are closely focused on Fintech and its implications for financial markets and market participants.

Recent studies published by the FSB and the BCBS, respectively, each concluded that the emergence of providers of bank-like services such as credit or payments offerings may enhance the efficiency of financial services in the longer term. However, they could threaten the revenue bases of banks and other incumbent financial institutions, making them potentially more vulnerable to losses and reducing retained earnings as a source of internal capital. Each paper noted that the degree of disruption to incumbent banks likely depends upon the speed at which new providers enter the market.[60]

Supra-national standard-setting bodies tend to be most relevant for commodities and derivatives markets because of their global nature, in contrast with the relatively parochial markets for securities and banking services. Of note, however, is that the CFTC – the primary U.S. regulator for commodities and derivatives markets – does not have a seat on the FSB.

Key regulations and regulatory approaches

Federal banking regulators

In July of 2018, the OCC adopted guidance providing for the charter of for special-purpose national bank charters from non-depository Fintech companies engaged in the business of lending.[61] In practice, Fintech companies that would apply, qualify for and receive special purpose national bank charters would be supervised in the manner of similarly situated national banks, to include capital, liquidity and financial inclusion commitments as the OCC deems appropriate. However, the statutory authority of the OCC to issue the special charters has been challenged in litigation brought by both the CSBS[62] and NYDFS.[63] While the CSBS case was dismissed for lack of standing and ripeness,[64] on October 21, 2019, the Southern District of New York entered a final judgment against the OCC, precluding the agency from charting any Fintech applications.[65] On December 19, 2019, the OCC filed an appeal against the ruling in the Second Circuit[66] and on April 23, 2020, the OCC filed an opening brief in that proceeding, which while arguing that the NYDFS's challenge was not ripe, makes a compelling argument in support of the OCC's authority to charter special purpose national banks.

A short time later, Joseph Otting, the Comptroller of the Currency stepped down and was replaced by Acting Comptroller Brian Brooks. Mr. Brooks, who has been dubbed by some as the "Fintech" Comptroller, joined the OCC from Coinbase, a leading cryptocurrency

platform, where he had served as Chief Legal Officer. Before that, he had served as the General Counsel of Fannie Mae, the centre-post of the U.S. residential mortgage market, where he had supported work on a wide range of cutting-edge Fintech projects. While already deeply engaged in facilitating the delivery and administration of financial services and products using advanced technology, the fact that his arrival at the OCC occurred during the coronavirus pandemic-related lockdown has only reinforced his focus on digitalisation.

A brief digression on the role of the OCC and national banks is worthwhile. First, the very largest U.S. banks – Bank of America, Citibank, JPMorgan Chase and Wells Fargo – are chartered as national banks, and a significant percentage of those in the next tier are also national banks. Secondly, while state banks are increasingly free to branch and conduct business on a national basis, as federally chartered entities, national banks enjoy the right to engage in business on a nationwide basis subject to the exclusive administrative oversight of the Comptroller. In contrast, without some sort of national fintech charter, non-bank financial service providers are subject to costly state-by-state licensing, opaque rules and fragmented and sometimes politicised oversight. Thus, special purpose national banks offer the most likely alternative to confusing and often ineffective state supervision of financial services and products.

As Acting Comptroller, Brian Brooks has embraced technology both as a tool to be used by the OCC in the supervision of banks, and a critical element in the modernisation of the delivery and administration of products and services and improvements in internal controls. Very shortly after Mr. Brooks became Acting Comptroller, the OCC issued an advanced notice of proposed rulemaking (the **ANPR**) seeking public comment guiding the OCC in its development of rules and guidance with respect to digital activities of national banks.[67] Noting profound developments in the financial services sector, the OCC observes:

> [T]echnological developments have led to a wide range of new banking products and services delivered through innovative and more efficient channels in response to evolving customer preferences. Back-office banking operations have experienced significant changes as well. AI and machine learning play an increasing role, for example, in fraud identification, transaction monitoring, and loan underwriting and monitoring. And technology is fueling advances in payments. In addition, technological innovations are helping banks comply with the complex regulatory framework and enhance cybersecurity to more effectively protect bank and customer data and privacy.

In light of these developments, the ANPR invites comment on the OCC's digital activities rules and other banking issues related to digital technology or innovation, including:

- Whether the existing rules are sufficiently flexible and clear in light of the technological advances that have transformed the financial industry over the past two decades.
- Whether these legal standards create unnecessary hurdles or burdens to innovation by banks.
- Whether there are digital banking activities or issues that are not covered by existing rules that the OCC should address (*e.g.*, digital finders' activities, certain software and correspondent services).
- What activities related to cryptocurrencies or crypto-assets are financial services companies or bank customers engaged in and what are the barriers or obstacles to further adoption of crypto-related activities in the banking industry.
- How is distributed ledger technology used or potentially used in activities related to banking.
- How are artificial intelligence and machine learning techniques used or potentially used in activities related to banking.

- What new payments technologies and processes should the OCC be aware of and what are the potential implications of these technologies and processes for the banking industry.
- What new or innovative tools do financial services companies use to comply with regulations and supervisory expectations (*i.e.*, Regtech).

While it is far from clear what will emerge from this process, there is strong reason to believe that it will further strengthen the role of the banking sector, as well as yielding greater efficiency and supervisory consistency in the Fintech sector.

SEC and FINRA

Rather than creating a new regulatory framework for financial technologies in the securities industry, the SEC has tended to apply its existing regulatory rubric to such nascent technologies. Thus, for example, the SEC has applied the traditional test for identifying "investment contracts" under *SEC v. W. J. Howey Co.*[68] to determine whether certain types of virtual currencies are securities.[69] FINRA's mission is to promote investor protection and market integrity in the securities industry through its oversight of member broker-dealers. FINRA recently created an Office of Financial Innovation to serve as a central point of coordination for issues related to new uses of Fintech.[70] The Office will promote FINRA's engagement on Fintech issues through outreach to FINRA stakeholders, training of FINRA staff, research and publications, internal coordination across FINRA and collaboration with other regulators.

CFTC

The CEA was first enacted in 1936 to provide a statutory framework for the regulation of trading of commodity futures in the United States. The CEA has been amended numerous times, significantly in 2010, when Title VII of the Dodd-Frank Act expanded the CFTC's regulatory authority to include over-the-counter derivative contracts (*i.e.*, swaps). Pursuant to its statutory authority under the CEA, the CFTC has promulgated regulations that are published in Title 17 of the Code of Federal Regulations.

In 2017, the CFTC created LabCFTC to serve as the focal point for the CFTC's efforts to promote responsible Fintech innovation and fair competition for the benefit of the American public.[71] LabCFTC is designed to make the CFTC more accessible to Fintech innovators, and to serve as a platform to inform the Commission's understanding of new technologies. LabCFTC also functions as an information source for the Commission and the CFTC staff on new technologies that may influence policy development. According to the CFTC, the goals of LabCFTC are: to promote responsible Fintech innovation to improve the quality, resiliency and competitiveness of our markets; and to accelerate CFTC engagement with Fintech and Regtech solutions that may enable the CFTC to carry out its mission responsibilities more effectively and efficiently.

FinCEN/OFAC

FinCEN and OFAC derive their authority from a combination of statutes and regulations. *See* "FinCEN/Office of Foreign Assets Control" above for more detail.

CFPB

Title X of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 created the CFPB as an independent agency within the FRB. The CFPB is charged with regulating the offering and provision of consumer financial products or services under the federal consumer financial laws, through rulemaking as well as enforcement actions.[72]

State regulators

In recent years, state regulators have been focused on developing greater cooperative

approaches for the supervision of non-bank financial services companies. One of the primary efforts has been the development of the Nationwide Multistate Licensing System (**NMLS**), which is a technology platform that functions as a system of record for the licensing activities (application, renewal and surrender) of 62 state or territorial government agencies.[73]

Outside these cooperative efforts, some states have developed more robust frameworks than others. For example, the NYDFS has taken a particularly aggressive approach, advocating for strong state-based regulation. This posture reflects state leaders' beliefs that New York regulators have nation-leading expertise in regulating the financial services industry and protecting consumers.[74] For example, as discussed in greater detail below, NYDFS was the first state agency to release a comprehensive framework for regulating digital currency-related businesses with the implementation of BitLicenses,[75] and to date has authorised 19 companies to conduct digital currency operations.[76] New York also exemplifies the model for state collaboration with CSBS, announcing early in 2019 that it will allow companies engaged in virtual currency business activity to use the NMLS to apply for, update and renew their operating licences, including BitLicenses.[77]

Restrictions

In addition to the general regulatory issues summarised above, several developments are worth highlighting.

Regulation of crypto-assets that are securities

As discussed above, the SEC generally applies the traditional *Howey* test for identifying "investment contracts" to determine whether a particular virtual currency is a security. *Howey* asks whether participants in the offering make an "investment of money" in a "common enterprise" with a "reasonable expectation of profits" to be "derived from the entrepreneurial and managerial efforts of others".[78] Since first explicitly applying *Howey* to digital assets in its investigation of the DAO "initial coin offering" (**ICO**),[79] the SEC has taken the view that a number of ICOs constituted offerings of securities that failed to comply with the registration requirements of Section 5 of the Securities Act of 1933 (**Securities Act**).[80] In addition to facing potential liability for offers or sales of unregistered securities, a party that transmits virtual currency that is a security to purchasers on behalf of issuers or other sellers could be deemed to be acting as an unregistered broker-dealer in violation of Section 15 of the Exchange Act.[81] Market participants should note that SEC enforcement actions are just the tip of an iceberg: over the past several years, U.S. law firms that specialise in plaintiffs' class actions have brought myriad lawsuits against ICO issuers, sponsors and trading platforms alleging violations of the Securities Act and the Exchange Act.

NYDFS BitLicense requirements

In June 2015, NYDFS published its final BitLicense rules after a nearly two-year inquiry into the appropriate regulatory guidelines for virtual currency firms. Under those rules, existing virtual currency firms had until August 10, 2015 to apply for a licence. The first BitLicense was approved in September 2015. Subject to certain exceptions, anyone engaging in any of the following activities is required to obtain a BitLicense from the NYDFS: transmission of virtual currencies; storing, holding, or maintaining custody or control of virtual currency on behalf of others; buying and selling virtual currency as a customer business; performing exchange services as a customer business; or controlling, administering or issuing a virtual currency.[82]

Expanded regulation of money transmitters

There are currently 49 states plus the District of Columbia and Puerto Rico that impose some

sort of licensing requirement in order to engage in the business of money transmission or money services. Any firm with a nationwide footprint or a purely digital presence will require a licence in, and be subject to examination by, every state in which it operates. The definition of money transmission and the corresponding licensing requirements can vary significantly by state, but generally include requirements to submit credit reports, business plans and financial statements, as well as a requirement to maintain a surety bond to cover losses that might occur. Some states may also request information regarding policies, procedures and internal controls. Broadly, the state regulators approach the framework with the goals of maintaining the safety and soundness of these businesses, ensuring financial integrity, protecting consumers and preventing ownership of money transmitters for illicit purposes (*e.g.*, money laundering or fraud).[83]

Attempting to comply with so many varying regimes can present significant operational challenges for financial services firms. Accordingly, states have sought to harmonise examinations for money transmitters with the creation of the Money Transmitters Regulators Association (**MTRA**) (an association of state money transmitter regulators), which executed a cooperative agreement in 2002 and an examination protocol in 2010 to provide for a taskforce that helps to coordinate joint money transmitter exams. As of May 2020, 48 states, Washington, D.C., Puerto Rico and the Virgin Islands had signed the MTRA agreements. More recently, state regulators have also launched a multi-step effort to develop a 50-state licensing and supervisory system by 2020, known as Vision 2020. Goals of this plan include: establishing an Advisory Panel to provide state regulators with important insight on efforts to improve state regulation; re-designing the existing NMLS platform through further automation and enhanced data and analytical tools; and developing a comprehensive state examination system to facilitate inter-state information sharing. This system is currently in pilot stage with 10 state agencies participating.[84]

Expanded AML/BSA regulation

New financial technologies are also creating new regulatory issues that are leading regulators to apply existing authority in new ways. For example, the CFTC has historically played a relatively small role in the world of AML and BSA enforcement, but the anonymous nature of most cryptocurrency trading has prompted the U.S. derivatives regulator to assume a more active role. This new posture was manifest in the complaint filed by the CFTC against 1Pool Ltd. (**1Pool**) and its Austrian chief executive officer on September 27, 2018. The CFTC alleged that 1Pool engaged in unlawful retail commodity transactions, failed to register as an FCM, and, notably, committed various supervisory violations under CFTC Rule 166.3 by failing to implement even basic know-your-customer procedures to prevent money laundering.[85] 1Pool was *not* a CFTC registrant, but according to the CFTC, it was nevertheless required to adopt and oversee an adequate AML programme because CFTC Rule 166.3 applies to any person who is registered *or required to be registered with the CFTC*, and 1Pool should have been registered as an FCM.[86] Moreover, because the CFTC has long taken the position that a violation of CFTC Rule 166.3 is a standalone claim that requires no underlying violation, this interpretation gives the impression that the CFTC believes that it has the authority to bring BSA-related cases against any entity that is operating in a capacity that requires registration as an FCM or IB, at least through a failure to supervise a claim under CFTC Rule 166.3. This authority is in addition to the NFA's authority to audit and supervise its members in its capacity as a designated self-regulatory organisation.

The CFTC has successfully argued that cryptocurrencies are commodities and, therefore, transactions involving cryptocurrencies are subject to its jurisdiction under the CEA.[87] In

the complaint filed against 1Pool, the CFTC specifically noted that 1Pool failed to perform its supervisory duties diligently, as evidenced by the fact that it requires its customers to provide nothing more than a username and an email address as identifying information in order to trade on its platform.[88] In this respect, 1Pool is not unlike many cryptocurrency trading platforms that may be currently operating on an unregistered basis, even though they nominally do not solicit or accept business from the U.S. The 1Pool case highlights the importance of robust KYC procedures that are necessary to ensure banks know the true identity of their customers sufficiently to know whether they fall within the CFTC's jurisdiction and to remain in compliance with the BSA.

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* * *

Endnotes

1. FINRA is a "self-regulatory organisation" established under the rules of the SEC pursuant to the Securities Exchange Act of 1934, which has the authority to establish a general supervisory framework for member firms, which includes most SEC-registered broker-dealers.
2. Division of Trading and Markets, SEC, *Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities* (July 8, 2019), https://www.sec.gov/news/public-statement/joint-staff-statement-broker-dealer-custody-digital-asset-securities.
3. *Id.*
4. With few, limited exceptions, several firms continue to struggle with obtaining FINRA approval to conduct business lines involving digital assets. Dave Michaels and Alexander Osipovich, *Cryptocurrency Startups Are in Limbo as Regulators Grapple With Risks*, Wall St. J., June 19, 2019, https://www.wsj.com/articles/cryptocurrency-startups-are-in-limbo-as-regulators-grapple-with-risks-11560957367.
5. Speech by Commissioner Hester M. Peirce, "How We Howey" (May 9, 2019), https://www.sec.gov/news/speech/peirce-how-we-howey-050919.
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9. *See* note 5, *supra*.
10. Nikhilesh De, *CFTC Chair Giancarlo Hints at What's Holding Back Bakkt's Bitcoin Futures*, CoinDesk, Apr. 22, 2019, https://www.coindesk.com/cftc-giancarlo-bakkt-bitcoin-futures.
11. ICE Futures U.S., CFTC Submission No. 19-161: Listing of Bitcoin Monthly Futures Contract (May 13, 2019), https://www.theice.com/publicdocs/regulatory_filings/19-161_Listing_Bitcoin_Monthly_Futures_Contract%20.pdf.
12. Patrick Thomas, *Regulators Approve Bitcoin Venture Backed by NYSE Owner*, Wall St. J., Aug. 16, 2019, https://www.wsj.com/articles/regulators-approve-bitcoin-venture-backed-by-nyse-owner-11565984183.

13. Mitchell Moos, *Bakkt granted approval from CFTC, Bitcoin futures launching September*, Cryptoslate, Aug. 16, 2019, https://cryptoslate.com/bakkt-approval-cftc-bitcoin-futures-launching/.
14. *CFTC To Revamp Oil Speculation Rule*, Bloomberg (Jan. 29, 2020), https://www.bloomberg.com/news/videos/2020-01-30/cftc-to-revamp-oil-speculation-rule-video.
15. *See* Market Intelligence Branch, Division of Market Oversight, CFTC, *Impact of Automated Orders in Futures Markets*, Mar. 2019, https://www.cftc.gov/sites/default/files/2019-03/automatedordersreport032719.pdf.
16. "Spoofing" is a manipulative practice in which a trader (or an electronic trading system designed by a trader) enters relatively small orders on one side of the market to drive the prevailing price in favour of a much larger order on the other side of the market, cancelling the smaller orders before execution.
17. *See* CFTC, Regulation Automated Trading (Proposed Rule), 80 Fed. Reg. 78824 (Dec. 17, 2015).
18. *See* CFTC, Regulation Automated Trading (Supplemental Notice of Proposed Rulemaking), 81 Fed. Reg. 85334 (Nov. 25, 2016).
19. See, *e.g.*, Capgemini, *Top 10 Trends in Wealth Management 2019: What You Need to Know* (Dec. 2018), https://www.capgemini.com/wp-content/uploads/2018/11/Wealth_Management_Trends_20191.pdf.
20. Deloitte, *Hands Off, Guard Up: Robo-Advising Platforms Carry New Risks* (2017), https://www2.deloitte.com/us/en/pages/risk/articles/robo-adviser-platform-risks-asset-wealth-management-firms.html.
21. OCIE, SEC, *National Exam Program Examination Priorities* (2020), https://www.sec.gov/about/offices/ocie/national-examination-program-priorities-2020.pdf.
22. Division of Investment Management, SEC, *Guidance Update No. 2017-02: Robo-Advisers* (Feb. 2017), https://www.sec.gov/investment/im-guidance-2017-02.pdf.
23. Spot cryptocurrency exchanges are generally required to obtain money transmitter licences from the states in which they do business and to register with FinCEN. As discussed below, several states, including New York, have implemented licensing and regulatory regimes specifically for virtual currency businesses.
24. Section 2(c)(2)(D) of the CEA, 7 USC 2(c)(2)(D). The requirement that leveraged spot trading absent actual delivery be regulated as trading in futures does not apply where both parties to the trade fall within the statutory definition of an ECP (which generally includes, among other things, individuals and entities with assets exceeding $10 million). However, even if both counterparties are ECPs, the provision of leverage may give rise to regulation generally under the CEA, *e.g.*, if the transaction falls within the definition of a swap.
25. See, *e.g.*, *CFTC v. McDonnell*, 287 F. Supp. 3d 213, 228 (E.D.N.Y. 2018) (holding that the CFTC may regulate virtual currencies as commodities); *CFTC v. My Big Coin Pay, Inc.*, 334 F.Supp.3d 492, 496-98 (D. Mass 2018) (same).
26. *In re BFXNA Inc. d/b/a BITFINEX*, CFTC Docket No. 16-19 (June 2, 2016).
27. CFTC, Retail Commodity Transactions Involving Certain Digital Assets (Final Interpretive Guidance), RIN Number 3038-AE62 (March 24, 2020).
28. *Id.* at pg. 30.
29. *Id.*
30. CFTC, Retail Commodity Transactions Involving Virtual Currency (Proposed Interpretation), 82 Fed. Reg. 60335 (Dec. 20, 2017).
31. Note 27, *supra* at pg. 30.
32. *CFTC v. Monex Credit Co.*, No. 18-55815 (9th Cir. Mar. 13, 2019), https://www.ca9.uscourts.gov/media/view_video.php?pk_vid=0000015372.

33. *CFTC v. Monex Credit Co.*, 311 F. Supp. 3d 1173, 1183 (C.D. Cal. 2018).
34. *See*, *e.g.*, Amended Motion of the CFTC for Expedited Review, *CFTC v. Monex*, No. 18-55815 (9th Cir. June 21, 2018).
35. Defendants-Appellees' Answering Brief, *CFTC v. Monex*, No. 18-55815 (9th Cir. Oct. 15, 2018).
36. *CFTC v. Monex Credit Co.*, 931 F.3d 966, 975, (9th Cir. 2019).
37. *Id.*
38. Section 4(a) of the CEA, 7 USC 6(a).
39. *See*, *e.g.*, *CFTC v. McDonnell*, 287 F. Supp. 3d 213, 228 (E.D.N.Y. 2018) (holding that the CFTC may regulate virtual currencies as commodities); *CFTC v. My Big Coin Pay, Inc.*, 334 F.Supp.3d 492, 496-98 (D. Mass 2018) (same).
40. *See* note 23, *supra*, and accompanying text.
41. 7 U.S.C. § 6(b)(1)(A).
42. 71 Fed. Reg. 64443, 64448 (Nov. 2, 2006). In its 2011 rule providing for registration of foreign boards of trade (**FBOT**), the CFTC clarified that this 2006 policy statement remains effective, except to the extent that it endorsed the use of the no-action process rather than rulemaking to establish criteria for FBOTs seeking to provide direct access to U.S. persons. 76 Fed. Reg. 80674, 80675 n.9 (Dec. 23, 2011).
43. 71 Fed. Reg. at 64448. While the CFTC did not identify specific factors that would be relevant to its totality of factors location analysis, it did identify certain factors that it would *not* consider probative of an exchange's location, such as the volume of trading on the exchange originating from the U.S. or the nature of the underlying contract (*i.e.*, whether the underlying commodity is produced in or is an economically important commodity to the U.S.). *Id.* at 64449.
44. *Id.* at 64448.
45. *Id.* at 64448 n.49. The CFTC also noted the commenters' remarks that if the CFTC used the location of exchange technology as a jurisdictional hook, regulators in other jurisdictions may reciprocate, asserting jurisdiction over U.S. exchanges that use technology hosted in the other jurisdiction.
46. FRB, *The Federal Reserve Payments Study 2016: Recent Developments in Consumer and Business Payment Choices*, https://www.frbservices.org/assets/news/research/2016-payments-study.pdf (**2019 Federal Reserve Payments Study**).
47. *Id.*
48. *Id.*
49. *Id.*
50. Anton Badev & Matthew Chen, FRB, *Bitcoin: Technical Background and Data Analysis*, https://www.federalreserve.gov/econresdata/feds/2014/files/2014104pap.pdf.
51. FINRA, *Technology Based Innovations for Regulatory Compliance in the Securities Industry* (Sept. 2018), https://www.finra.org/rules-guidance/guidance/reports/cover-technology-based-innovations-regulatory-compliance-regtech-securities-industry.
52. OCIE, SEC, *Observations from Investment Adviser Examinations Relating to Electronic Messaging* (Dec. 14, 2018), https://www.sec.gov/files/OCIE%20Risk%20Alert%20-%20Electronic%20Messaging.pdf. OCIE staff specifically excluded email use on advisers' systems from its review, reasoning that firms have had decades of experience complying with regulatory requirements with respect to firm email. The staff instead focused on the increased use of social media, texting, and other types of electronic message apps, and the pervasive use of mobile and personally owned devices for business purposes.
53. *See*, *e.g.*, FINRA, Regulatory Notice 07-59: Supervision of Electronic Communications (Dec. 2007), http://www.finra.org/sites/default/files/NoticeDocument/p037553.pdf.

54. U.S. Department of Treasury, *A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation* 41-44, 199 (2018) (**Treasury Fintech Report**), https://home.treasury.gov/sites/default/files/2018-08/A-Financial-System-that-Creates-Economic-Opportunities---Nonbank-Financials-Fintech-and-Innovation_0.pdf.
55. *Id.*
56. FinCEN, *Press Release: FinCEN Announces Its Innovation Hours Program* (May 24, 2019), https://www.fincen.gov/news/news-releases/fincen-announces-its-innovation-hours-program.
57. 15 USC § 78o–3.
58. 7 U.S.C. § 21. Section 17 was added to the CEA by Title III of the CFTC Act of 1974 and provides for the registration and CFTC oversight of self-regulatory associations of futures professionals.
59. CSBS, Vision 2020: Fintech Industry Advisory Panel Recommendations and Next Steps (2019), https://www.csbs.org/sites/default/files/2019-02/FIAP%20Chart%20and%20Next%20Steps.pdf.
60. FSB, *Fintech and Market Structure in Financial Services: Market Developments and Potential Financial Stability Implications* (Feb. 2019), https://www.fsb.org/wp-content/uploads/P140219.pdf; BCBS, *Implications of Fintech Developments for Banks and Bank Supervisors* (Feb. 2018), https://www.bis.org/bcbs/publ/d431.pdf.
61. OCC, *Press Release: OCC Begins Accepting National Bank Charter Applications From Financial Technology Companies* (July 31, 2018), https://www.occ.gov/news-issuances/news-releases/2018/nr-occ-2018-74.html.
62. Complaint, *CSBS v. Otting*, No. 1:18-cv-02449 (D.D.C. Oct. 25, 2018).
63. Complaint, *Lacewell v. Otting*, No. 1:18-cv-08377 (S.D.N.Y. Sept. 14, 2018).
64. *Id.*
65. *Lacewell v. Office of the Comptroller of the Currency*, No. 19-04271, (2d. Cir. Dec. 19, 2019).
66. SDNY, Case 1:18-cv-08377-VM Document 46 Filed 12/19/19 (2d Cir. Case 0:19-cv-04271).
67. OCC, ANPR, National Bank and Federal Savings Association Digital Activities, https://www.occ.gov/news-issuances/news-releases/2020/nr-occ-2020-76a.pdf.
68. 328 U.S. 293 (1946).
69. *See* SEC, *Framework for "Investment Contract" Analysis of Digital Assets* (Apr. 3, 2019), https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets#_edn1 (**SEC Howey Framework**).
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74. NYDFS, *Press Release: DFS to Co-Host Fintech Forum with Conference of State Banking Supervisors* (Apr. 10, 2018), https://www.dfs.ny.gov/reports_and_publications/press_releases/pr1804101.
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76. Steve Kaaru, *ErisX Obtains BitLicense, Gets Green Light to Serve New Yorkers*, CoinGeek (May 7, 2020), https://coingeek.com/erisx-obtains-bitlicense-getting-the-green-light-to-serve-new-yorkers/.

77. NYDFS, *Virtual Currency Business (BitLicense) Application and License Management via NMLS*, https://www.dfs.ny.gov/apps_and_licensing/virtual_currency_businesses/license_management.
78. *E.g.*, SEC Howey Framework, *supra* note 61; SEC, Release No. 81207, *Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO*, at 13-16 (July 25, 2017) (**DAO Report**).
79. In the DAO investigation, the SEC found that the "reasonable expectation of profits" prong of the *Howey* test was supported by promotional materials of the issuer indicating that token purchasers would profit through the returns of the ventures to be funded by the token sales. The SEC also found that these promotional materials suggested that such returns would result from the entrepreneurial and managerial efforts of persons other than the investors, namely the issuer or others associated with it (e.g., in creating successful apps or systems or selecting profitable projects for funding).
80. *See*, *e.g.*, *In re Munchee Inc.*, Admin. Proc. File No. 3-18304, Securities Act Release No. 10445 (Dec. 11, 2017); DAO Report, *supra* note 74. In those cases, the SEC pointed to statements of ICO issuers – including statements in white papers related to the offering – that coin or token purchasers will profit through the returns of the venture to be funded by the coin or token sales.
81. 15 U.S.C. § 78c(a)(5).
82. For licensing requirements see 23 NYCRR Part 200(q).
83. Treasury Fintech Report, *supra* note 54, at 63-65.
84. The Conference of State Bank Supervisors, *Fintech Industry Advisory Panel Accountability Report* (December 2019), https://www.csbs.org/system/files/2020-01/Fintech-Accountability-Report.pdf.
85. Notably, the CFTC did not pursue a claim under Rule 42.2, perhaps recognising that FinCEN delegated to the CFTC only the authority to examine institutions for compliance with BSA requirements and that FinCEN remains the government agency with overall authority to enforce compliance with the BSA.
86. *CFTC v. 1Pool Ltd.*, Case No. 1:18-CV-2243 (D.D.C. Sept. 27, 2018) at para. 62 (emphasis original).
87. *CFTC v. My Big Coin Pay, Inc.*, Case No. 1:18-cv-10077-RWZ, Doc. No. 106 (D. Mass. Sept. 26, 2018).
88. *CFTC v. 1Pool Ltd.*, Case No. 1:18-CV-2243 (D.D.C. Sept. 27, 2018) at para. 64.

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