On 31 October 2008, Satoshi Nakamoto published a white paper describing what he referred to as a system for peer-to-peer payments, using a public decentralised ledger known as a blockchain and cryptography as a source of trust to verify transactions. That paper, released in the dark days of a growing global financial market crisis, laid the foundations for Bitcoin, which would become operational in early 2009. Satoshi has never been identified, but his white paper represented a watershed moment in the evolution of virtual currency. Bitcoin was an obscure asset in 2009, but it is far from obscure today, and there are now many other virtual currencies and related assets. In 2013, a new type of blockchain that came to be known as Ethereum was proposed. Ethereum’s native virtual currency, Ether, went live in 2015 and opened up a new phase in the evolution of virtual currency. Ethereum provided a broader platform, or protocol, for the development of all sorts of other virtual currencies and related assets.

Whether Bitcoin, Ether or any other virtual currency will one day be widely and consistently in use remains uncertain. However, the virtual currency revolution has now come far enough and has endured a sufficient number of potentially fatal events that we are confident virtual currency in some form is here to stay. Virtual currencies and the blockchain and other distributed ledger technology on which they are based are real, and are being deployed right now in many markets and for many purposes. The technology has matured beyond hypothetical use cases and beta testing. These technologies are being put in place in the real world, and we as lawyers must now endeavour to understand what that means for our clients.

Virtual currencies are essentially borderless: they exist on global and interconnected computer systems. They are generally decentralised, meaning that the records relating to a virtual currency and transactions therein may be maintained in a number of separate jurisdictions simultaneously. The borderless nature of this technology was the core inspiration for The Virtual Currency Regulation Review (Review). As practitioners, we cannot afford to focus solely on our own regulatory silos. For example, a US banking lawyer advising clients on matters related to virtual currency must not only have a working understanding of US securities and commodities regulation; he or she must also have a broad view of the regulatory treatment of virtual currency in other major commercial jurisdictions.

Global regulators have taken a range of approaches to responding to virtual currencies. Some regulators have attempted to stamp out the use of virtual currencies out of a fear that virtual currencies such as Bitcoin allow capital to flow freely and without the usual checks that are designed to prevent money laundering and the illicit use of funds. Others have attempted to write specific laws and regulations tailored to virtual currencies. Still others – the United States included – have attempted to apply legacy regulatory structures to virtual
currencies. Those regulatory structures attempt what is essentially ‘regulation by analogy’. For example, a virtual currency may be regulated in the same manner as money, or in the same manner as a security or commodity. The editors make one general observation at the outset: there is no consistency across jurisdictions in their approach to regulating virtual currencies. That is, there is currently no widely accepted global regulatory standard. That is what makes a publication such as The Review both so interesting and so challenging to assemble.

The lack of global standards has led to a great deal of regulatory arbitrage, as virtual currency innovators shop for jurisdictions with optimally calibrated regulatory structures that provide an acceptable amount of legal certainty. While some market participants are interested in finding the jurisdiction with the lightest touch (or no touch), most of our clients are not attempting to flee from regulation entirely. They appreciate that regulation is necessary to allow virtual currencies to achieve their potential, but they do need regulatory systems with an appropriate balance and a high degree of clarity. The technology underlying virtual currencies is complex enough without adding layers of regulatory complexity into the mix.

It is perhaps ironic that the sources of strength of virtual currencies – decentralisation and the lack of trusted intermediaries necessary to create a shared truth – are the same characteristics that the regulators themselves seem to be displaying. There is no central authority over virtual currencies, either within and across jurisdictions, and each regulator takes an approach that seems appropriate to that regulator based on its own narrow view of the markets and legacy regulations. We believe optimal regulatory structures will emerge and converge over time. Ultimately, the borderless nature of these markets allows market participants to ‘vote with their feet’, and they will gravitate toward jurisdictions that achieve the right regulatory balance. It is much easier to do this in a virtual business than it would be in a brick and mortar business. Computer servers are relatively easy to relocate. Factories and workers are less so.

The Review is intended to provide a practical, business-focused analysis of recent legal and regulatory changes and developments, and of their effects, and to look forward at expected trends in the area of virtual currencies on a country-by-country basis. It is not intended to be an exhaustive guide to the regulation of virtual currencies globally or in any of the included jurisdictions. Instead, for each jurisdiction, the authors have endeavoured to provide a sufficient overview for the reader to understand the current legal and regulatory environment.

Virtual currency is the broad term that is used in The Review to refer to Bitcoin, Ether, tethers and other stable coins, cryptocurrencies, altcoins, ERC20 tokens, digital, virtual and crypto assets, and other digital and virtual tokens and coins, including coins issued in initial coin offerings. The term is intended to provide rough justice to a complex and evolving area of law, and we recognise that in many instances the term virtual currency will not be appropriate. Other related terms, such as cryptocurrencies, digital currencies, digital assets, crypto assets and similar terms, are used throughout as needed. In the law, the words we use matter a great deal, so where necessary the authors of each chapter provide clarity around the terminology used in their jurisdiction, and the legal meaning given to that terminology.

We hope that you find The Review useful in your own practices and businesses, and we welcome your questions and feedback. We are still very much in the early days of the virtual currency revolution. No one can truthfully claim to know what the future holds for virtual currencies, but as it does not appear to be a passing fad, we have endeavoured to provide as
much useful information as practicable in *The Review* concerning the regulation of virtual currencies.

The editors would like to extend special thanks to Ivet Bell (New York) and Dan Applebaum (Chicago), both Sidley Austin LLP associates, without whom *The Review*, and particularly the US chapter, would not have come together.

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I INTRODUCTION TO THE LEGAL AND REGULATORY FRAMEWORK

United States financial regulators are concerned about the implications of virtual currency transactions and investments on investors and the financial markets. Many US federal and state agencies have published risk warnings to investors and, in some cases, have brought civil enforcement actions against virtual currency trading platforms, brokers and operators of collective investment funds. The regulators are also concerned about initial coin offerings (ICOs). On the federal level, the US Securities and Exchange Commission (SEC) regulates virtual currency and ICO transactions if they are offered or traded as securities or investment contracts, or are offered through a collective investment fund. In June 2018, the SEC disapproved the listing and trading of the Winklevoss Bitcoin Trust, finding that because Bitcoin markets are not ‘uniquely resistant to manipulation’, the listing of a Bitcoin fund by a securities exchange was not consistent with the requirements of the exchange to prevent fraudulent and manipulative acts and practices and to protect investors and the public interest. In August 2018, the SEC rejected nine separate applications to list Bitcoin exchange-traded funds. The US Commodity Futures Trading Commission (CFTC), the primary federal derivatives regulator in the United States, determined that virtual currencies are commodities that fall within its jurisdiction. The CFTC has jurisdiction over virtual currency derivatives transactions and has brought civil enforcement cases against virtual currency derivatives trading facilities alleging failures to comply with the CFTC’s requirements for regulated derivatives exchanges. Importantly, the CFTC also has broad authority to bring civil enforcement actions where there is fraud or manipulation with respect to any commodity transaction in interstate commerce, even if the transaction is not a derivatives transaction (i.e., even if it is not a futures contract, swap or option). Because the CFTC has interpreted virtual currencies to be commodities as the term is defined in the Commodity Exchange Act (CEA), the CFTC maintains that it can police any fraudulent, deceptive or manipulative activity involving virtual currency spot, cash and forward transactions, making the CFTC a key player in the US regulatory regime for virtual currencies.

Another US federal agency, the Financial Crimes Enforcement Network (FinCEN) of the US Treasury Department, regulates money services transmitters and has issued interpretative guidance for virtual currency exchanges. The federal banking agencies have also closely...
monitored banking activities involving virtual currencies. In mid-2018, the former Chair of the CFTC testified before Congress that there may be a gap in the oversight of virtual currencies that are not securities, stating that regulatory oversight through state money transmission regulations is not satisfactory and that the US Congress might consider giving the CFTC or another federal agency the authority to write new rules for spot digital asset markets, including new registration requirements. Reportedly, in 2018 the US Department of Justice (DOJ), working with the CFTC, launched an investigation into the potential manipulation of the prices of virtual currencies, an activity that constitutes a crime. The DOJ has recently criminally indicted fraudsters and money launderers for crimes relating to virtual currency transactions. Each of the 50 states in the United States has its own securities and financial services regulator, many of whom are involved in monitoring activities regarding virtual currencies and in some cases have brought enforcement actions where they found fraud or money laundering.

This chapter reviews the complex web of concurrent and overlapping regulatory jurisdiction and developments in the United States regarding virtual currency transactions and ICOs, including evolving scrutiny of intermediaries and trading platforms.

II SECURITIES AND INVESTMENT LAWS

i Securities laws

In planning to negotiate, effect, clear or settle transactions in virtual currencies that are securities, market participants should evaluate whether their activities may trigger registrations and related requirements under the framework of the Securities Exchange Act of 1934 (SEA), which is administered by the SEC. In particular, market participants should be aware of the definitions of broker, dealer, exchange, alternative trading system (ATS), clearing agency and transfer agent. The SEC has increasingly made clear that it intends to regulate virtual currencies to the extent of its existing authority in these areas.

For example, the SEC’s Division of Trading and Markets and Division of Enforcement recently published a joint statement in which they noted that trading venues on which individuals buy tokens that are securities as part of an ICO may be required to register with the SEC as a national securities exchange or otherwise avail themselves of an exemption from registration, such as by filing as an ATS. The SEC addressed this same point in its July 2017 Report of Investigation regarding the activities of an entity known as The Decentralized Autonomous Organisation (DAO), an unincorporated organisation. There, the SEC found that certain platforms that facilitated trading of certain DAO tokens that

2 As described below, many, but not all, virtual currencies are viewed by US regulators as being securities.
4 Id. § 78c(a)(5).
5 Id. § 78c(a)(1).
8 Id. § 78c(a)(25).
constituted securities appeared to violate Section 5 of the SEA by engaging in activities that met the definition of an exchange (i.e., matching the orders of multiple buyers and sellers for execution using non-discretionary methods) without being registered as such or relying on an available exemption from registration.

Below is a general overview of some of the most common registration types and related requirements under the SEA that may be triggered by transacting in or otherwise facilitating transactions in virtual currencies that are securities.

**Broker-dealers**

Registration with the SEC is generally required for any entity that meets the statutory definition of a broker or dealer, including with respect to their activities in virtual currencies that are securities. A securities broker includes any person who is engaged in the business of effecting transactions in securities for the accounts of others.\(^\text{11}\) Exceptions from the broker definition are also available to a bank,\(^\text{12}\) as defined under the SEA, that only engages in certain securities activities (e.g., third-party brokerage arrangements, trust activities, stock purchase plans and sweep accounts).\(^\text{13}\) A securities dealer includes any person engaged in the business of buying and selling securities for such person’s own account, regardless of whether through a broker or otherwise. However, the definition also includes an exception for persons who are not in the business of dealing in securities. Specifically, the dealer-trader exception states that a person is generally not acting as a dealer where that person trades for her or his own account but not as part of a regular business. The SEC Division of Trading and Markets has also published a significant volume of guidance in the form of no-action letters that further address when a person may be engaged in broker or dealer activities, but SEC staff would not recommend enforcement action by the agency if the person engages in the specified activities without becoming registered. Consideration of that guidance is therefore also relevant to a market participant’s own evaluation of whether it is acting as broker or dealer and must register.

Section 15(a)(1) of the SEA generally requires registration of any person who acts as a broker or dealer, as described above, and who uses instrumentalities of interstate commerce\(^\text{14}\) ‘to effect any transaction in, or to induce or attempt to induce the purchase or sale of, any security (other than an exempted security or commercial paper, bankers acceptances or commercial bills)’.\(^\text{15}\) Registration with the SEC requires the submission of Form BD (Uniform Application for Broker-Dealer Registration) through the Central Registration Depository, which is currently the central licensing and registration system operated by the Financial Industry Regulatory Authority (FINRA). Unless a broker-dealer is a member of a US national securities exchange and generally limits its securities activities to trading on that exchange, it must also become a member of FINRA, which is the national securities

\(^{12}\) Id. § 78c(a)(6).
\(^{13}\) Id. § 78c(a)(4)(B).
\(^{14}\) Id. § 78c(a)(17).
\(^{15}\) Id. § 78o(a)(1). A broker-dealer and its personnel must also, separately and independently, comply with the securities or Blue Sky laws, and in particular the broker-dealer and agent and salesperson registration requirement, of all US states and territories (and the District of Columbia) in which the broker-dealer and its personnel conduct securities activities, even if the broker-dealer does not maintain a place of business in such state.
association in the United States for broker-dealers that, among other things, has surveillance and enforcement authority over its members. To apply to become a member of FINRA, broker-dealers must complete a detailed new membership application that requires an applicant to provide FINRA with, among other things, detailed written supervisory and compliance procedures.

Among other considerations regarding acting as a broker-dealer in respect of virtual currencies that are securities, market participants should consider the compatibility of their planned activities with the existing requirements of the SEC’s financial responsibility rules. For example, broker-dealers are generally required by SEC Rule 15c3-3(b)(1) to promptly obtain and thereafter maintain control of all fully-paid and excess margin securities that are carried for the account of a customer.\footnote{16} The terms fully paid securities\footnote{17} and excess margin securities\footnote{18} are separately defined in Rule 15c3-3, and broker-dealers frequently satisfy this obligation today through custody of the securities at a clearing agency (e.g., the Depository Trust Company (DTC) or a custodian bank) because those locations are recognised in Rule 15c3-3(c) as being under the control of the broker-dealer. In terms of virtual currencies that are securities, however, the same recognised good control locations may not be practicable depending on the characteristics of the financial instruments and how they are issued and maintained. Accordingly, a broker-dealer should evaluate its planned activities against the SEC’s control requirement, including whether it may need to apply to the SEC for the recognition of a new control location pursuant to Rule 15c3-3(c)(7).

\textbf{Exchanges and ATSs}

In general under the SEA, an exchange is defined to mean a system that brings together the orders for securities of multiple buyers and sellers, and uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other.\footnote{19} As noted above, the SEC and its staff have emphasised recently that market participants who facilitate transactions in virtual currencies that are securities may come within the definition of an exchange, and that any such entity or group of persons that performs the functions typically provided by a securities exchange must either register as a national securities exchange, pursue an exemption from the definition of an exchange\footnote{20} or become an ATS that is operated by a broker-dealer. Under the regulatory framework administered by the SEC, an ATS is a national securities exchange; however, it is exempt from such registration provided that it complies with the requirements of Regulation ATS.\footnote{21}

The regulatory burdens associated with registering and operating as a national securities exchange are significantly greater than those associated with an ATS. For example, the registration process for an exchange involves completing and submitting Form 1 to the SEC, which is published for public notice and comment. By contrast, the submission of Form ATS to the SEC is not subject to the same public notice and comment process. Additionally,
under Section 6(b)(2) of the SEA, a national securities exchange is generally required to permit any broker-dealer or natural person associated with a broker-dealer to become a member of the exchange. An ATS is not subject to this obligation, and therefore it has more discretion over who it allows to participate. The rules of an exchange also generally cannot be amended without the advance submission of rule changes to the SEC pursuant to Section 19(b)(1) of the SEA, which are published for public notice and comment and may take up to 240 calendar days for the SEC to approve or disapprove. No such rule filing requirement currently applies to an ATS that wishes to change its operating procedures. Changes to the operating procedures of an ATS are made pursuant to an amendment to Form ATS or Form ATS-N, are not approved by the SEC, and need only be submitted to the SEC 30 days (at most) in advance of implementation of the change. Exchanges are also subject to the requirements of the SEC’s Regulation Systems Compliance and Integrity (Regulation SCI), which require detailed policies, procedures and monitoring to ensure the integrity and resiliency of most exchange systems. ATSs are generally not subject to these same requirements, unless they exceed certain volume thresholds in a given security.

Clearing agencies

Market participants who plan to engage in post-trade activities related to transactions in virtual currencies that are securities should closely examine whether their activities may rise to the level of performing clearing agency functions. The term clearing agency under Section 3(a)(23)(A) of the SEA is defined broadly to generally include any person who:

a. acts as an intermediary in making payments or deliveries, or both, in connection with transactions in securities;

b. provides facilities for the comparison of data regarding the terms of settlement of securities transactions, to reduce the number of settlements of securities transactions or for the allocation of securities settlement responsibilities;

c. acts as a custodian of securities in connection with a system for the central handling of securities whereby all securities of a particular class or series of any issuer deposited within the system are treated as fungible and may be transferred, loaned or pledged by bookkeeping entry, without physical delivery of securities certificates; or

d. otherwise permits or facilitates the settlement of securities transactions or the hypothecation or lending of securities without physical delivery of certificates.

In practice, this reaches firms that operate as a central counterparty to novate, net and guarantee securities settlement obligations or that operate as a central securities depository (e.g., DTC) to transfer ownership by book entry. However, the SEC has also recognised in guidance that it may capture firms performing other common types of functions in the securities markets. These include, but are not limited to collateral management activities – involving calculating

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23 Id. § 78s(b)(1).
25 Id. § 242.1000 et seq.
26 Id. § 242.1000 (defining SCI alternative trading system).
collateral requirements and facilitating the transfer of collateral between counterparties and trade matching services – whereby an intermediary compares trade data to reduce the number of settlements or to allocate settlement responsibilities.\(^{28}\)

Like the registration and operation of a national securities exchange, the registration and operation of a registered clearing agency involves significant regulatory requirements that include, but are not limited to, the submission of proposed rule changes to the SEC and compliance with Regulation SCI. Accordingly, market participants who believe that their activities may come within the clearing agency definition may wish to consider whether they nonetheless qualify for certain exclusions from the clearing agency definition in SEA Section 3(a)(23)(B),\(^{29}\) or whether it would be appropriate to pursue an exemption from registration. The SEC has authority to provide conditional or unconditional exemptions from registration pursuant to SEA Section 17A(b)(1).\(^{30}\)

**Transfer agents**

Where a market participant provides services to the issuer of a virtual currency that is a security, it should consider the implications of the transfer agent definition. The definition of a transfer agent in Section 3(a)(25) of the SEA\(^{31}\) includes any person who engages on behalf of a securities issuer in:

- a countersigning such securities upon issuance;
- b monitoring the issuance of such securities with a view to preventing unauthorised issuance;
- c registering the transfer of the issuer’s securities of the issuer;
- d exchanging or converting the securities; or
- e transferring record ownership of the securities by bookkeeping entry without physical issuance of securities certificates.

In turn, SEA Section 17A(c)(1) requires that, except as otherwise provided in the SEA, it is unlawful for any transfer agent, unless registered, to use US instrumentalities of interstate commerce ‘to perform the function of a transfer agent with respect to any security registered under Section 12 [of the SEA] or which would be required to be registered except for the exemption from registration provided by subsections (g)(2)(B) or (g)(2)(G) of that section’.\(^{32}\) Therefore, transfer agent registration is not required unless a person acts as a transfer agent in respect of such securities. The SEC also has authority pursuant to SEA Section 17A(c)(1)\(^{33}\) to provide conditional or unconditional exemptions from transfer agent registration.

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\(^{30}\) Id. § 78q-1(b)(1).

\(^{31}\) Id. § 78c(a)(25).

\(^{32}\) Id. § 78q-1(c)(1).

\(^{33}\) Id.
ii Tokens as securities

In July 2017, the SEC issued a Report of Investigation (DAO Report) analysing whether a digital asset is a security under the federal securities laws. The digital asset in question was a token issued by The DAO. The DAO was created by a German corporation named Slock.it UG, and by the time the DAO Report was issued, The DAO had offered and sold approximately 1.15 billion DAO tokens in exchange for a total of approximately 12 million Ether, a virtual currency used on the Ethereum blockchain, which had a value, at the time the offering closed, of approximately US$150 million.

The SEC analysed whether the DAO token was an investment contract, and therefore a security, as defined by the Supreme Court of the US (Court) in the seminal case, SEC v. WJ Howey Co,35 which involved the offer and sale of interests in an orange grove. The Court defined investment contract as an investment of money in a collective enterprise with a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others. In the DAO Report, the SEC approvingly quoted from the Court’s observation that this definition embodies a ‘flexible rather than a static principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits’.36

The DAO token represented an ownership interest in a collective vehicle whereby monies raised by the token sales would be used to fund various blockchain projects that could provide holders with a return on their investment. DAO token holders could vote on which projects to fund; however, before a project could be voted on, it first had to be reviewed and approved by one of The DAO’s curators, which were a group of individuals selected by Slock.it. These curators performed crucial security functions and maintained ultimate control over which proposals could be submitted to, voted on and funded by The DAO.

Presented with this fact pattern, the SEC easily concluded that the DAO token was an investment contract. There was (1) an investment of money (in this case, Ether) in (2) a common enterprise (The DAO platform), with the (3) expectation of profits (promotional materials informed investors that The DAO was a for-profit entity whose objective was to fund projects in exchange for a return on investment) (4) derived from the efforts of others (Slock.it and the curators). Although the DAO token holders did have voting rights, the SEC concluded that the voting rights were limited, and that the holders were substantially reliant on the managerial efforts of Slock.it and the curators.

Following the issuance of the DAO Report, blockchain participants focused on the two elements of the investment contract test that could potentially lead to a different conclusion than the one reached by the SEC with respect to the DAO token. Certainly, the first two elements would likely always be met: an investment of money in a common enterprise. But could it be possible to avoid triggering the expectation of profits and the efforts of others elements? For example, what if the value of the token was not primarily to provide a return on investment, but rather to enable the holder to do something that the holder could not do without a token, such as purchase a good or service available through the network on which the token was created? Or, what if the holder’s expectation of profits did not rely on the efforts of others, but rather the holder had the power to create his or her own return on investment?

34 The DAO Report, footnote 10.
35 328 U.S. 293 (1946).
36 Id. at 299.
In December 2017, the SEC provided further clarity for blockchain participants in a cease-and-desist order issued to Munchee Inc, a California corporation (Munchee). Munchee commenced business operations when it launched an iPhone app in 2015 (Munchee App), which allowed users to review meals and upload pictures. In early 2017, Munchee sought to raise capital through the development and issuance of a digital token (MUN token). The issuance of the MUN token purported to address the issues raised by the SEC in the DAO Report. For example, Munchee characterised the MUN tokens as utility tokens, because there was a real use case for the MUN token in connection with the already existing Munchee App. The SEC’s order quickly addressed the first two elements of the Howey analysis and focused on the manner of sale of the MUN token. The order stated that ‘investors’ expectations were primed by Munchee’s marketing of the MUN token offering’, and listed several examples of how the marketing of the MUN tokens offered investors hope and expectations that their investments would increase in value. Munchee’s marketing materials also stated that Munchee would ‘ensure that MUN token is available on a number of exchanges in varying jurisdictions’, thereby ensuring MUN holders could buy and sell MUN on secondary markets to realise the purported increases in value. Additionally, the SEC noted that Munchee and its agents marketed the MUN token to people interested in investing in digital assets instead of marketing to restaurant owners and food critics. Directly addressing the utility token argument that developed after the DAO Report, the SEC stated that ‘even if MUN tokens had practical use at the time of the offering, it would not preclude the token from being a security. Determining whether a transaction involves a security does not turn on labelling [. . .] but instead requires an assessment of the economic realities underlying the transaction.’

In June 2018, the SEC’s Director of the Division of Corporation Finance, William Hinman, made an important speech in which he refined and effectively revised the SEC’s analysis of a digital asset as an investment contract and therefore as a security. First, he framed the question differently by focusing not on the digital asset itself, but rather on the circumstances surrounding the digital asset and the manner in which it is sold. He conceded that the token, or ‘whatever the digital information packet is called’, is not a security all by itself, just as the interests in the orange grove in Howey were not. The token is ‘simply code’. Instead, ‘the way it is sold – as part of an investment; to non-users; by promoters to develop the enterprise – can be, and, in that context, most often is, a security – because it evidences an investment contract. And regulating these transactions as securities transactions makes sense.’ When there is information asymmetry between promoters or founders and investors, then the protections of the Securities Act of 1933 (Securities Act) – namely, disclosure and liability for material misstatements and omissions – are necessary and appropriate.

On the other hand, Hinman noted that ‘[i]f the network on which the token or coin is to function is sufficiently decentralised – where purchasers would no longer reasonably expect a person or group to carry out essential managerial or entrepreneurial efforts – the assets may not represent an investment contract. Moreover, when the efforts of the third party are no longer a key factor for determining the enterprise’s success, material information

asymmetries recede.’ Hinman put both Bitcoin and Ether into this latter category – as digital assets where there is no central third party whose efforts are a key determining factor in the common enterprise, and where it would seem that the disclosure regime of the federal securities laws would provide little value to the holders of Bitcoin and Ether.

In other words, as has always been the case, an investment contract can be made out of virtually any asset, including digital assets, so long as the investor is reasonably expecting profits from the promoter’s efforts. Similarly, an investment contract can also be unwound or undone. The management contract for the orange grove can be terminated. What is novel here, with digital assets, is the idea that this transition or change would or could occur just by the passage of time, without any action taken or to be taken by the holder.

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Smart contracts

The DAO illustrated more than the application of federal securities laws to the offer and sale of digital tokens. It also served as an early illustration of the potential technical and legal issues that may arise from the use of smart contracts by blockchain companies. Most digital tokens with smart contracts are built on the Ethereum network, a decentralised platform with a protocol to code tokens (e.g., ERC-20) that is specifically designed to create smart contracts.39 These smart contracts are self-executing and use the Ethereum network’s decentralised cryptographic mechanism for enforcement.40 Early-stage blockchain companies, such as The DAO, have obtained seed capital through ICOs by issuing tokens (usually ERC-20 compliance tokens) through the use of a smart contract in exchange for cryptocurrencies.41

In the simplest terms, a smart contract is a computer algorithm that automatically executes and enforces a transaction.42 Unlike traditional contracts, contractual clauses in smart contracts are embedded as computer code (i.e., a set of instructions), and the transaction is self-executing and self-enforcing by a computer program.43 While automated contracts are nothing new, smart contracts raise issues of legal interpretation in situations where digital tokens have been issued by a blockchain company and there are claims of fraud or misrepresentation, or simply where circumstances changed and a party would like to amend or rescind the contract prior to its execution.44 The DAO hack in 2016 served as an early example of smart contract coding gone awry. After raising hundreds of millions of dollars in its ICO, but before the project commenced activity, computer programmers

43 Id.
realised that there was a recursive call bug in the code for The DAO’s smart contract.\(^4\) The DAO’s smart contract was designed to be self-executing and entirely reliant on the code on the Ethereum blockchain.\(^4\) While the potential threat was identified, due to the self-executing nature of the smart contract, it was not possible to fix the error before the vulnerability was exploited.\(^4\) On 18 June 2016, a hacker exploited the error in The DAO’s code and The DAO lost approximately one-third of the Ether it raised in its ICO.\(^4\)

Most, if not all, of the legal issues that may arise from a dispute involving a smart contract can be addressed with existing contract law. However, the novelty of the blockchain and tokens with smart contracts has generated uncertainty for some regulators. This uncertainty has led several US state legislatures to introduce legislation clarifying the validity of smart contracts. For example, Arizona\(^4\) and Tennessee\(^5\) legally recognise blockchain transactions and smart contracts. In Ohio, a proposed senate bill is intended to amend existing law to ‘include blockchain records and smart contracts as electronic records’.\(^5\) Lawmakers in several other states have also introduced similar legislation. In Michigan, the state legislature took a different approach and introduced two bills that would criminalise modifying data on a blockchain, presumably including smart contracts.\(^5\) These laws may, arguably, be necessary to recognise the existence and nature of smart contracts (e.g., unilaterally coded and self-executing). However, the application of existing contract law will continue to provide the mechanism to adjudicate grievances that arise after the smart contract has been consummated.

### iv Commodities laws

The CFTC is the US federal regulatory agency that administers and enforces the CEA, having jurisdiction over derivatives, that is, futures contracts, options and swaps involving commodities.\(^5\) CEA Section 1a(9) defines a commodity as ‘[enumerated agricultural products], and all other goods and articles [. . .] and all services, rights, and interests [. . .] in which contracts for future delivery are presently or in the future dealt in’.\(^5\)

Virtual currencies are not fiat currencies; they are not legal tender issued by a sovereign government. In 2017, the CFTC interpreted virtual currency to encompass any digital

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4 Id.
4\footnote{Id. The hacker was not able to access the Ether because The DAO smart contract explicitly stated that any of the invested Ether taken out of The DAO would not be accessible for 28 days. ‘What is Ethereum Classic? Ethereum vs Ethereum Classic’, Blockgeeks, https://blockgeeks.com/guides/what-is-ethereum-classic/ (last visited Aug. 20, 2018). With this in mind, the Ethereum community and team decided to take action and forced a hard fork of the Ethereum network, primarily to refund all the money that had been taken from everyone by the DAO. Id.}
4\footnote{Tenn. Code Ann. § 47-50-119 (2017).}
5\footnote{7 U.S.C. § 1, et seq. (2012). The CFTC’s regulations are at 17 C.F.R. § 1, et seq. (2017).}
5\footnote{7 U.S.C § 1a(9) (2012).}
representation of value that functions as a medium of exchange, and any other digital unit of account used as a form of currency.\(^{55}\) In December 2017, the CFTC permitted the trading of Bitcoin futures contracts and Bitcoin binary options on two CFTC-regulated futures exchanges, referred to as designated contract markets (DCMs).\(^{56}\) Therefore, as of December 2017, Bitcoins satisfied the condition in the ‘commodity’ definition of being the underlying asset for a futures contract.

In 2014, the then-current CFTC Chair advised Congress that derivatives contracts based on virtual currencies fall within the CFTC’s jurisdiction.\(^{57}\) Beginning in 2015, the CFTC commenced several administrative enforcement actions involving virtual currencies. In settling an enforcement case with Coinflip, Inc, an unregistered trading facility on which Bitcoin options were traded, the CFTC determined that Bitcoin and all virtual currencies are commodities within the definition of CEA Section 1a(9), that Bitcoins are not fiat currencies, that Bitcoin options are commodity options and therefore are CFTC-regulated swaps, and that the trading facility was therefore required to be registered with the CFTC as either a swap execution facility (SEF) or DCM.\(^{58}\) The CFTC determined that all virtual currencies fell within the CEA definition of commodity, notwithstanding that no regulated futures contract based on any virtual currency was traded at that time.

In 2016, in another administrative enforcement proceeding, the CFTC entered into a settlement with Bitfinex, which operated an online platform for retail customers exchanging and trading various virtual currencies, including Bitcoins, on a margined, leveraged or financed basis, without actually delivering the Bitcoins to the retail customers, but instead holding the Bitcoins in wallets that it owned and controlled, in violation of the CEA’s retail commodity transactions provision that is intended to protect individual retail customers from abuse involving unregulated speculative commodities investments.\(^{59}\) The CFTC again determined that virtual currencies are commodities, and that the transactions were illegal, off-exchange commodity futures contracts because they were transacted with retail investors and did not result in actual delivery. Retail investors are individuals who are not eligible contract participants (e.g., sophisticated investors, specified regulated entities and large entities). Retail commodity transactions are treated under the CEA as futures contracts and must be traded on regulated DCMs. The CFTC required Bitfinex to register with the CFTC as a futures commission merchant because it engaged in soliciting or accepting orders for retail commodity transactions and received funds from retail customers in connection with the transactions.

In 2017, the CFTC published a proposed interpretation on the meaning of the term actual delivery in the context of retail transactions in virtual currencies, in order to determine whether off-exchange transactions involving virtual currencies fall within the CEA’s retail...

\(^{59}\) In the Matter of: BFXNA Inc d/b/a Bitfinex, CFTC No. 16-19 (June 2, 2016).
commodity transactions prohibition. The CFTC advised that while the test for whether actual delivery has occurred would be determined by facts and circumstances, it will look to whether, no later than within 28 days, the retail customer is able to take possession and control of the entire quantity of the virtual currency purchased, regardless of whether the purchase was leveraged or financed, and use it freely in commerce without the seller or platform retaining any security interest in the virtual currency. The CFTC advised that a book-out or cash settlement, or where the virtual currency is retained in an omnibus wallet where the platform operator retains the private keys, will not constitute actual delivery. The CFTC recognised that a virtual currency trading platform may have relationships with depositories for its customers, but the platform (and any financing provider) may not retain an interest in the virtual currency deposited in the depository.

In March 2018, in the enforcement case CFTC v. McDonnell and CabbageTech Corp (d/b/a Coin Drop Markets), a federal district court judge confirmed the CFTC’s view that all virtual currencies are commodities under the CEA definition, and that spot transactions in virtual currencies are subject to the CFTC’s anti-fraud and anti-manipulation enforcement authority. Notwithstanding that only Bitcoin futures contracts are currently traded on CFTC-regulated DCMs, the court found that all virtual currencies are goods that fall within the CEA’s definition of commodity, as excerpted above. The court also held that the CFTC grants the CFTC enforcement authority over fraud or manipulation not only in derivatives markets, but also over the underlying virtual currencies spot markets pursuant to CFTC Rule 180.1, which prohibits employing a manipulative or fraudulent scheme not only in connection with derivatives transactions but ‘in connection with [ . . . ] a contract of sale of any commodity in interstate commerce’. The court also concluded that the CFTC’s jurisdiction over virtual currencies is concurrent with the jurisdiction of other federal and state regulators and criminal prosecutors. In August 2018, following a non-jury trial, the case was decided in favour of the CFTC and the court issued a permanent injunction and assessed civil monetary penalties against the defendants.

With respect to virtual currency swap transactions, the CFTC’s jurisdictional authority is not based on the underlying asset being a commodity. Therefore, even if a virtual currency is not a commodity, if the transaction is determined to be a swap, the CFTC would have regulatory authority over the swap transaction, which means that the CFTC’s swap dealer, reporting, recordkeeping and other swaps compliance rules would apply.

The CFTC has also advised that virtual tokens and virtual coin offerings may be commodities or derivatives contracts depending on the particular facts and circumstances.

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61 No. 1:18-cv-00361-JBW-RLM, slip op. (E.D.N.Y. Mar. 6, 2018) (mem.).


III BANKING AND MONEY TRANSMISSION

Below is an overview of the regulation of virtual currency activities by US federal prudential banking regulators (the Board of Governors of the Federal Reserve System (Fed), the Office of the Comptroller of the Currency (OCC) and the Federal Deposit Insurance Corporation (FDIC)) and the Consumer Financial Protection Bureau (CFPB), as well as the regulation of virtual currency activities by the US states, specifically as money transmission or a related money services business activity.64 The US federal prudential banking regulators and the CFPB remain in the formative stages of assessing their potential roles in the regulation of virtual currency activities of the financial institutions they oversee, and have not sought to actively regulate the virtual currencies and virtual currency activities of their supervised entities to date.65 The US states, on the other hand, have adopted a broad spectrum of approaches concerning the application of money transmission and related laws and regulations to virtual currency activities, including requiring in certain circumstances a specialised virtual currency licence or a more general money transmission licence (MTL) as discussed further below.

i Federal banking regulators

While the CFTC, the SEC66 and FinCEN67 have issued guidance or made public pronouncements that begin to define the scope of their jurisdiction concerning virtual currencies, the Fed, OCC, FDIC and CFPB have largely adopted a more limited ‘wait and see’ approach.

Fed

In a press conference in late 2017, the former Chair of the Fed, Janet Yellen, responded to a question regarding the Fed’s policy regarding Bitcoin as follows:

It is a highly speculative asset, and the Fed doesn’t really play any role – any regulatory role with respect to Bitcoin other than assuring that banking organisations that we do supervise are attentive, that they’re appropriately managing any interactions they have with participants in that market and appropriately monitoring anti-money laundering Bank Secrecy Act, you know, responsibilities that they have.68

In short, Chair Yellen confirmed that the Fed does not have any direct role in regulating Bitcoin, and by implication the class of other virtual currencies with similar features.

Nonetheless, the Fed continues to monitor the use and development of virtual currencies and the role of Fed-regulated financial institutions in virtual currency activities through a

64 This section does not address securities or commodities laws and regulations, tax laws or commercial law questions, such as the mechanism for taking a security interest in virtual currencies. The money services business registration requirements of FinCEN are discussed in Section IV.
65 The information in this section is current as of 30 August 2018. Regulation of virtual currencies on both the federal and state levels is rapidly evolving and subject to change.
66 See Section II.
67 See Section IV.
working group that includes the CFTC, the SEC and FinCEN. As of 6 February 2018, the status of the work of this group was characterised as: ‘a number of preliminary conversations and work streams developed [. . .] It has begun with just some broad conversations establishing our different jurisdictions so that we are all clear as to what we are doing, but also what we are not doing, where the gaps are.’ Each of the current Fed governors have publicly commented that virtual currencies pose limited risk to the US banking system given their limited adoption, but could be a potential risk issue if they gain wider use and integration with the banking system.

**OCC**

Like the Fed, the OCC has published little guidance regarding the role of national banks in virtual currency ecosystems, taking the position that the nascent market, and the role of national banks in the market, is not yet sufficiently developed to warrant regulatory intervention. However, on 31 July 2018, the OCC announced it will make available a special-purpose national bank charter, generally known as a FinTech charter, that may be owned by certain types of non-bank financial services companies. A FinTech charter permits a company to operate on a national basis under the OCC's supervision and thereby bypass multi-state licensing and supervision, and certain types of state regulation. These features have led to industry speculation whether the charter will be available to enable a more streamlined alternative for certain virtual currency activities than the multi-state licensing approach described below. The OCC has stated that applicants and licensees will be held to

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70 Id.
71 The Fed is comprised of seven governors, but as of 30 August 2018 four governor positions are vacant.
75 Id.
76 The OCC has not explicitly commented on what types of virtual currency activities, if any, may be conducted under the authority of a FinTech charter. The OCC has stated that the charter is available to entities that facilitate payments electronically, and suggested that certain new or innovative activities may qualify as banking activities permitted by the charter; however, the OCC has expressly stated that entities will not qualify if they intend to accept deposits or engage primarily in fiduciary services.
the same standards as national banks, suggesting that even if the FinTech charter is an avenue for certain virtual currency activities, only certain industry participants may be in a position to meet the applicable regulatory requirements.77

The FinTech charter proposal proved controversial shortly after it was initially proposed, and state regulators continue to oppose the charter, which could give rise to future legal challenges.78

**FDIC**

Like the other prudential banking regulators, the FDIC is presently merely monitoring the development of virtual currencies and is likely to continue this approach. The FDIC has publically stated that it is actively studying the potential effects of virtual currencies on the banking system and banks under its jurisdiction through an internal working group, the Financial Technology Working Group.79

**CFPB**

In light of its consumer protection mandate, the CFPB's focus with respect to virtual currencies has been on ensuring that consumers are adequately informed of the characteristics and risks of virtual currencies before engaging in virtual currency transactions. In this regard, in 2014 the CFPB issued a public warning to consumers regarding the risks of transacting and investing in virtual currencies and began accepting consumer complaints regarding virtual currency matters, a potential first step towards regulation or enforcement.80 However, in 2016, after taking public comments on its expansion of Regulation E to cover prepaid products (Prepaid Rule), the CFPB declined to bring virtual currencies within the scope of the Prepaid Rule or to take a position concerning whether virtual currencies are otherwise subject to Regulation E.81 Moreover, to date there have been no public CFPB enforcement actions regarding virtual currency activities.

**ii State money transmission regulators**

The states have adopted a broad spectrum of approaches concerning the application of money transmission laws and regulations to virtual currencies. These approaches range from promulgating an entirely separate regulatory regime for the oversight of entities engaged in virtual currency activities (e.g., New York’s 'BitLicense'), to incorporation by varying degrees

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77 Office of the Comptroller of the Currency, footnote 74. The standards applicable to national banks that apply to FinTech charter licensees include those concerning capital and liquidity, profitability, corporate governance and management, risk management, community financial inclusion, financial-stress contingency planning, competition, treating customers fairly and regulatory compliance.

78 After the OCC publically announced that it was considering issuing FinTech charters, the NY Department of Financial Services and the Conference of State Bank Supervisors (CSBS) filed separate lawsuits that were subsequently dismissed for ripeness, alleging that the OCC exceeded its authority in proposing the issuance of a FinTech charter. Since the OCC's statement that it will make FinTech charters available, the NY Department of Financial Services and CSBS have continued to make statements critical of the OCC's authority to issue such charters.


of such oversight into state MTL regimes by statutory amendment or regulatory fiat, to
deciding to adopt a position (e.g., the approach of the California Department of Business
Oversight (CDBO)). As these approaches continue to evolve, there is also a potential
alternative approach on the horizon, the Uniform Law Commission’s proposed Uniform
Regulation of Virtual Currency Business Act (Uniform Act), which, like the New York
BitLicense, is a licensing regime specifically designed for entities involved in virtual currency
activities. Although the Uniform Act has only been introduced in the legislatures of a handful
of states and has yet to be adopted in any state, it may serve as the basis for future legislative
activity concerning virtual currency regulation. Similarly, the CSBS has published a model
regulatory framework for states to consider as they craft their supervisory approaches to
virtual currency activities. The following summarises a handful of representative approaches
to regulation of virtual currency activities at the state level. However, there are numerous
variations on the themes below, as well as significant pending legislative and regulatory
activity that promise to make this a dynamic area for the foreseeable future.

New York BitLicense

New York, through rulemaking by the New York Department of Financial Services (NYDFS),
has been the most aggressive of the states in regulating virtual currencies. Under New York
law, a licence referred to as a BitLicense is broadly required to engage in any virtual currency
business activity. Given that New York is the epicentre of US financial markets and services,
this requirement has led the NYDFS to be a leader in regulating, or seeking to regulate,
wide spectrum of virtual currency businesses operating in the United States. New York
regulations define virtual currencies as ‘any type of digital unit that is used as a medium of
exchange or a form of digitally stored value’ and includes both centralised and decentralised
currencies. Excluded from the definition of virtual currencies are prepaid cards that are
issued or redeemable in legal tender; digital units that are part of a customer affinity or
rewards programme that cannot be converted into legal tender or a virtual currency; and
digital units used within gaming platforms that have no real-world value or market outside

82 The states also have generally expressed concern regarding consumer protection in virtual currency
transactions, publishing bulletins warning consumers of the risks inherent in such transactions. See, e.g.,
virtual-currency-20140429-story.html; Fla. Dep’t of Fin. Servs., Consumer Alert: Virtual Currencies
Financial%20Institutions/Money%20Transmitters/OCOB_Virtual_Currency_Alert.pdf.
84 See Conference of State Bank Supervisors, State Regulatory Requirements For Virtual Currency Activities
CSBS-Model-Regulatory-Framework%28September%28September%202015%29.pdf. Several states also have
published consumer advisories regarding the risks of transacting or investing in virtual currencies, generally
using a model form promulgated jointly by the CSBS and the North American Securities Administrators
Association. See, e.g., Md. Office of the Comm’n of Fin. Reg., Advisory Notice 14-01, Virtual Currencies:
Risks for Buying, Selling, Transacting, and Investing (Apr. 24, 2014), http://www.dllr.state.md.us/finance/
advisories/advisoryvirtual.shtml.
86 Id. at § 200.2(p).
the gaming platform, and cannot be converted into real-world value or a virtual currency.87 Virtual currency business activity, the activity that gives rise to the licensing requirement, broadly entails any of the following:

- receiving a virtual currency for transmission or transmitting a virtual currency;
- storing, holding or maintaining custody or control of a virtual currency on behalf of others;
- buying and selling a virtual currency as a customer business;
- performing exchange services; and
- controlling, administering or issuing a virtual currency.88

Virtual currency business activities do not include use of a virtual currency by merchants or consumers to purchase goods or services, investment by merchants and consumers, and the development and issuance of software.89

In addition to the requirement to obtain a licence, licensees under the BitLicense regime are also required to meet certain substantive compliance requirements. Generally, licensees are required to:

- maintain a sufficient amount of capital as determined by the NYDFS;90
- maintain sufficient anti-money laundering, customer identification, cybersecurity, consumer complaint and anti-fraud programmes;91
- provide certain disclosures and receipts in connection with transactions;92
- file certain money laundering reports with the NYDFS if not otherwise filed with FinCEN;93
- have a compliance officer and a chief information security officer;94
- maintain certain written policies and procedures;95
- maintain a sufficient surety bond;96 and
- meet certain record retention requirements.97

Licensees that hold virtual currencies on behalf of others are also required to hold such funds in trust with a qualified custodian that is approved by the NYDFS; hold virtual currencies of the same type and amount as what is owed to the beneficiaries; and not sell, lend or assign virtual currencies held on behalf of others except at the direction of the beneficiary.98 Licensees are also subject to supervision of the NYDFS, which includes periodic examinations and the submission of financial and transactional information to the NYDFS.99

87 Id. at §§ 200.2(p), (j).
88 Id. § 200.2(q).
89 Id. §§ 200.2(q), 200.3(c).
90 Id. § 200.8.
91 Id. §§ 200.15, 200.16, 200.20.
92 Id. § 200.19.
93 Id. § 200.15.
94 Id. §§ 200.7(b), 200.16(c).
95 Id. §§ 200.7, 200.15–200.17.
96 Id. § 200.9(a).
97 Id. § 200.12.
98 Id. §§ 200.7, 200.2(n).
Notwithstanding this extensive regulation, it should be noted that, depending on the nature of a licensee’s activities, the NYDFS may require an entity that has received a BitLicense to also obtain a New York MTL. Moreover, as an alternative to the BitLicense, the NYDFS also has licensed a handful of trust companies to engage in certain virtual currency trading and custody activities. Although applicants for a trust company licence must meet a particularly high standard, there is an advantage to the trust company licence in that many (but not all) states do not require licences for trust companies that are chartered and supervised in another state.

**Inclusive legislation**

As an alternative to a new and separate regulatory regime, a number of other states have amended their MTL statutes broadly to include the receipt of virtual currencies for transmission or the issuance or the sale of virtual currencies as stored value.\(^{100}\) Such amendments typically revise the statutory definitions of money or money transmission to include the concept of virtual currencies, and add virtual currency as an additional defined term to the statute.\(^{101}\) It is important to note that several, but not all, state MTL statutes exempt licensed broker-dealers to some degree,\(^{102}\) and some states also recognise exceptions for agent of the payee\(^{103}\) or payment processors.\(^{104}\) Some virtual currency businesses therefore may be able to take advantage of these and other exceptions on state-by-state or activity-by-activity bases, or both.

In regard to the various types of potential virtual currency activities and whether they are subject to regulation in these states, states generally do not cover end users of a virtual currency (e.g., merchants that accept a virtual currency in payment for goods or services, individuals who use a virtual currency to make such payments and investors who purchase a virtual currency for their own portfolios), but transmitting or maintaining control of virtual currencies for others typically is a covered activity under such regimes,\(^{105}\) which may be interpreted as covering both purchases and sales of virtual currencies on behalf of others.\(^{106}\)

Licensees under these state MTL regimes are also subject to certain compliance requirements. Based on the plain text of money transmitter statutes and regulations, these requirements are generally not quite as extensive as those required for a New York BitLicense, but state regulators typically have discretion to require additional controls as a condition of licensing. The relevant statutory or regulatory requirements include the following:

- **holding permissible investments in an amount equivalent to funds received from senders;**

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\(^{100}\) These states include, without limitation, Alabama, Connecticut, North Carolina, Oregon, Vermont and Washington. A 50-state survey was not conducted in the development of this section, and other states may also fall under this category or other categories presented in this section.


\(^{103}\) See, e.g., Jorge I. Perez, Banking Comm’r, Conn. Dep’t of Banking, No Action Position on Money Transmission licensure Requirement for Persons Acting as an Agent of a Payee (Oct. 24, 2017).


b maintaining a sufficient net worth, which is often at a statutorily specified amount rather than an amount that is specific to the licensee;
c maintaining a sufficient surety bond; and
d meeting certain record retention requirements.

In certain states, money transmitters are also required to maintain certain policies and procedures, provide a receipt with each transaction and provide certain disclosures. State money transmitter licensees are also subject to periodic examinations, and must submit financial and transactional information to the supervising agencies.

For licensees that engage in virtual currency activities, compliance with these requirements can pose challenges in states that have not made accommodations for the unique attributes of virtual currencies that decades-old MTL statutes were not designed to address. For example, if a licensee holds a virtual currency for a customer and the state regulator views that holding as an outstanding obligation of the licensee to the customer, state regulations will typically require, as indicated above, that the licensee hold certain eligible investments in an amount equal to the outstanding obligation. For traditional licensees, that typically means holding customer funds in insured bank accounts, US Treasury securities or the like. While most states have concluded that it is permissible to hold a ‘like-kind’ investment of a virtual currency when the licensee has an obligation to deliver a virtual currency to a customer,107 that is not uniformly the case, leading to significant duplicate collateralisation requirements in Hawaii, for example.108

**Inclusive regulatory guidance**

At least one state, Hawaii, has issued regulatory guidance broadly classifying virtual currencies as money and subject to the state’s money transmission laws.109 The guidance is relatively short, does not explain the reasoning of the Hawaii Department of Commerce and Consumer Affairs, and is very broad – it implies that even mining activities require a licence.110

**Nuanced regulatory guidance**

Other states have taken a more nuanced position, covering some activities related to virtual currencies, but not others. For example, a line of guidance initially promulgated by Texas and adopted by several other states111 distinguishes between decentralised and centralised virtual

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110 Id.
currencies. The guidance concludes that decentralised virtual currencies do not qualify as money under the respective state MTL statutes, because they are not a currency as defined by the state law: that is, ‘the coin or paper of the [United States] or any other country’.\textsuperscript{112} As decentralised virtual currencies are not money, their transmission therefore is not money transmission.\textsuperscript{113}

However, the guidance further notes that transactions involving decentralised virtual currencies that also involve the exchange of legal tender could constitute money transmission if the transactions involved more than two parties.\textsuperscript{114} Under this line of guidance, the direct purchase and sale of virtual currencies as principal, the acceptance of virtual currencies for goods or services, the mere custody of virtual currencies, and the exchange of one virtual currency for another virtual currency, are not money transmission activities.\textsuperscript{115} However, the sale of virtual currencies through an exchange for legal tender would be considered money transmission.\textsuperscript{116}

As for centralised virtual currencies issued by a private party, the guidance generally declines to adopt a broad position given the numerous potential variations in structure.\textsuperscript{117} Instead, it defers making a judgement until the regulator is presented with the specific facts and circumstances at issue.\textsuperscript{118}

\textit{No position}

At present, not every state has taken a position, either through legislation or the actions of a regulator, regarding the application of MTL statutes to virtual currencies. Most notably, the CDBO has indicated that it is reserving judgement regarding the potential application of the California MTL statute to many virtual currency activities and the necessity of obtaining a licence. In response, some virtual currency companies are moving forward with virtual currency activities in California pending a determination by the CDBO that the California MTL statute applies to such activities and that a licence is required.

\textit{Uniform Regulation of Virtual-Currency Business Act}

As reflected above, states have adopted a broad range of regulatory approaches. As virtual currencies mature and gain wider acceptance, more states may move to adopt a separate regulatory regime for virtual currencies or otherwise update their already enacted regulatory regimes for virtual currencies. Indeed, legislation to that effect has been introduced in a number of states. During such a process, states may look to the Uniform Act referenced above for guidance.

The substance of the Uniform Act is heavily influenced by New York’s BitLicense licensing regime, state money transmitter licensing regimes and the CSBS Model Regulatory Framework for virtual currencies. Under the Uniform Act, a licence is required to ‘engage in

\begin{itemize}
  \item \textsuperscript{112} See Charles G Cooper, Banking Comm’r, Tex. Dep’t of Banking, Supervisory Memorandum – 1037, Regulatory Treatment of Virtual Currencies Under the Texas Money Services Act 2–3 (Apr. 3, 2014).
  \item \textsuperscript{113} Id. at 3.
  \item \textsuperscript{114} Id.
  \item \textsuperscript{115} Id. at 2–3.
  \item \textsuperscript{116} Id. at 3.
  \item \textsuperscript{117} Id.
  \item \textsuperscript{118} Id.
\end{itemize}
virtual-currency business activity’. The Uniform Act incorporates the concept of licensing reciprocity between states, so a separate licence may not be required for every state if the proposal is adopted as drafted. Similar to the BitLicense regulation, the definition also excludes a customer affinity or rewards programme that cannot be converted into legal tender or a virtual currency, and digital units used within gaming platforms that have no real-world value and cannot be converted into real-world value or a virtual currency. Unlike the BitLicense regulation, but similar to other states that have amended their money transmission statutes, the Uniform Act does not explicitly exclude prepaid cards that are issued or redeemable in legal tender.

The definition of virtual currency business activity – the activity that gives rise to the licensing requirement – includes ‘exchanging, transferring, or storing virtual currency or engaging in virtual currency administration’. The definition also explicitly includes issuing electronic certificates representing an interest in precious metals or holding such certificates on behalf of another person. As with the BitLicense regulation and several amended state money transmission statutes, the Uniform Act also excludes from the definition of virtual currency business activity direct purchases of goods and services using a virtual currency, the direct purchase of a virtual currency as an investment, and persons whose activities are limited to the development or issuance of software. The Uniform Act also provides a number of additional exceptions. Among the exceptions, several worth highlighting are those for:

a. registered broker-dealers or other securities and commodities intermediaries under the Uniform Commercial Code that do not engage in the ordinary course of business in virtual currency business activity with or on behalf of a resident in addition to maintaining securities accounts or commodities accounts;

b. a licensed money transmitter;

c. a payment processor that facilitates clearing and settlement between exempt entities;

d. entities whose activity in the jurisdiction is associated with annual transactions that have a value of US$5,000 or less;

e. a virtual currency control-services vendor; and

f. an entity that does not receive compensation for providing virtual currency products or services.

As with state licences generally, the Uniform Act also imposes certain substantive compliance requirements, including:

a. maintaining a sufficient net worth and reserves as is determined necessary by the relevant regulator in its discretion;

119 The Uniform Law, footnote 83.
120 Id. §§ 201, 203.
121 Id. § 102(23).
122 Id.
123 Id. § 102(24).
124 Id.
125 Id. § 103.
126 Id.
127 Id. § 204.
b maintaining sufficient anti-money laundering, customer identification, cybersecurity, complaint programmes and anti-fraud programmes; 128
c providing certain disclosures and receipts in connection with transactions; 129
d maintaining certain written policies and procedures; 130
e maintaining a sufficient surety bond; 131 and
f meeting certain record retention requirements. 132

Licensees that hold virtual currencies on behalf of others are also required to hold virtual currencies of the same type and amount as what is owed to the beneficiary. 133

IV ANTI-MONEY LAUNDERING

The Bank Secrecy Act (BSA) 134 is the primary federal statute that imposes anti-money laundering (AML) obligations on institutions in the financial sector. FinCEN, a bureau of the US Department of the Treasury, issues and enforces AML regulations promulgated under BSA authority, generally in conjunction with other federal agencies with direct supervisory authority over impacted institutions, such as banks and broker-dealers. The BSA and its implementing regulations (BSA Regulations) 135 require that certain enumerated financial institutions that are not otherwise federally regulated must register with FinCEN, maintain a risk-based AML programme, and collect, retain and share information with FinCEN.

i FinCEN guidance: a functional approach

The BSA Regulations impose AML obligations on a variety of financial institutions, including traditional financial entities such as banks, mutual funds, brokers and dealers in securities, futures commission merchants, introducing brokers in commodities as well as a variety of non-traditional financial entities, including money services businesses (MSBs). 136 Under the BSA Regulations, persons or entities ‘wherever located doing business, whether or not on a regular basis or as an organised or licensed business concern, wholly or in substantial part within the [United States]’ conducting certain activities are considered MSBs. 137 MSBs include, inter alia, dealers in foreign exchange, providers and sellers of prepaid access, and money transmitters. 138 A money transmitter is any person or entity that provides money transmission services or is engaged in the transfer of funds. 139 It is the term money transmitter that has formed the basis for FinCEN’s regulation of entities engaged in certain virtual currency activities.

128 Id. §§ 601, 602.
129 Id. § 501.
130 Id. § 601.
131 Id. § 204.
132 Id. § 302.
133 Id. § 502.
136 Id. § 1010.100(t).
137 Id. § 1010.100(ff).
138 Id. §§ 1010.100(ff)(1), (4)–(5).
139 Id. § 1010.100(ff)(5).
In 2011, FinCEN finalised a rule\(^{140}\) that expanded the definition of money transmission services to encompass ‘the acceptance of currency, funds, or other value that substitutes for currency from one person and the transmission of currency, funds, or other value that substitutes for currency to another location or person by any means’.\(^{141}\) By covering other value that substitutes for currency, FinCEN thus laid the foundation for assessing whether a particular virtual currency business constitutes acting as a money transmitter.

Following the expansion of its BSA Regulations to reference value that substitutes for currency, FinCEN issued guidance entitled Application of FinCEN’s Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (Guidance)\(^{142}\) that established key definitions and analytical principles that FinCEN uses to assess virtual currency activities under the BSA. The Guidance defines virtual currency as ‘a medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency’, distinguishing real currency from virtual currency on the basis that the latter does not have legal tender status in any jurisdiction.\(^{143}\) The BSA Regulations define real currency as coin and paper money of any country that is also designated as legal tender, circulates and is customarily used and accepted as a medium of exchange in the country of issuance.\(^{144}\)

The Guidance is limited to activities involving convertible virtual currencies, defined as a virtual currency that ‘has either an equivalent value in real currency, or acts as a substitute for real currency’.\(^{145}\) The Guidance does not include any reference to whether convertible virtual currencies must be convertible to real currency as opposed to some other form of value; nor does it address whether convertibility must be authorised by the virtual currency system itself, or whether a mere market for trade or exchange is sufficient.\(^{146}\)

The Guidance defines three participants in virtual currency arrangements: a user is a person that obtains a virtual currency to purchase goods or services; an exchanger is a person


\(^{141}\) 31 C.F.R. § 1010.100(ff)(5)(A) (2017).


\(^{143}\) Id.

\(^{144}\) 31 C.F.R. § 1010.100(m) (2017).

\(^{145}\) Fin. Crimes Enf’t Network, U.S. Dept of the Treasury, FIN-2013-G001, Application of FinCEN’s Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (Mar. 18, 2013). FinCEN defines prepaid access as ‘access to funds or the value of funds that have been paid in advance and can be retrieved or transferred at some point in the future through an electronic device or vehicle, such as a card, code, electronic serial number, mobile identification number, or personal identification number’. 31 C.F.R. § 1010.100(ww) (2017). The Guidance distinguishes convertible virtual currency from prepaid access on the basis that prepaid access is limited to value denominated in real currency.

\(^{146}\) While the Guidance clearly was intended to cover digital assets such as Bitcoin and Ether, the Department of the Treasury confirmed in a letter to Senator Ron Wyden, then the ranking member on the Senate Finance Committee, that it was intended to sweep more broadly, and that ‘under existing regulations and interpretations, a developer that sells convertible virtual currency, including in the form of ICO coins or tokens, in exchange for another type of value that substitutes for currency is a money transmitter and must comply with applicable AML obligations. Letter from Drew Maloney, Assistant Secretary for Legislative Affairs, Department of the Treasury to Senator Ron Wyden (Feb. 13, 2018), https://coincenter.org/files/2018-03/fincen-ico-letter-march-2018-coin-center.pdf. Moreover, ‘an exchange that sells ICO coins or tokens, or exchanges them for other virtual currency, fiat currency, or other value that substitutes for currency, would typically also be a money transmitter’.
engaged as a business in the exchange of a virtual currency for real currency, funds or other virtual currency; and an administrator is a person engaged as a business in issuing (putting into circulation) a virtual currency, and who has the authority to redeem (to withdraw from circulation) such virtual currency. 147 An exchanger or administrator that accepts and transmits a convertible virtual currency, or buys or sells a convertible virtual currency for any reason, is a money transmitter subject to any applicable limitations or exceptions. 148 However, merely acting as a user does not fit within the definition of money transmission, and therefore users are not MSBs subject to AML obligations.

In connection with convertible virtual currencies for which there is a centralised repository, the Guidance concludes that the administrator of a centralised repository of convertible virtual currencies is a money transmitter to the extent it allows transfers of value between persons or from one location to another, regardless of whether the transferred value is a real or convertible virtual currency; and an exchanger that uses its access to virtual currency services provided by the administrator to accept and transmit convertible virtual currencies on behalf of others is a money transmitter. The Guidance expressly states that the activity of accepting real currency from a user’s bank account to fund a convertible virtual currency account with an administrator constitutes money transmission. 149

The Guidance also discusses decentralised convertible virtual currencies such as Bitcoin. 150 A person who merely creates units of convertible virtual currency and uses those units to purchase real or virtual goods and services is a user and is not a money transmitter under the BSA Regulations. A person is an exchanger, and a money transmitter under the BSA Regulations, if that person accepts such convertible virtual currency from one person and transmits it to another person.

FinCEN has subsequently applied the Guidance in a variety of specific factual circumstances. For example, although the Guidance originally provided that a person is a money transmitter under the BSA Regulations if the person creates units of convertible virtual currency and sells them to a third party for real currency or its equivalent, a later FinCEN ruling clarified that virtual currency miners are merely users provided they use the virtual currency (including by selling it for currency) solely for their own purposes and not for the benefit of others. 151 FinCEN similarly found that investors in virtual currencies for

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147 A person or entity may act in more than one capacity in a particular arrangement or transaction.
148 The BSA Regulations identify six circumstances under which a person is not a money transmitter despite accepting and transmitting currency, funds or value that substitutes for currency. 31 C.F.R. §§ 1010.100(ff) (5)(ii)(A)–(F) (2017). These carveouts include: a person who merely provides the delivery, communication or network instruments used for transmission; a payment processor who facilitates payment for goods or services by agreement with the creditor or seller; and accepting or transmitting funds integral to the sale of goods or services by the person accepting or transmitting the funds. See Id. §§ (A)–(B), (F).
149 Note that this position contrasts with FinCEN’s more flexible position that the handling of funds for a merchant in connection with the sale of prepaid access is not money transmission. See Jamal El-Hindi, Assoc. Dir., Regulatory Policy and Programs Div., Fin. Crimes Enf’t Network, U.S. Dept’t of the Treasury, FIN 2009-R001, Whether Certain Operations of a Service Provider to Prepaid Stored Value Program Participants is a Money Services Business (Jan. 22, 2009).
150 These are convertible virtual currencies that have no central repository and no single administrator, and may be obtained by a person’s own computing or manufacturing effort as a decentralised convertible currency.
their own benefit, and not for the benefit or at the behest of others, are users of a virtual currency and therefore are not money transmitters.152 Thus, FinCEN does not look to the label applied to a particular process of obtaining a virtual currency, but rather to the function of ‘what the person uses the convertible virtual currency for, and for whose benefit’. Another pair of FinCEN administrative rulings further clarified the scope of exchanger money transmission activities under the BSA Regulations. In FIN-2014-R011, FinCEN holds that an entity is a money transmitter even if it only effects transmissions contingent upon the occurrence of predetermined conditions: for example, finding a match between a buyer and a seller.153 The fact that the buying and selling customers are never identified to one another does not affect this determination. In FIN-2014-R012, FinCEN holds the fact that an entity uses its own cache of Bitcoin to pay merchants irrelevant to whether it conducts money transmission as an exchanger. In other words, an exchanger will be subject to the same AML obligations under the BSA Regulations regardless of whether it acts as a broker attempting to match two (mostly) simultaneous and offsetting transactions involving the acceptance of one type of currency and the transmission of another, or as a dealer transacting from its own reserve in either convertible virtual currency or real currency.154

ii FinCEN enforcement activity

FinCEN has also actively pursued criminal and civil enforcement matters against virtual currency businesses. Virtual currency exchanger Ripple Labs Inc and its wholly owned subsidiary XRP II, LLC (Ripple) concurrently entered into a consent agreement with FinCEN and a settlement with the US Attorney’s Office in the Northern District of California for the failure to register as an MSB and violating numerous AML-related BSA Regulation requirements.155 Ripple agreed to pay US$700,000 and to take remedial actions, including to only conduct such exchanger activities through a registered MSB and to implement an effective, compliant AML programme. FinCEN also assessed a US$110,003,314 civil penalty against Canton Business Corporation (BTC-e) along with a 21-count criminal indictment under 18 USC Sections 1956, 1957 and 1960 for wilful violations of the BSA AML requirements, including failure to register as an MSB and maintain an effective AML compliance programme as well as criminal money laundering charges. This was the first such action against a foreign-located, internet-based virtual currency business.156 The Ripple and BTC-e examples are representative of numerous additional civil and criminal enforcement actions stemming from failures to comply with the BSA Regulations AML requirements.


154 Id.


AML compliance programme requirements

When a virtual currency business acts as an MSB, it must register with FinCEN and implement and maintain an effective written, risk-based AML programme that is reasonably designed to prevent the MSB from being used to facilitate money laundering and the financing of terrorist activities.\(^{157}\) At a minimum such a programme must:

a. establish policies, procedures and internal controls to verify customer identification, file reports, create and retain records, and respond to law enforcement requests;
b. integrate AML compliance procedures with automated data processing systems to the extent applicable;
c. maintain a list of agents;
d. designate an AML programme compliance officer;
e. provide appropriate AML education and training for relevant personnel; and
f. provide for independent periodic review and monitoring to ensure programme adequacy.

Finally, MSBs also have a variety of recordkeeping and reporting obligations in connection with their AML activities, including the obligation to file certain reports of suspicious activity.\(^{158}\)

Incorporation of the BSA AML requirements into state law

In addition to federal requirements under the BSA, all US jurisdictions (with the exception of Montana) also regulate money transmitters in some capacity through licensure and other requirements. As explained in Section III, each jurisdiction’s money transmitter laws differ in terms of which activities require a licence and what is required to obtain a licence. Accordingly, whether FinCEN requires a virtual currency business to be registered federally as an MSB does not necessarily mean a state will agree with the classification under its laws, which generally have consumer protection goals as well as AML goals.

Many jurisdictions expressly incorporate compliance with the BSA and BSA Regulations AML requirements into their own money transmission statutes and regulations.\(^{159}\) Moreover, some jurisdictions impose AML obligations in addition to the federal requirements.\(^{160}\) Consequently, virtual currency businesses may be subject to enforcement of federal AML compliance from state regulators, and may also have to comply with additional AML requirements depending on whether their activities necessitate a licence.

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\(^{158}\) Other regulated financial institutions also have similar, but somewhat more extensive, AML obligations, including, for example, a more specific obligation to develop a customer identification programme. See, e.g., 31 C.F.R. § 1020.220 (2017).


Office of Foreign Assets Control

The Office of Foreign Assets Control (OFAC) of the Department of the Treasury implements certain statutes, regulations and executive orders related to trade and economic sanctions that have been imposed on targeted foreign countries and regimes, terrorists, international narcotics traffickers, those engaged in activities related to the proliferation of weapons of mass destruction and other threats to the national security, foreign policy or economy of the United States. Those sanctions may prohibit certain types of transactions, or may require the blocking and freezing of assets associated with the targets of the sanctions regime, and are enforced with significant federal criminal sanctions. Any entity engaged in virtual currency activities in the United States must comply with the applicable OFAC regimes, and therefore must take care to assess whether its customers or counterparties are subject to relevant sanctions.

REGULATION OF MINERS

Mining of virtual currencies is generally lawful under US federal and state law, although there have to date been limited calls for US citizens to be banned from buying, selling or mining virtual currencies. Furthermore, concerns about energy consumption and environmental impacts have caused some local governments to contemplate or issue temporary bans on virtual currency mining. There is no US regulatory regime that is specific to virtual currency mining: that is, virtual currency miners are not at this time regulated in the US as virtual currency miners. FinCEN has indicated that to the extent a user mines Bitcoin and uses the Bitcoin for its own purposes (i.e., not for the benefit of a third party), that user is not an MSB, because the mining activity involves neither acceptance nor transmission of Bitcoin. To the extent that the virtual currency being mined is a security or a commodity, the mining of the virtual currency may implicate other aspects of US federal law, including broker-dealer, investment adviser, commodity pool operator (CPO) or commodity trading adviser (CTA) registration.

US federal taxation of virtual currency mining may also prove complex and unclear. For example, miners may be required to include the fair market value of a mined currency in their gross income, and to the extent that an individual miner engages in virtual currency mining as part of a trade or business, the individual taxpayer may be required to pay self-employment tax on his or her net earnings from mining.

The treatment of virtual currency mining at the state level is less clear. For example, Hawaii has issued guidance classifying virtual currencies as money, which subjects virtual currencies to the state’s laws on money transmission. The guidance is relatively short, however, and does not explain the reasoning for this treatment. It is also quite broad, and

appears to imply that mining activity requires a licence.\textsuperscript{165} Montana is the only state to not have enacted any form of money transmission statute. While Montana has no laws or regulations specific to blockchain or virtual currencies, it is the first state to take a financial stake in a Bitcoin mining operation.\textsuperscript{166}

\section*{VI REGULATION OF ISSUERS AND SPONSORS}

Issuers and sponsors of virtual currency-related investment funds (both public and private) and regulators are challenged with applying an existing body of law and regulation to new technology and a new class of assets. Public interest in virtual currencies and digital tokens has prompted the formation of hundreds of virtual currency-related private investment funds,\textsuperscript{167} and several public fund sponsors have filed registration statements with the SEC with a view to the public offering of shares of virtual currency-related investment funds.\textsuperscript{168}

\subsection*{i Legal and regulatory environment overview}

All offers and sales of securities in the United States, including by investment funds, must either be registered with the SEC under the Securities Act, or be exempt from such registration.\textsuperscript{169} The Securities Act imposes rigorous disclosure requirements in connection with the offer and sale of registered securities. Additionally, investment funds that invest substantially in securities\textsuperscript{170} and wish to issue their shares to the public in the United States generally are subject to registration and regulation as investment companies under the Investment Company Act of 1940 (Company Act). The Company Act substantively regulates virtually every aspect of the business and operations of a registered investment company. Investment advisers to investment funds that invest substantially in securities generally are subject to registration and regulation as investment advisers under the Investment Advisers Act of 1940 (Advisers Act) unless an exemption is available. The Advisers Act substantively regulates the business of investment advisers and their relationships with their clients, including investment funds. The Director of the Division of Investment Management of the SEC, which administers the Company Act and the Advisers Act, as well as the Securities Act as applied to investment companies registered under the Company Act, has expressed particular concerns regarding investment funds that invest in virtual currencies and related assets.\textsuperscript{171} The operators of investment funds that invest or may invest to any extent in derivatives, including

\begin{thebibliography}{9}
\item \textsuperscript{167} See, e.g., ProShares Trust II, Registration Statement (Form S-1) (Sept. 27, 2017); Etherindex Ether Tr., Registration Statement (Form S-1) (Sep. 5, 2017); VanEck SolidX Bitcoin Tr., Registration Statement (Form S-1) (June 5, 2018); and Rex Bitcoin Strategy Fund, Registration Statement (Form N-1A) (Nov. 3, 2017).
\item \textsuperscript{170} The status of virtual currencies and digital tokens as securities is addressed in Section II.
\end{thebibliography}
virtual currency-based or digital assets-based derivatives, are also subject to regulation by the CFTC under the CEA, including disclosure, reporting and recordkeeping requirements under the Part 4 Rules of the CFTC.\(^{172}\) Registered CPOs and CTAs also are required to be members of the National Futures Association (NFA), which imposes additional substantive regulation on their business activities.\(^{173}\) The SEA may subject an investment fund to public reporting requirements that include, among other things, quarterly and annual reports filed with the SEC that must comply with SEC rules regarding their content.\(^{174}\) Generally, these reporting obligations arise when an investment fund’s shares are listed on a national securities exchange, or when its equity securities are held by either 2,000 persons or 500 persons who are not accredited investors, and the issuer has total assets exceeding US$10 million.\(^{175}\)

Private fund managers typically avoid the registration and disclosure obligations of the Securities Act by offering securities in the United States pursuant to Section 4(a)(2) of the Securities Act, which exempts from registration transactions ‘by an issuer not involving any public offering’.\(^{176}\) Regulation D under the Securities Act (Regulation D) establishes a safe harbour that assures exemption under Section 4(a)(2). Private fund sponsors relying on Regulation D are obligated to file certain information regarding the fund and the sale of securities with the SEC on Form D. Historically, a material requirement of Regulation D was a prohibition on general solicitation or general advertising.\(^{177}\) However, pursuant to the Jumpstart our Business Startups Act, enacted in 2012, the SEC amended Rule 506 of Regulation D to provide that the prohibition against general solicitation will not apply, provided that all purchasers of the securities in the offering are accredited investors and that reasonable efforts, as described in the amended rule, are undertaken to verify their status as such.

Private investment funds generally avoid registration and regulation under the Company Act by relying on one of two available exclusions from the definition of the term investment company.\(^{178}\) Section 3(c)(1) of the Company Act provides an exclusion for investment funds that have fewer than 100 beneficial owners, and Section 3(c)(7) provides an exclusion for investment funds that are sold exclusively to qualified purchasers (without imposing any limit on the number of beneficial owners). Both Section 3(c)(1) and Section 3(c)(7) require that the investment fund not make or propose to make a public offering of its securities.

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\(^{172}\) The CFTC and the CEA do not regulate investment funds directly. Rather, they regulate CPOs and CTAs in respect of their operation of, and provision of commodity derivative trading advice to, investment funds that use commodity derivatives, which the CEA and the CFTC refer to as commodity pools.

\(^{173}\) The NFA has implemented rules specifically addressing transactions in and offerings of virtual currencies and related assets. In December 2017, the NFA issued reporting requirements that required CPOs to notify the NFA immediately once they have executed a transaction involving any virtual currency transaction or virtual currency derivative (including futures, options or swaps) on behalf of a commodity pool. On Aug. 9, 2018, the NFA adopted disclosure requirements for NFA members offering commodity pools that trade virtual currencies or virtual currency derivatives. The NFA’s disclosure guidelines highlighted concerns with virtual currencies such as price volatility, valuation and liquidity, and virtual currency exchanges, intermediaries and custodians, cybersecurity and the opaque spot market. See Notice I-18-13, NFA (Aug. 9, 2018), https://www.nfa.futures.org/news/newsNotice.asp?ArticleID=5036.


\(^{177}\) See Rule 502(c).

\(^{178}\) See Sections 3(a)(1)(A) and 3(a)(1)(C) of the Company Act for the relevant definitions of the term investment company.
(which is satisfied by complying with Regulation D). A number of investment funds that propose to invest solely in virtual currencies or their derivatives, and have sought to sell their securities to the public and list them for trading on a national securities exchange, have relied on Section 3(b)(1) of the Company Act for exclusion from registration and regulation thereunder. Section 3(b)(1) excludes any issuer primarily engaged in a business or businesses other than that of investing, reinvesting, owning, holding or trading in securities. Reliance on this exclusion requires that the digital currencies or tokens in which an investment fund will invest are not securities (in the case of an investment fund that will hold virtual currencies, such as Bitcoin or Ether) or that the investment fund is a commodity pool (in the case of an investment fund that may invest in Bitcoin derivatives).179

Investment advisers to private funds have sought to avoid registration and regulation under the Advisers Act by not advising registered investment companies, and either keeping their assets under management below the threshold that would require registration under Section 203A of the Advisers Act (which may subject them to regulation at the level) or operating as exempt reporting advisers under the private fund adviser exemption. However, once a private fund adviser’s assets under management exceed US$150 million, or if the adviser acts as investment adviser to a registered investment company or a separately managed account, registration and regulation under the Advisers Act are unavoidable. Compliance with the Advisers Act has proved challenging in the digital asset context. The custody rule has been particularly challenging due to the general lack of qualified custodians to hold digital assets for the benefit of an investment fund and the lack of guidance from the SEC on how to comply with the custody rule with respect to digital assets.180

Exemptions from registration and regulation as a CPO or CTA may be available. A CPO may be exempt from registration under the *de minimis* rule if commodity derivatives are not a material component of the investment fund’s portfolio, and if the fund’s securities are sold in transactions exempt from registration under the Securities Act and are offered and sold without marketing to the public in the United States (which is satisfied by complying with Regulation D).181 If the *de minimis* rule is not available, registration with the CFTC as a CPO and membership in NFA is required. However, once a CPO is registered, an exemption from most of the otherwise applicable CFTC disclosure, reporting and recordkeeping rules is available if the investment fund is sold exclusively to qualified eligible persons in an offering exempt from registration under the Securities Act (which is satisfied by complying with Regulation D).182 Because qualified purchasers are, by definition, qualified eligible persons, an investment fund that relies on Section 3(c)(7) for exclusion from the Company Act generally will be eligible for this relief. Exemption from registration as a CTA (and membership in NFA) is available for CTAs that have 15 or fewer advisory clients over each 12-month period and who do not hold themselves out generally to the public as CTAs.183 Other exemptions from CTA registration may be available as well.

179 In a line of no-action letters, the SEC has provided guidance as to how to distinguish a commodity pool from an investment company required to be registered and regulated under the Company Act. See Peavey Commodity Funds I, II and III, 1983 SEC No-Act. LEXIS 2576 (June 2, 1983); EF Hutton and Company Inc (June 22, 1983); Ft Tryon Futures Fund Limited Partnership, 1990 SEC No-Act. LEXIS 1192 (Aug. 16, 1990); and Managed Futures Association, 1996 SEC No-Act. LEXIS 623 (July 15, 1996).

180 See Advisers Act Rule 206(4)-2.

181 See CFTC Rule 4.13(a)(3).

182 See CFTC Rule 4.7.

183 See Section 4m(1) of the CEA and CFTC Rule 4.14(a)(10) thereunder.
Attempts at public offerings

Several fund sponsors have filed registration statements with the SEC for virtual currency-related investment funds with a view to offering them to the public and, in some instances, listing their shares on a national securities exchange. These investment funds include investment companies registered under the Company Act, commodity pools exempt from the Company Act pursuant to Section 3(b)(1) but fully compliant with the Part 4 Rules of the CFTC, and investment funds that are exempt from the Company Act pursuant to Section 3(b)(1) (because they do not invest in securities) and not regulated under the CEA or the Part 4 rules of the CFTC (because they do not invest in commodity derivatives). To date, the SEC has not declared effective any registration statement for any such issuer, and SEC staff have compelled the withdrawal of a number of registration statements for registered investment companies that would invest in virtual currencies, digital tokens or derivatives, referencing such assets under threat of enforcement action.

The SEC has disapproved applications by securities exchanges to list the securities of funds that would invest in digital assets. The SEC must authorise the listing of every security traded on a national securities exchange in the United States. Although generic listing rules are available for most types of securities commonly listed on national securities exchanges, if the security or issuer exhibits new or novel features, the exchange must submit an application to the SEC's Division of Trading and Markets to promulgate a new listing rule designed specifically for that issuer and security. In March 2017, the SEC disapproved two applications to list securities of an exchange-traded investment product that would invest solely in Bitcoin, finding that the investment funds in question were inconsistent with Section 6(b)(5) of the SEA, which requires that rules of national securities exchanges be designed to prevent fraudulent and manipulative acts and practices, and protect investors and the public interest. One of these orders was resubmitted, and was disapproved once more in July 2018 on the same grounds.

Other applications for exchange-traded investment products that would invest in digital assets have been submitted, and a number of such applications have been rejected by the SEC. In March 2018, the SEC exercised its discretion to extend the period for issuing an order approving or disapproving an application to list and trade the shares of two proposed exchange-traded commodity pools that would invest in Bitcoin futures contracts listed on the Chicago Mercantile Exchange (CME) and the Chicago Board Options Exchange (CBOE).
to allow sufficient time to consider the proposal.\textsuperscript{190} In July 2018, the SEC similarly extended the review period for a proposal to list and trade the shares of five similar exchange-traded products that proposed to invest in Bitcoin futures contacts.\textsuperscript{191} On 22 August 2018, the Division of Trading and Markets of the SEC issued three separate orders rejecting nine Bitcoin exchange-traded funds (ETF) proposals and disapproving related rule changes.\textsuperscript{192} The following day, the SEC issued letters indicating that it will review the orders, and stayed the orders until the SEC orders otherwise.\textsuperscript{193}

\textbf{iii The Dalia Blass Letter}

On 18 January 2018, the Division of Investment Management of the SEC issued a letter to the Investment Company Institute and the Securities Industry and Financial Markets Association (Blass Letter). This letter outlined the SEC’s concerns regarding virtual currency-related funds in relation to valuation, liquidity, custody, arbitrage (in respect of exchange traded funds), and potential manipulation and other risks associated with virtual currency-related funds.\textsuperscript{194} While the Blass Letter was issued in response to an attempt to register investment products under the Company Act, the SEC noted that these concerns apply also to private virtual currency-related funds.\textsuperscript{195} The SEC also noted that ‘until the questions raised [in the Blass Letter] can be addressed satisfactorily, [they] do not believe that it is appropriate for fund sponsors to initiate registration of funds that intend to invest substantially in virtual currency and related products’.\textsuperscript{196} The Blass Letter noted that ‘cryptocurrency markets are developing swiftly. Additional questions may arise from these developments’.\textsuperscript{197} At the same time, the SEC has clearly signalled its willingness to work with the industry by indicating that, ‘over the years, dialogue between fund sponsors and the [SEC] has facilitated the development of many new types of investment products’.\textsuperscript{198}

\begin{itemize}
\item \textsuperscript{190} NYSE Arca, Exchange Act Release No. 34-82838 (Mar. 28, 2018).
\item \textsuperscript{194} Blass, footnote 171.
\item \textsuperscript{195} Id.
\item \textsuperscript{196} Id.
\item \textsuperscript{197} Id.
\item \textsuperscript{198} Id.
\end{itemize}
VII CRIMINAL AND CIVIL FRAUD AND ENFORCEMENT

i Civil enforcement

Both the CFTC and SEC have declared expressly their intention to police conduct in the cryptocurrency markets. On 19 January 2018, the Directors of Enforcement for the CFTC and the SEC released a highly unusual joint statement, stating:

When market participants engage in fraud under the guise of offering digital instruments – whether characterised as virtual currencies, coins, tokens, or the like – the SEC and the CFTC will look beyond form, examine the substance of the activity and prosecute violations of the federal securities and commodities laws. The Divisions of Enforcement for the SEC and CFTC will continue to address violations and bring actions to stop and prevent fraud in the offer and sale of digital instruments.¹⁹⁹

That same day, the CFTC Chair, J Christopher Giancarlo, delivered a speech on virtual currencies in which he stated that ‘[t]he CFTC believes that the responsible regulatory response to virtual currencies involves asserting CFTC legal authority over virtual currency derivatives in support of anti-fraud and manipulation enforcement, including in underlying spot markets’.²⁰⁰ In another truly extraordinary event, the Chairs of the SEC and CFTC, Jay Clayton and Giancarlo, penned a joint op-ed for the Wall Street Journal addressing the oversight of virtual currencies. They stated their agencies ‘along with other federal and state regulators and criminal authorities, will continue to work together [. . .] to deter and prosecute fraud and abuse’.²⁰¹

CFTC

The principal mechanism that the CFTC uses to bring enforcement actions involving cryptocurrencies is its broad statutory and regulation provisions prohibiting fraud and manipulation in connection with ‘a contract of sale of any commodity in interstate commerce’.²⁰² The CEA, in turn, defines a commodity to include, with very limited exceptions, ‘all [. . .] goods and articles [. . .] and all services, rights and interests [. . .] in which contracts for future delivery [i.e., futures] are presently or in the future dealt in’.²⁰³ Enforcement actions can also be brought for violations of registration and other regulatory requirements if the transactions take the form of swaps, futures or even commodity cryptocurrency transactions with retail customers (as discussed further below).

In September 2015, the CFTC brought two actions in quick succession. It first entered into a settlement agreement with a trading platform named Coinflip, Inc, which was hosting trading in Bitcoin options. The CFTC declared Bitcoin and other virtual currencies to be commodities within the meaning of the CEA, and thus the platform, which was unregistered, ²⁰⁴

to be illegally hosting trading in options on commodities.\textsuperscript{204} A week later, the CFTC brought another case against a trading platform that was registered as a SEF for failing to prevent wash trading. The CFTC asserted that the platform had arranged a transaction to ‘test the pipes’ by doing a round-trip trade, but then publicised the transactions without noting they were pre-arranged to test the systems, ‘creating the impression of actual trading interest in the Bitcoin swap’.\textsuperscript{205}

In June 2016, the CFTC entered a settlement order with another trading platform, Bitfinex, involving spot transactions in the virtual currency itself.\textsuperscript{206} Bitfinex allowed trading on a 30 per cent margin, and thus potentially fell under the retail commodity transaction provisions of the CEA.\textsuperscript{207} The CFTC concluded that there was not actual delivery of the virtual currency, and thus Bitfinex was operating illegally by not complying with the requirement to register as a DCM. In concluding that actual delivery had not taken place, the CFTC was principally concerned that ‘Bitfinex retained control over the private keys’ to the wallets in which the customers’ coins were held.\textsuperscript{208}

In September 2017, the CFTC charged an individual and his company with fraud, misappropriation and issuing false account statements in connection with solicited investments in Bitcoin. The defendants were accused of operating a Ponzi scheme, whereby investors were encouraged to place their funds in a pool that would be managed by using ‘a high-frequency, algorithmic trading strategy’.\textsuperscript{209}

On 18 January 2018, the CFTC filed two lawsuits in federal court alleging fraud in connection with the trading of virtual currencies. One involved allegations that the perpetrators were promoting a pooled investment vehicle in which the investors would contribute Bitcoin, which would be converted into fiat currency and then used to trade various commodity interests.\textsuperscript{210} The other case involved an allegation of trading advice relating to trading of virtual currencies themselves.\textsuperscript{211} Both involved simple allegations that the defendants misappropriated the funds.

On 24 January 2018, the CFTC announced that it had filed an action under seal on 16 January 2018, alleging misappropriation of over US$6 million in funds from customers. In this instance, the allegations focused on misrepresentations about how the form of virtual currency being promoted, My Big Coin (MBC), could be used with merchants and others

\textsuperscript{204} In the Matter of: Coinflip, Inc, d/b/a Derivabit, et al, CFTC No. 15-29 (Sept. 17, 2015).
\textsuperscript{205} In re TerraExchange LLC, CFTC No. 15-33 (Sept. 24, 2015).
\textsuperscript{206} In the Matter of: BFXNA Inc d/b/a Bitfinex, CFTC No. 16-19 (June 2, 2016).
\textsuperscript{207} The CEA’s various regulatory requirements apply to all transactions with retail customers in any commodity involving margin, leverage or financing provided by the seller or someone acting in concert with the seller without regard to whether the contract could be characterised as a derivative or a futures, as long as it is not a true spot transaction, meaning there is actual delivery of the commodity to the customer within no more than 28 days, and certain other, limited, exceptions. See 7 U.S.C. § 2(c)(2)(D) (2012).
\textsuperscript{208} In the Matter of BFXNA, Inc, CFTC No. 16-19. As the CFTC put it: ‘In the context of cryptocurrencies, a ‘private key’ is a secret number (usually a 256-bit number) associated with a deposit wallet that allows Bitcoin in that wallet to be spent’. Id. at *3 n.4. This focus on the private key as the basis for analysing delivery raised concerns and has led the CFTC to propose an interpretation to address the issue of actual delivery in the context of virtual currencies. See Geoffrey F Aronow, ‘Projections Of The Imagination: When is a Token Actually Delivered?’, 38 Futures & Derivatives L. Rep. 11 (Jan. 2011).
to process transactions with MBC.\textsuperscript{212} On 6 March 2018, the CFTC won affirmation from a federal district court of its antifraud authority over virtual currencies. In the context of ruling on the CFTC’s motion for a preliminary injunction (which the court granted), the court held that CEA Section 6(c)(1), as amended by the Dodd-Frank Act and as implemented by CFTC Rule 180.1, does grant the CFTC jurisdiction to bring cases for fraud in cash markets in general and virtual currencies in particular.\textsuperscript{213} The alleged fraud involved purported consulting services and trading advice relating to Bitcoin and another virtual currency, Litecoin.\textsuperscript{214} On 23 August 2018, following a non-jury trial, the case was decided in favour of the CFTC, and the defendants were ordered to pay US$1.1 million in civil monetary penalties and restitution.\textsuperscript{215}

\textbf{SEC}

The SEC’s enforcement jurisdiction is somewhat more limited than the CFTC’s because the SEC can only bring actions involving instruments falling within the definition of security. However, once properly regarded as a transaction in a security, the SEC’s enforcement powers sweep very broadly, with possible statutory and rule violations involving registration, business conduct, trading and many other types of statutory and regulatory requirements, as well as fraud and manipulation.\textsuperscript{216} In 2017, the SEC’s Division of Enforcement formed a Cyber Unit, which it stated would focus on the following:

\begin{enumerate}
\item market manipulation schemes involving false information spread through electronic and social media;
\item hacking to obtain material non-public information and trading on that information;
\item violations involving distributed ledger technology and ICOs;
\item misconduct perpetrated using the dark web;
\item intrusions into retail brokerage accounts; and
\item cyber-related threats to trading platforms and other critical market infrastructure.
\end{enumerate}

In July 2017, as described in more detail in Section II, the SEC issued the DAO Report, which addressed the activities of The DAO. A Report of Investigation is an infrequently used device that allows the Division of Enforcement to report on violations of the statute and regulations without actually bringing an enforcement action.\textsuperscript{218} In the DAO Report, the SEC found that the tokens offered and sold by The DAO were securities, and thus subject to the requirements of the federal securities laws. The DAO Report gave a lengthy description of the operation of the DAO token, and then applied the \textit{Howey} test \textsuperscript{219} to conclude that the token offering operated as an investment contract and thus was a security under US law. The four

\textsuperscript{212} Id. ¶ 28.

\textsuperscript{213} \textit{CFTC v. McDonnell}, No. 1:18-cv-00361.

\textsuperscript{214} Id. at 3.


\textsuperscript{217} Id. at 4.


\textsuperscript{219} \textit{SEC v. WJ Howey Co}, 328 U.S. 293, 301 (1946).
elements of that test are (1) an investment of money, (2) in a common enterprise, (3) with a reasonable expectation of profits, (4) derived from the managerial efforts of others. The DAO Report found that each of these elements were met by the DAO token offering.\(^{220}\)

In the wake of the DAO Report, the SEC has brought various actions for illegal ICOs, sometimes, but not always, including charges of fraud. For example, in September 2017, the SEC brought charges against an individual and his two companies for fraud in two ICOs purported to be backed by investments in real estate and diamonds. In the former, the alleged misstatements included that the company had a ‘team of lawyers, professionals, brokers, and accountants’ that would invest the ICO proceeds into real estate when in fact none had been hired or even consulted. The individual and his company allegedly misrepresented they had raised between US$2 million and US$4 million from investors when the actual amount was approximately US$300,000. In the case of the second company, the allegations were that they claimed to have purchased diamonds and engaged in other business operations when they had actually done nothing in that regard.\(^{221}\) The SEC obtained an emergency asset freeze against the defendants.

As another example, in December 2017, the SEC charged a Canadian and his company with fraudulently marketing tokens to US investors (and thus also violating the registration provisions of the US securities law), and obtained an emergency asset freeze.\(^{222}\) In a final example, in May 2018, the SEC filed a complaint and obtained an emergency asset freeze, and then a consented-to preliminary injunction and appointment of a receiver, in connection with an alleged ongoing fraudulent ICO that had raised US$21 million by a self-described ‘blockchain evangelist’ who had misrepresented his business relationship with the Fed and many well-known companies.\(^{223}\)

As previously noted, the SEC has demonstrated its willingness to move against unregistered ICOs that it views as securities offerings even in the absence of fraud. In December 2017, the SEC filed a settled administrative proceeding against Munchee, Inc for making an illegal, unregistered securities offering. The company, which had created an iPhone application for people to review restaurant meals, was conducting an ICO ‘to raise about $15 million in capital so that it could improve its existing app and recruit users to eventually buy advertisements, write reviews, sell food and conduct other transactions using’ the tokens. In connection with the offering, the SEC found that Munchee ‘described the way in which [the] tokens would increase in value as a result of Munchee’s efforts and stated that [the] tokens would be traded on secondary markets’. After being contacted by the SEC, Munchee agreed voluntarily to halt the offering, to return to investors the proceeds raised to that point and to the entry of the order finding a violation of the securities registration provisions of the Securities Act.\(^{224}\)

In February 2018, the SEC brought an action against a former platform and its operator for operating an unregistered securities exchange and also for defrauding users

\(^{220}\) The DAO Report, footnote 10.


\(^{224}\) See footnote 37.
of the exchange. The exchange offered what the SEC alleged were securities in ‘virtual currency-related enterprises in exchange for [B]itcoins’. The operator of the exchange was also charged with fraud in connection with an illegally unregistered token offering.225

The SEC has also acted when illegal sales of securities occur linked to sudden increases in what were previously shell companies in the wake of announcements that they had entered into cryptocurrency-related businesses.226 Finally, while not constituting enforcement actions, the SEC has halted trading in the shares of a number of companies involved or purportedly involved in cryptocurrency-related businesses because of unusual and unexplained market activity, concerns about the accuracy and adequacy of publicly released information about the company, or both.227

ii Criminal enforcement

The DOJ and other law enforcement authorities are rapidly recognising that cryptocurrencies present a variety of opportunities for engaging in fraud, money laundering and other criminal activity. As a result, 2017 and 2018 have seen a noticeable uptick from prior years in criminal investigations and charges involving cryptocurrencies across a broad spectrum of crimes. Indeed, at a digital asset industry conference in June 2018, the Federal Bureau of Investigation (FBI) revealed that it had 130 cases under investigation that had been ‘threat tagged’ as involving cryptocurrencies, covering crimes including ‘human trafficking, illicit drug sales, kidnapping and ransomware attacks’.228

Money laundering

The use of cryptocurrencies in money laundering – a crime that can involve either laundering the proceeds of criminal activity or transmitting funds for the purpose of carrying on criminal activity229 – is one of the most significant focuses of attention by the DOJ. Deputy Attorney General Rod Rosenstein observed at a Financial Services Roundtable conference in February 2018 that ‘[a] lot of [. . .] schemes involve [B]itcoin and other cryptocurrencies which do not flow through the traditional financial system’, and that the DOJ is ‘working [. . .] with our cybercrime task force [. . .] on a comprehensive strategy to deal with that’.230

Not surprisingly, a number of recent high-profile federal indictments have involved money laundering charges or allegations relating to the defendants’ use of cryptocurrencies to carry out or hide the proceeds of their offences. For example, in July 2017, US Attorney

Brian Stretch of the Northern District of California announced the indictment of Russian national Alexander Vinnik and BTC-e – alleged to be one of the world’s largest and most widely used digital currency exchanges – for deliberately allowing BTC-e to be used as a platform to facilitate transactions for cybercriminals worldwide and [to] receive[] the criminal proceeds of numerous computer intrusions and hacking incidents, ransomware scams, identity theft schemes, corrupt public officials, and narcotics distribution rings. In another big criminal takedown in March 2018, the DOJ charged seven individuals with facilitating prostitution and money laundering through their operation of the notorious prostitution advertising website, backpage.com, accusing them, among other things, of furthering their ‘money laundering efforts [by] [. . .] us[ing] [. . .] such as CoinBase, GoCoin, Paxful, Kraken, and Crypto Capital to receive payments from customers and/or route money through the accounts of related companies’. Perhaps the most high-profile money laundering charges involving cryptocurrencies were those brought in July 2018 against 12 Russian intelligence officers charged with hacking the 2016 presidential election, who were alleged to have transferred cryptocurrencies through a web of transactions in order to purchase computer servers, register domains, and make other payments in furtherance of their hacking activities, while trying to conceal their identities and their links to the Russian government.

**Investment fraud**

A cryptocurrency is not just a medium of exchange, but also an investment. For that reason, in at least two widely reported instances, the DOJ has recognised the opportunities that now exist for the perpetration of fraud against cryptocurrency investors.

In May 2018, the US Attorney for the Southern District of New York (SDNY) brought what is believed to be the first criminal fraud charges against the issuers of an ICO. Specifically, the SDNY charged three co-founders of a startup company, Centra Tech, with ‘conspiring to commit, and the commission of, securities and wire fraud in connection with a scheme to induce victims to invest millions of dollars’ worth of digital funds for the purchase of unregistered securities, in the form of digital currency tokens issued by Centra Tech, through material misrepresentations and omissions’. In particular, the indictment alleged that the defendants’ offering materials for the ICO misrepresented details about their supposed executive team, their supposed partnerships with established financial institutions and their supposed state licensing. In connection with the charges, the FBI seized 91,000 Ether units that represented US$60 million in investor funds.

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Also in May 2018, the DOJ was reported to have opened a parallel investigation with the CFTC into manipulation of the market for Bitcoin and other digital currencies. The DOJ’s market-manipulation probe was reported to focus on a variety of illegal practices that might influence prices, including spoofing. Although reported as a seemingly broad-based investigation when it was opened, this federal criminal investigation likely soon found at least one area of particular focus in June 2018 when researchers at the University of Texas released a paper in which they purported to have identified a specific instance of fraudulent manipulation of the market for Bitcoin in 2017 involving activity at a specific cryptocurrency exchange.

Overall, the opportunities to defraud investors in cryptocurrencies are many and varied. No doubt for this reason, the DOJ’s July 2018 announcement that it had created a new task force on market integrity and consumer fraud noted prominently that one of the task force’s main areas of focus would be digital currency fraud.

**Miscellaneous crimes**

Finally, beyond money laundering and investment fraud, cryptocurrencies can be either a vehicle for, or an object of, criminal activity in all of the same ways that traditional currency and investments can be. Thus, for example, in March 2018, the Internal Revenue Service issued a notice to taxpayers reminding them to ‘report the income tax consequences of virtual currency transactions’ and warning that, in ‘extreme situations, taxpayers could be subject to criminal prosecution for failing to properly report the income tax consequences of virtual currency transactions’.

In a somewhat unexpected instance of cryptocurrency crime mirroring traditional currency crime, the Manhattan District Attorney’s Office reported in December 2017 that it had indicted an individual named Louis Meza for perpetrating a gunpoint armed robbery of US$1.8 million worth of Ether tokens.

**VIII TAX**

Guidance on the US federal income tax treatment of virtual currencies such as Bitcoin is limited to a single notice (Notice) issued by the Internal Revenue Service (IRS), which

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treats such virtual currency as property. From an investor’s perspective, merely calling a virtual currency property leaves many questions unanswered. How does a US taxpayer treat gains on buying and selling a virtual currency? Would a US tax-exempt entity such as a private foundation be able to make an unlevered investment in a virtual currency without incurring unrelated business taxable income (UBTI)? Would a non-US investor be able to invest in a virtual currency through a US-based investment manager (whose operations, personnel and equipment are located in the United States) without being treated as engaged in a US trade or business or having effectively connected income (ECI) in respect of such virtual currency investments? Would one need to distinguish, from a US federal income tax perspective, between direct investments in virtual currencies and derivatives on assets like the Bitcoin futures on the CBOE or CME?

If a US taxable person recognises a gain or loss on the sale or exchange of a virtual currency, the character of such gain or loss generally depends on whether such currency is a capital asset in that person’s hands.242 Assuming the US taxable person holds the virtual currency as a capital asset for more than one year, gains are generally treated as long-term capital gain.243 For US tax-exempt persons, gains or losses from the sale or other disposition of property are generally not taxed as UBTI.244 This UBTI exclusion does not apply to inventory or property otherwise held primarily for sale to customers in the ordinary course of business.245

Does investing in virtual currencies constitute investing in securities or commodities for the purposes of the Section 864 safe harbour (safe harbour) under the Internal Revenue Code of 1986 (Code)? As described in greater detail in Section II, the CFTC considers virtual currencies as commodities subject to its regulation.246 Similarly, the SEC has asserted jurisdiction when a virtual token offering has hallmarks of a security offering under the broadly interpreted Howey test for investment contracts.247 Can these authorities be applied, by analogy, to conclude that a non-US investor can claim the protection of the safe harbour? The activities of a US-based investment manager are generally attributed to a non-US investor who invests through such manager.248 If such manager only engages in safe harbour activities (i.e., investing or trading in securities and commodities), such activities do not create a US trade or business for the non-US investor, and gains from such safe harbour activities generally do not constitute ECI.249 If the non-US investor is not protected by the safe harbour, the activities of the US-based investment manager could create a US trade or business generating ECI for such non-US investor, subjecting such investor to US federal net income tax (up to 37 per cent for individuals, or 21 per cent plus 30 per cent branch profits tax for corporations).

While it may be reasonable for a non-US investor to claim the protection of the safe harbour by applying CFTC and SEC authorities by analogy, there is no assurance that the

243 26 U.S.C. § 1222(3) (2012). A taxpayer’s holding period could be suspended under certain rules, including the straddle rules under Section 1092 of the Code, if the taxpayer enters into hedging positions.
244 Id. § 512(b)(5)(B).
245 Treas. Reg. § 1.512(b)–1(d).
246 See, e.g., CFTC Primer, footnote 63.
247 See, e.g., The DAO Report, footnote 10.
248 This could be altered by income tax treaties.
249 This treatment could be modified by rules under 26 U.S.C. §§ 897, 1445, 1446 and the Treasury Regulations thereunder.
IRS or the courts would agree with such claim. As a result, the tax risk of being incorrect is material. Thus, any offering document for an investment fund that invests in a virtual currency targeted at non-US investors is expected to include robust tax disclosure specifically identifying the risks associated with an investment in a virtual currency. In addition, due to the material tax risks and depending on the precise investment strategy, a fund sponsor will have to make an important gating decision on how narrowly to tailor an offering’s target market.

Many fund sponsors cast their nets wide for investors while utilising the most tax-neutral vehicle to raise money from such investors (i.e., no or de minimis entity level tax to the extent permitted under the law). Partnerships (or local law entities that can be treated as partnerships for US federal income tax purposes) are typical vehicles used for pooled investments in commodities and derivatives thereon. Partnerships are generally not taxed at the entity level, so there is very little expected US federal income entity tax cost. However, when interests of a partnership are publicly traded for US federal income tax purposes, the partnership (PTP) is treated as a corporation subject to a corporate level income tax of 21 per cent unless certain exceptions apply. One exception is for small offerings (e.g., an offering for a private investment fund exempt from registration as an investment company under Section 3(c)(1) of the Company Act where the number of investors cannot exceed 100 and certain other requirements are met). Another is where the partnership meets the qualifying income test, such that at least 90 per cent of the partnership’s annual gross income consists of certain passive-type income. Notably, gains from direct virtual currency investments are not explicitly included in the definition of qualifying income.

For non-US investor virtual currency funds, the launch of the CBOE and CME Bitcoin futures in December 2017 is a positive development. The safe harbour for trading or investing in commodities covers a non-US investor only if the commodities are of a kind customarily dealt in on an organised commodity exchange and if the transaction is of a kind customarily consummated at such place. Thus, a non-US investor investing solely in these particular futures (directly or through a partnership for US federal income tax purposes) has tenable support for claiming safe harbour benefits.

Similarly, the CBOE and CME Bitcoin futures support partnership tax treatment in the case of a PTP where the PTP invests solely in such futures, making possible a retail offering of such PTP interests. In the case of PTPs whose principal activity is the buying and selling of commodities (that are not inventory) or options, futures or forwards with respect to commodities, income and gains from futures on commodities constitute qualifying income.

In addition, because the CBOE and CME Bitcoin futures meet the definition of a Section 1256 Contract under the Code, a US taxable investor generally recognises annual

250 Treas. Reg. § 1.7704-1(b).
252 Id. § 7704(d).
255 Id. § 7704(d)(1)(G).
256 A Section 1256 contract includes regulated futures contracts. A regulated futures contract is a contract with respect to which the amount to be deposited and the amount that may be withdrawn depends on a system.
mark-to-market gain (60 per cent long-term capital gain and 40 per cent short-term capital gain) in respect of such investments (directly or through a partnership for US federal income tax purposes). 257

Finally, while there are many uncertain areas relating to the taxation of virtual currencies and activities related thereto, it is worth noting that mining virtual currencies, when conducted in the United States, could be treated as the business of performing services such that any virtual currency from such mining is treated as ordinary income from services, and any taxable income (i.e., receipt of virtual currencies) from mining constitutes UBTI and ECI. 258 Once a virtual currency is earned and taxed, such currency is merely property and, depending on what the taxpayer does with such currency and where such activities are undertaken, will have varying and potentially complex results for any particular taxpayer.

IX OTHER ISSUES

i State uniform regulation of virtual currencies

In order to provide a uniform framework among the various states for the regulation of virtual currency business activities, the Uniform Law Commission developed the Uniform Act. 259 As described in greater detail in Section III, the Uniform Act includes licensure, prudential regulations and customer protection requirements relating to certain businesses engaged in activities involving exchanging, transferring or storing virtual currencies. The Uniform Act is intended to provide a clear regulatory regime tailored to address issues specifically relating to virtual currency businesses, rather than the existing patchwork of money service and money transmitter licensure laws, and other, sometimes ambiguous or duplicative, existing regulatory regimes that could be applied to such activities among the various states. The motivation for developing the Uniform Act centred on a desire to provide legal certainty, which in turn would foster continued innovation and access to capital for businesses in the virtual currency space. The drafting process involved significant input from various industry, state and federal government participants, as well as practising lawyers and academics. The Uniform Act is now available for introduction to and adoption by state legislatures.

ii Uniform Commercial Code

The Uniform Commercial Code (UCC) provides the often-unnoticed plumbing for a broad range of commercial transactions and property rights. Where the UCC applies, parties benefit from clarity of law and special protections. Where the UCC does not apply, parties may unexpectedly find themselves without the benefit of legal rules they took for granted. Three key questions arise under the UCC with respect to virtual currencies: are virtual currencies subject to the regimes of UCC Article 3 (negotiable instruments), Article 4 (bank deposits and collections) or Article 4A (funds transfers); can virtual currencies serve as collateral under
UCC Article 9; and can virtual currencies be credited as a security or financial asset to a securities account under UCC Article 8? Although we are not aware of any cases on point, we consider each question in turn below.

**Applicability of UCC Articles 3, 4 and 4A**

Virtual currencies as commonly structured today would not be subject to UCC Articles 3, 4 or 4A. Virtual currencies do not constitute a negotiable instrument, because they are not a paper asset.\(^{260}\) In addition, most virtual currencies would fail to meet the requirements for a negotiable instrument, because there is no promise or order to pay a fixed amount of money, as this presupposes a counterparty who is either the promisor or who would be subject to the order. When a party holds a virtual currency, there is no counterparty against which it has a claim (at least until it decides to transfer the virtual currency in return for value). Most virtual currencies also are not tied to a fixed amount of money (although there are purported exceptions in which the value of a virtual currency is supposedly fixed to an actual value of money in a fashion seemingly analogous to an exchange rate peg). Virtual currencies do not fit within Articles 4 or 4A owing to the absence of a bank from the scene. This leaves a significant gap in the commercial law plumbing applicable to virtual currencies. Virtual currency transactions operate without the typical UCC legal protections that strip adverse claims, provide for clear ownership or enforceability, and establish transfer warranties. In 2017 the Uniform Law Commission considered – but did not fill – that gap when it created the Uniform Act.\(^{261}\)

**Use of virtual currencies as collateral**

Like most types of personal property, virtual currencies can serve as collateral under UCC Article 9.\(^{262}\) Most virtual currencies will constitute a general or payment intangible under the UCC, and may also constitute proceeds of another form of collateral.\(^{263}\) As a general or payment intangible, a security interest in a virtual currency can be perfected solely by the filing of a financing statement.\(^{264}\) Unfortunately for an interested secured party, however, the classification of a virtual currency as a general intangible or payment intangible means that the priority of security interests in such virtual currency is determined in order of the first to file or perfect; thus, any prior liens on the virtual currency – which may be difficult to identify

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261 At the time of writing, no state has adopted the Act.
263 Current virtual currencies are likely not money under the UCC, although that could change. UCC Section 9-102(b)(24) defines money as a ‘medium of exchange currently authorized or adopted by a domestic or foreign government. The term includes a monetary unit of account established by an intergovernmental organisation or by agreement between two or more countries.' To our knowledge, no governments or intergovernmental organisations have yet authorised or adopted a virtual currency as a medium of exchange or unit of account, so such definition is inapplicable to virtual currencies in their current vestige, though such classification could be called into question if a government or intergovernmental agency were to so authorise or adopt a virtual currency. It should be noted, however, some have argued that even if a virtual currency was adopted as a medium of exchange or unit of account, it still would not fit within the UCC definition of money. See, e.g., Schroeder, footnote 262, at 20.
264 U.C.C. § 9-310, 9-312(b) (Unif. Law Comm’n 2018).
or trace – could take priority over such secured party’s perfected security interest. The parts of the UCC plumbing that strip prior liens when transfers are made involving money or bank accounts would not apply to virtual currencies as structured today.

Use of securities accounts

Because of the flexibility contained in UCC Article 8, virtual currencies can be credited to a securities account (as a financial asset) at a willing securities intermediary. In fact, the Uniform Law Commission has completed a companion act to the Uniform Act that would require that virtual currencies regulated by the Act be held in securities accounts at a securities intermediary. Whether this model will be readily adopted by those who hold virtual currencies on behalf of others remains to be seen, as the benefits of certainty resulting from securities account treatment come with an accompanying increase in responsibility and liability for the entity acting as securities intermediary. Of course, state law UCC characterisation as a security does not mean that a virtual currency would be characterised as a security for federal regulatory purposes, including under the federal securities laws.

X BANKRUPTCY

Below we provide an overview of certain bankruptcy-related issues that may arise relating to virtual currencies in a bankruptcy proceeding under the applicable United States law. As noted earlier, there is continuing legislation and regulation from federal agencies and states such that there is a complex web of concurrent and overlapping regulatory and legislative developments that must be considered, as such could be relevant and persuasive in the context of a bankruptcy proceeding. There have been less than a handful of bankruptcy cases that have only tenuously considered or involved issues relating to virtual currencies. As such, the development of bankruptcy law involving virtual currency issues is in its very nascent stages.

i Applicable bankruptcy regime

The first question that needs to be addressed is which bankruptcy regime would apply. This would depend on the type of entity that becomes insolvent. If the entity is a broker-dealer or an SEC-registered broker-dealer that owns or is in the business of dealing with virtual currencies, then Subchapter III of Chapter 7 of Title 11 of the United States Code (Bankruptcy Code), or perhaps even the Securities Investor Protection Act of 1970, may apply; however, neither of these currently seem likely, as we are not aware of any SEC-registered broker-dealers in the brokerage business involving virtual currencies. More likely, an entity will be eligible to commence bankruptcy proceedings either under Chapter 7 (the liquidation chapter) or Chapter 11 (the reorganisation chapter) of the Bankruptcy Code.

265 Id. § 9-322.

266 See id. § 9-332.

267 See id. § 8-102(a)(9)(iii), which includes ‘any property that is held by a securities intermediary for another person in a securities account if the securities intermediary has expressly agreed with the other person that the property is to be treated as a financial asset under this Article’.

ii Virtual currencies as property of the estate

Upon the commencement of a bankruptcy case, an estate is created under Section 541 of the Bankruptcy Code, and an automatic stay arises enjoining all creditors and entities from, among other things, taking any enforcement actions against the debtor or against property of the estate, any actions to obtain possession of property of the estate, or any actions to create, perfect or enforce any lien against property of the estate. Virtual currencies owned by a debtor should be treated as part of the property of that debtor's estate. Section 541 of the Bankruptcy Code provides that the property of a debtor's estate includes 'all legal or equitable interests of the debtor in property as of the commencement of the case', and courts have held that the scope of property interests included in a debtor's estate is intended to be quite broad. Although federal law governs the extent to which a debtor's interest in property is part of that debtor's estate, state law governs the nature and existence of the debtor's right to such property. Accordingly, bankruptcy courts would look to the applicable non-bankruptcy law to determine the property interests of the debtor in any virtual currency owned by a debtor, which would form part of the debtor's estate and be afforded the protection of the automatic stay subject to certain exceptions that may apply, as discussed further below.

While Section 541 of the Bankruptcy Code should include any virtual currency owned by the debtor, given the anonymous nature of the ownership of virtual currencies (through private keys known only to the owner of the virtual currency) it may be difficult to obtain complete transparency regarding the whereabouts, amounts and transactions relating to the debtor's virtual currency without the full cooperation of the debtor. However, a debtor is required to provide a full and accurate accounting of its property and other assets as part of filling out and filing with the bankruptcy court, under penalty of perjury, its schedules and statements of financial affairs.269 A debtor should be incentivised to provide accurate and full accounting of its property, both because it would be subject to penalties and sanctions by the bankruptcy court, and may also be denied the benefit of a discharge of its debts and liabilities if it is found to have transferred, removed, destroyed, mutilated or concealed property of the debtor within one year before the commencement of the case or after the commencement of the case.270

However, creditors or other interested parties in a case involving a debtor with virtual currencies may consider taking action to assure full disclosure, such as conducting discovery against the debtor for information relating to its virtual currency transactions (including virtual currency addresses, public keys, private keys, exchanges used, digital wallet information, financial and other account statements, and emails and other data that may be used to confirm virtual currency transactions), and subpoenaing major exchanges and payment merchants that could have additional information regarding a debtor's virtual currency transactions and holdings. The fact that virtual currencies, digital wallets and exchanges may be located and held in foreign jurisdiction may raise additional hurdles, and discovery may be a costly exercise; however, depending on the amount and value of the virtual currencies owned by the debtor, such costs may be worth the effort of pursuing such discovery.

270 See id.; see also 11 U.S.C. §523.
iii Virtual currencies as cash collateral

As discussed in Section IX, a virtual currency may serve as collateral under UCC Article 9. Thus, it is possible that a debtor in a bankruptcy may own a virtual currency that is subject to a secured creditor’s lien. There may be issues with the perfection of such security interest and subject to previously filed security interests; however, assuming the debtor’s virtual currency is subject to a secured creditor’s validly perfected lien, then such virtual currency may constitute cash collateral under the Bankruptcy Code. Under Section 363 of the Bankruptcy Code, cash collateral is defined as ‘cash, negotiable instruments, documents of title, securities, deposit accounts, or other cash equivalents whenever acquired in which the estate and an entity other than the estate have an interest and includes proceeds’. Section 363 further provides that a debtor ‘may not use, sell or lease cash collateral’ unless the secured creditor consents or the court, after notice and a hearing, authorises such use of such cash collateral, typically by providing such secured creditor with adequate protection. Even if the virtual currency is not considered cash collateral, a secured creditor with a valid security interest in the virtual currency may seek similar adequate protection to protect its collateral from the debtor’s use, sale or lease of such property.271 Adequate protection typically is provided in the form of a cash payment, periodic cash payments, or additional or replacement liens in order to protect the secured creditor against the diminution of value of the collateral from the debtor’s use of such property rather than the return of such property to the secured creditor.272 Accordingly, a secured creditor would have some protections from the debtor’s use of a virtual currency subject to its liens; however, given the volatility in value of virtual currencies, such protection may not be adequate during a bankruptcy case if the value of the virtual currency decreases.

iv Valuation issues and obtaining highest value

The volatility of the value or price of a virtual currency owned by the debtor also raises concerns as to how a debtor should maximise the value of its virtual currency, given that any decrease in value would impair the debtor’s ability to satisfy unsecured creditors’ claims or require additional collateral to protect secured creditors. Accordingly, if a debtor uses its virtual currency as a form of payment or merely holds it as an asset, it may behoove the debtor and creditors for the debtor to convert such virtual currency to cash through a methodology that maximises its value. Depending on the circumstances, that may dictate a prompt sale or a more systematic sale that better preserves its value and captures any increase in value (if any). However, if the virtual currency is instrumental to the carrying out of the debtor’s business function or the value of the business, or any restructuring depends on the retention and continued use of its virtual currency, then it may be more appropriate (albeit risky, if there is a significant decrease) for the debtor to retain and use its virtual currency in its business either with the court’s permission or, if appropriate and within the applicable bankruptcy case law, in the ordinary course of its business.

v Treatment of certain contracts involving virtual currencies

Different provisions of the Bankruptcy Code may apply depending on the nature and type of contract involving a virtual currency. The only case to date dealing with a contract involving

a virtual currency is *In re CLI Holdings, Inc*\(^{273}\) (*In re CLI Holdings*). In *In re CLI Holdings*, the debtor, an affiliate of CoinLab, Inc, doing business as Alydian, was a Bitcoin miner using rigs or supercomputers to mine Bitcoins. The debtor entered into several Bitcoin service agreements whereby Alydian agreed to use commercially reasonable efforts to use supercomputers to mine for a specified number of Bitcoins for a customer in exchange for an upfront payment. Alydian determined that it was unable to mine sufficient Bitcoins to perform all of the service agreements because the costs of deploying the supercomputers exceeded the value of the Bitcoins mined. It therefore sought to reject the burdensome contracts pursuant to Section 365 of the Bankruptcy Code, which allows a debtor to reject executory contracts (i.e., contracts where performance remains due and owing from both parties to the contract). Several of the customers and counterparties to these Bitcoin service agreements filed objections to the debtor’s motion to reject the contract on the grounds that the contract was not executory since they had fully performed their end of the contract and had no remaining obligations. The court denied the debtor’s motion to reject the service agreements, finding that the contracts were not executory in line with analogous cases where the only remaining obligation under the contract is to receive the agreed product. Of further interest, the debtor in *In re CLI Holdings* subsequently moved to sell its mining rigs on an expedited basis through a Section 363 sale in the bankruptcy case. The bankruptcy court also denied its 363 sale motion, expressing several concerns regarding the ownership of the rigs, the accuracy of the debtor’s financial statements and the lack of transparency, which the court observed could cause her to appoint a trustee or dismiss the case, allowing the parties to continue litigation that had been pending but stayed in New York State and federal courts. This further underscores the need for accurate schedules and financial statements and transparency in a bankruptcy case involving virtual currencies.

**vi Potential safe harbour contracts – currencies, commodities and securities**

Other contracts that may be involved in a bankruptcy case involving virtual currencies may provide special protections to counterparties, depending on the determination of whether the virtual currency at issue is a currency, a security or a commodity. As noted previously, different federal regulators, state legislators and courts have given conflicting views on whether virtual currencies are currencies, securities or commodities, and such determination may depend on the specific facts and circumstances involving the virtual currency and its use. A transaction involving currency could be considered a swap agreement under the Bankruptcy Code, given that the definition of swap agreement includes a currency swap, option, future or forward agreement.\(^{274}\) Similarly, if the virtual currency is considered a security, a transaction involving the ‘purchase, sale or loan’ of such virtual currency could meet the definition of a securities contract under the Bankruptcy Code.\(^{275}\) If the virtual currency is considered a commodity, there is a higher hurdle to meet the requirements for a forward contract, which requires that the ‘purchase, sale or transfer of a commodity’ has a ‘maturity date more than two days after the date the contract is entered into’.

If a transaction or agreement involving a virtual currency satisfies the requirements of any of these safe-harbour financial contracts (i.e., a swap agreement, securities contract or commodity contract), then the non-debtor counterparty would be afforded certain

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rights. Such rights include the ability to terminate, accelerate or liquidate the contracts and foreclose on any collateral held by the non-debtor counterparty, and to exercise rights of netting or setoff, notwithstanding the automatic stay that would typically enjoin non-debtor counterparties from taking such enforcement actions.

Another favourable safe harbour protection that could be available if contracts for virtual currencies are determined to satisfy the definitions of a swap agreement or forward agreement is that the Bankruptcy Code prohibits a debtor from avoiding transfers that would otherwise be a preference or fraudulent transfer (other than actual fraud). Thus, non-debtor counterparties would be protected from having virtual currencies or payments or other transfers in connection with a swap agreement or forward contract made prior to the commencement of the bankruptcy case from being clawed back or avoided and required to be turned over to the debtor.

To be clear, there have been no bankruptcy court decisions with regard to these safe harbour protections in connection with any virtual currencies to date, and as such, the treatment or availability of these protections remain unclear. In addition, although these safe-harbour contract provisions were not legislated with virtual currencies in mind, the definitions of a swap agreement and a forward contract were drafted to include contracts regarding swaps or commodities that in the future become the subject of recurrent dealings in the swap or other derivative markets or the forward contract trade.

vii Avoidance actions

Another area in which virtual currencies and their value will be of significant importance in a bankruptcy case is in the debtor’s ability to recover a virtual currency or the value of the virtual currency as an avoidable transfer (as preferences or fraudulent transfers). For the purposes of this summary, an assumption is made that transfers of virtual currencies that satisfy the requirements of a voidable preference or fraudulent transfer can be voided by a debtor pursuant to Sections 547 and 548 of the Bankruptcy Code. There may be difficulties in identifying transfers of virtual currencies and, more importantly, likely greater difficulty identifying the transferees of such transfers, but here we highlight the issue of whether a court would allow the debtor to recover the virtual currency or the value of the virtual currency under Section 550 of the Bankruptcy Code. Section 550 allows the debtor to ‘recover, for the benefit of the estate, the property transferred, or, if the court so orders, the value of such property’. The issue with virtual currencies is whether they would be treated in a bankruptcy case as currency or property. If a virtual currency is treated as currency, then the debtor may only be able to recover the value of the transferred property and may not benefit from any appreciation of the virtual currency. However, a court may take the view that the appreciation of a virtual currency should be recoverable by the estate, and thereby allow the recovery of the virtual currency, which would include any appreciation thereof. The latter approach is in line with Section 550’s goal of ‘putting the estate back where it would have been but for the transfer’. This approach is also in line with the treatment of virtual currencies as property or a commodity rather than a currency, which seems to be more consistent with the current regulatory trends for the treatment of virtual currencies.

One bankruptcy court was faced with this issue when a liquidating trustee sought to recover Bitcoins or their present value, which had appreciated from the time of transfer.

276 See Collier on Bankruptcy ¶550.02[3][a].
The bankruptcy court ultimately did not decide whether the Bitcoins were currency or a commodity, but found instead that Bitcoins were not US dollars, leaving for a subsequent determination whether it would allow the recovery of the virtual currency or the value of the virtual currency. Given the CFTC’s stance that a virtual currency is a commodity, it may be that courts allow the recovery of virtual currencies, including any appreciation thereon.

viii Recognition of foreign proceedings

As many virtual currency exchanges and entities doing business with virtual currencies may not be located or have their primary place of business within the jurisdiction of the United States, bankruptcy activity may occur outside the United States but with assistance of the United States bankruptcy courts through the recognition proceedings under Chapter 15 of the Bankruptcy Code. Such was the case with the bankruptcy proceedings of MtGox Co Ltd in Tokyo, Japan, which sought and obtained recognition of the Japanese bankruptcy proceedings as foreign main proceedings through Chapter 15 of the Bankruptcy Code. Recognition of its Tokyo bankruptcy proceedings provided much-needed relief in the United States, including a stay that enjoined several lawsuits and allowed the Japanese foreign representative full and unfettered access to the US courts. The recognition order expressly provided the foreign representative with the ‘right and power to examine witnesses, take evidence or deliver information concerning the Debtor’s assets, affairs, rights, obligations or liabilities’; and ‘entrusted [the foreign representative] with the administration and realisation of all of the Debtor’s assets within the territorial jurisdiction of the United States’. Thus, recognition of foreign bankruptcy proceedings involving virtual currencies may assist foreign debtors to identify and recover their property for the benefits of their creditors.

XI LOOKING AHEAD

The US regulatory environment applicable to virtual currencies is highly complex, in most cases unclear, and subject to rapid and unpredictable change. US federal and state laws generally attempt to fit virtual currencies into the existing regulatory structures, but this is often like fitting a square peg into a round hole: that is, the same virtual currency product or transaction may need to accommodate the evolving concerns of US securities, derivatives, commodities and bank regulators. However, this is beginning to change, as legislatures and regulators consider new structures designed specifically to accommodate virtual currencies. If the authors had to characterise the overall US regulatory approach, they would say that most US regulators are sceptical about, but not hostile toward, virtual currencies. In some cases, some regulators, and notably the CFTC, have attempted to protect the public while not taking aggressive actions that could stifle innovation in this area. However, notwithstanding that the CFTC and the SEC have appointed staff members to work with virtual currency sponsors to understand their products and trading platforms, the agencies have brought several enforcement actions to protect the public from fraud and registration abuses, and have collected hefty monetary penalties from violators. While it is impossible to predict with any certainty the future direction of virtual currency regulation in the United States, it does appear that virtual currencies are here to stay, at least for the foreseeable future, and

277 See Kasolas v. Lowe (In re Hashfast Tech LLC) Adv. No. 15-3011 (Bankr. N.D. Cal.).
that the US regulators recognise this fact. Innovators in the virtual currency space would be well-advised to review this chapter carefully, engage actively with competent US counsel and follow closely regulatory developments in this area. Failure to fully understand the US regulatory regime, in all its complexity and uncertainty, may expose market participants to an unacceptable level of legal, regulatory and reputational risk.
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