



**COUNTRY
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United States BLOCKCHAIN

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This country-specific Q&A provides an overview of blockchain laws and regulations applicable in United States.

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UNITED STATES BLOCKCHAIN



1. Please provide a high-level overview of the blockchain market in your jurisdiction. In what business or public sectors are you seeing blockchain or other distributed ledger technologies being adopted? What are the key applications of these technologies in your jurisdiction?

In the United States of America ("United States" or "US"), Bitcoin is the poster child application of blockchain. Cryptocurrencies generate much of the blockchain-related news in the US, including, amongst others, Ether, Tether and more recently, Dogecoin. Despite the focus on cryptocurrency, the application of blockchain in the US goes well beyond this and involves a wide cross-section of industries in both the private and public sector.

On the public front, federal agencies, such as the Food and Drug Administration, the Department of Health and Human Services, the Department of the Treasury and the Department of Defense, have launched various blockchain-based initiatives, which are currently at various stages of maturity ranging from proof of concept through pilot all the way to production. In one such initiative, the Food and Drug Administration has recruited an expert in traceability technologies in global food supply chains, Frank Yiannas, to work with the FDA to incorporate blockchain technology to further strengthen the US Food Supply. The Department of Defense has also been particularly active in the space, awarding multiple contracts to SIMBA Chain, a blockchain application development company, to develop blockchain-based solutions to improve data security systems, provide a secure messaging platform and manage replacement parts inventory for weapons.¹

In the private sector outside of the cryptocurrency space, blockchain is still in its infancy, but we are seeing attempts to incorporate blockchain applications into various facets of companies' operations, from supply chain management and tracking, to making payments to the core corporate governance of a company.

Companies such as IBM and Amazon are now starting to offer services that customers can use to build or integrate their own secure blockchain networks.² IBM has been developing its IBM Food Trust network that allows participants, including companies like Wal-Mart and Dole, to more securely store and share documentation both internally and with third parties in their supply chain and more easily track the location and status of food products.³ The IBM Food Trust network is also being utilized as a tool to provide customers assurance about the sourcing of certain foods. For example, Nestle has started to use the IBM Food Trust network to allow customers to scan their coffee products and see the coffee's journey from harvest to shelf.⁴ Blockchain is finding applications in the financial services industry as well. J.P. Morgan's Liink, a peer-to-peer blockchain network in which 100 banks are currently participating, allows banks in the network to more easily validate account ownership and receive confirmation of account information in near real time, lowering costs associated with rejected transactions.⁵

States also have shown an interest in the integration of blockchain by companies. Delaware, in which the greatest number of major US corporations are incorporated, has expressly authorized companies to use blockchain to track corporate shares to help clarify property rights, to automate cap tables and corporate actions such as dividend issuance, to provide transparent and accurate proxy voting and to provide self-executing certificates of good standing.⁶ Generally, while the initial enthusiasm has somewhat slowed and it is still uncertain which blockchain applications will firmly take hold, there is nonetheless significant interest in blockchain technology in the United States, with the US having the most blockchain-related patents issued or applied for of any country in the world.⁷

2. To what extent are tokens and virtual assets in use in your jurisdiction? Please mention any notable success stories or failures of applications of these

technologies.

ICOs, also referred to as token sales, had previously predominated the use in this area. These have mainly concerned utility tokens but the tokenization of assets is also budding, allowing for either a fractional ownership of the tangible asset in the shape of a token or the pegging of a cryptocurrency to some secondary source to minimize volatility. Tokenized assets, ranging from real estate to collateralized stablecoins, had been gaining traction in the US.⁸ However, ICOs have largely been stopped as a result of SEC enforcement of the US federal securities laws and there is currently significant uncertainty regarding the ability to sell tokens that could represent securities without registration under the securities laws. Cryptocurrencies have nonetheless continued to grow in popularity and use, with interest among both institutional and retail investors growing at unprecedented rates. In April 2021, the cryptocurrency market cap reached a new all-time peak of \$2 trillion, with Bitcoin largely leading the way.⁹ One recent trend of note involves private, US-based companies beginning to add cryptocurrencies, like Bitcoin, on their balance sheets as a store of value. MicroStrategy, a US-based enterprise software company, has been slowly increasing its reserves, and owns more than \$3 billion worth of Bitcoin as of June 2021.¹⁰ Other companies like Tesla and Square have followed suit, both announcing substantial purchases of Bitcoin in the past year.¹¹

In addition, non-fungible tokens (“NFTs”) have quickly gained popularity in the United States, with everything from digital art, digital trading cards and even digital land available for purchase by individuals who view the digital space as ripe for investment and providing unique opportunities not otherwise available with physical assets. One example involves NBA TopShot, a collaboration between the National Basketball Association, its players’ union and a company named Dapper Labs to develop blockchain-based digital trading cards in the form of video clip highlights. NBA TopShot generated more than \$230 million in sales in its first four months of trading,¹² with an NFT of a LeBron James highlight recently selling for over \$387,000.¹³ In the world of digital art, there are few artists better known than Mike Winkelmann, a digital artist who goes by the name of Beeple. In March 2021, Beeple sold his NFT digital art piece entitled *Everydays: The First 500 Days* for a record-breaking \$69 million through an auction facilitated off of the blockchain at Christie’s Auction House.¹⁴ Although the production and resale of NFTs continues to grow, questions as to the long-term demand for NFTs and the value they hold persist.

3. To what extent has blockchain technology intersected with ESG (Environment, Social and Governance) outcomes or objectives in your jurisdiction?

While blockchain technology has the capability to provide significant social value, including through blockchain-based supply chain solutions (as discussed above) and the promise of cost-effective access to the financial system for the global unbanked population, perhaps the most notable concern related to ESG is the significant energy consumption and related environmental impact of mining new blocks on a blockchain, especially in the context of cryptocurrencies. With China beginning to crack down on Bitcoin mining, a report from the Cambridge Bitcoin Electricity Consumption Index shows that the United States is now the world’s second largest Bitcoin mining power consumer, with the United States’ share of total consumption increasing from 4.1% in September 2019 up to 16.8% in April 2021.¹⁵ According to the same Cambridge Bitcoin Electricity Consumption Index, the global Bitcoin network currently consumes around 85 terawatt-hours of electricity annually, consuming more electricity and emitting more carbon dioxide than entire nations.¹⁶ US corporations have started to take this environmental impact into consideration. For instance, in May 2021, Tesla halted its acceptance of Bitcoin as payment for its products, citing the environmental impact of Bitcoin mining as its main concern and stating that it would consider accepting Bitcoin again if more renewable energy is used.¹⁷

While the US federal government has yet to take affirmative action to address these environmental concerns, individual members of Congress have been vocal about the issue, including Senator Elizabeth Warren, who has called for a “crack down on environmentally wasteful cryptocurrencies”.¹⁸ In 2019, the Congressional Research Service, a research institute that works exclusively with the US Congress, released a paper entitled “Bitcoin, Blockchain, and the Energy Sector”.¹⁹ The paper provides an overview of the environmental concerns relating to blockchain and cryptocurrencies and suggests certain solutions to Congress, including setting minimum energy conservation standards on the equipment and data centers used for mining activities. While the environmental issues are prevalent and not necessarily unique to the US, US-based cryptocurrency miners are working towards creative solutions to alleviate some of these concerns.

As miners migrate from China to the United States, many have settled in Texas, where government officials

have been welcoming²⁰ and energy prices are relatively low. Energy companies in Texas have started to enter into demand response contracts with Bitcoin miners, whereby miners are provided the excess power when there is more supply than demand, but agree to shut off their mining operations at a moment's notice if there are surges in demand for energy, such as during ice storms or heat waves.²¹ The guarantee that excess power will be purchased by miners incentivizes investment in additional renewable sources,²² while also helping balance the Texas power grid to avoid power shortages, like the February 2021 power crisis that left more than 4.3 million homes and businesses without power in the middle of a severe winter storm.²³ Bitcoin mining operations have also turned to excess natural gas as fuel to power the energy-intensive Bitcoin mining rigs by installing piping systems to divert natural gas that would otherwise leak into the atmosphere into generators to produce electricity on site to mine Bitcoin. According to Crusoe Energy, a company working on this technology, its Bitcoin mining systems reduce up to 63% of carbon dioxide emissions compared to allowing the natural gas to be flared²⁴ and are diverting 10 million cubic feet per day of natural gas.²⁵

While these innovative solutions have helped lessen the environmental costs underlying cryptocurrency mining, more work needs to be done to ensure that the incentive structure does not encourage wasteful energy production simply to facilitate such activities. Separate consideration may also need to be given to the energy consumption inherent to the use of different consensus mechanisms, such as proof-of-work or proof-of-stake models. Proof-of-work, the model utilized by Bitcoin, requires substantially more energy than proof-of-stake to validate transactions. In April 2021, Ethereum announced that it will move to a proof-of-stake model by end of 2021, a transition that could reduce Ethereum's energy use by up to 99.95%.²⁶ While the United States can regulate cryptocurrencies in an attempt to alleviate the environmental impact, the communities that use and mine cryptocurrencies are also considering how they can improve the technology and adapt the protocols to address the intensive energy consumption. The United States, and the relevant stakeholders, will need to continue to grapple with these issues as blockchain use cases continue to expand.

4. Has COVID-19 provoked any novel applications of blockchain technologies in your jurisdiction?

COVID-19 has undeniably presented significant public health challenges to governments and societies. The grave public health challenge has required

organizations, both public and private, to be flexible and nimble in adapting new business models, technologies and approaches to continue operating during the pandemic. One major issue that governments and healthcare providers faced was addressing the severe shortage of medical devices, personal protective equipment and other medical supplies needed to care for patients during the pandemic. As traditional supply struggled to keep up with demand, the unique ability for blockchain technologies to create decentralized trust among arm's-length parties has led to some novel supply chain applications during the COVID-19 pandemic. For example, faced with a severe shortage of N95 masks during the beginning of the COVID-19 pandemic, many US-based organizations began to look abroad for excess supply. However, adequately authenticating foreign N95 masks became a major concern. Real Items Company, a San Francisco-based company, created a solution involving the use of blockchain technology and QR codes to scan and create an immutable record of transport that could provide buyers of N95 masks the ability to trace their masks back to the original source of manufacturing.

Relatedly, in April 2020, IBM announced the launch of IBM Rapid Supplier Connect, a blockchain-based network designed to help government agencies and healthcare organizations identify new, non-traditional suppliers who have pivoted to address the shortage of personal protective equipment, medical devices and other supplies needed for COVID-19 relief efforts.²⁷ When many businesses from outside the traditional healthcare procurement system pivoted to produce the essential supplies needed to support the healthcare sector, IBM Rapid Supplier Connect helped buyers such as hospitals, state procurement divisions, pharmacies and others connect with these non-traditional suppliers and facilitated the vetting and onboarding of new suppliers and understanding their real-time inventory availability. This blockchain application enabled healthcare organizations and government agencies to access a wider pool of suppliers and reduced the time to get essential medical supplies to the location where they were most needed. Since its launch, IBM Rapid Supplier Connect has partnered with various healthcare and supply chain organizations to support onboarding efforts, including the C19 Coalition, a coalition of governmental and private actors focused on medical device supply chains, and Northwell Health, New York's largest healthcare provider.²⁸ IBM has recently announced plans to partner with Moderna to explore how blockchain technology can help vaccine distribution efforts, such as by allowing governmental organizations and healthcare providers to more easily trace and share information about vaccine batches as they move through the supply chain.²⁹

The focus on the critical nature of the supply chain, especially for healthcare equipment, appears to have served as a catalyst for broader adoption of the use of blockchain technology in supply chain management in the US.

5. Please outline the principal legislation and the regulators most relevant to the use of blockchain technologies in your jurisdiction. In particular, is there any blockchain-specific legislation or are there any blockchain-specific regulatory frameworks in your jurisdiction, either now or envisaged in the short or mid-term?

The rapidly growing crypto asset industry has brought the use of blockchain technologies to the attention of regulators at the state and federal level in the US over the past year. While there is not yet a comprehensive set of legislation to govern such technologies, financial regulators in particular have begun to scrutinize the use of such technologies by banks and in the financial markets and craft policy frameworks for stricter oversight of crypto assets as noted below. A common thread to the guidance and proposals issued to date is that the focus is not on the overarching blockchain technology, but rather how it relates to the crypto asset (see question 9). There is a general acknowledgment that blockchain technology is an important part of the US's objective to remain at the forefront of innovation; however, similar to the reach of the technology, the legal questions remain widespread and ill-defined. The concerns are both industry-specific and application-specific, thus affecting a broad spectrum of the legal framework, ranging from tax law, securities law, intellectual property law, consumer protection/data privacy law, sales and banking regulations, advertising law as well as estate planning, and various cross-border implications of the borderless technology. However, across all these fields, the US's approach thus far has largely been to "wait and see", with the impact of any legislation or regulation being carefully considered, in part due to a lack of full understanding of the technology and in part due to the effects on innovation such regulation could result in. This hesitation is reflected at the federal level, with most attention to blockchain coming from the federal administrative and agency level, with a focus on the financial industry and cryptocurrency assets.³⁰ Among other things, financial regulators are focused on a number of concerns, including consumer protection, investor protection, money laundering and terrorist financing, process and settlement, and financial stability. Rather than issuing express regulations, warnings and guidelines have been

the preferred method of intervention, coupled with enforcement actions, or threats thereof to further guide industry behavior. For example, instead of enacting official regulation on initial coin offerings, the SEC has instead largely utilized investor alerts and unofficial frameworks to provide guidance.³¹ The SEC has also sent notices to companies in the space indicating that the agency intends to file a lawsuit if certain actions are undertaken. For instance, in September 2021, the SEC sent Coinbase a notice over its unreleased Lend product candidate that would allow users to lend and earn interest on the USDC they hold on the Coinbase platform.³² The SEC stated that the product was a security and that it would file a lawsuit against Coinbase if the product was launched.³³ Coinbase canceled the Lend launch in response.³⁴

However, as federal agencies have seen an increased need for accountability and oversight in the crypto space, this approach is beginning to shift, with agencies conducting reviews of the industry and soliciting comment and guidance from the public with the aim of promulgating express regulation accordingly. For instance, the Financial Crimes Enforcement Network ("FinCEN") issued a notice of proposed rulemaking in December 2020, requesting comments to its proposed rule which would impose more stringent reporting and identity verification requirements on banks and money service businesses for transactions above certain thresholds involving cryptocurrency wallets not hosted by a financial institution or hosted by financial institutions in certain jurisdictions.³⁵ While this rule has faced pushback from the cryptocurrency community and congressional lawmakers due to the administrative burden that it would place on emerging businesses and privacy concerns,³⁶ FinCEN has continued to indicate that additional regulation on the matter is necessary to address the potential uses of cryptocurrency for illicit purposes. The SEC has also issued official guidance and a request for comment through an agency statement providing a five-year temporary safe harbor for broker-dealers seeking to custody digital assets.³⁷ Among bank regulators, the Federal Deposit Insurance Corporation ("FDIC") recently set forth a request for information and comment regarding regulation of depository institutions' current and potential activities relating to digital assets.³⁸ Under the direction of former Acting Comptroller Brian Brooks, the Office of the Comptroller of the Currency (the "OCC") had granted conditional approval to crypto companies Paxos, Anchorage and Protego for national trust charters and released a series of interpretive letters over the past year regarding national banks' use of stablecoins, holding stablecoin reserves as deposits, and the provision of cryptocurrency custody services (see question 9). However, current Acting Comptroller Michael Hsu has

said that the agency will review its pending licensing decisions and previous actions with respect to cryptocurrencies and digital assets.³⁹ In light of the novel charter types being authorized at both the federal and state level (as described further below), the Federal Reserve Board ("FRB") has also proposed guidelines for evaluating requests for accounts and payment services at Federal Reserve Banks.⁴⁰ The view on a Federal Reserve central bank digital currency ("CBDC") has been varied at the FRB and the agency is still in the exploratory phase of the policy process (see question 6 below).

More notably, the federal agencies have been working together on a set of policy frameworks through interagency "sprint" teams and the President's Working Group on Financial Markets ("PWG"), which includes Treasury Secretary Janet Yellen, Federal Reserve Chair Jerome Powell and SEC Chair Gary Gensler, in an effort to coordinate policy making and focus on the issues raised by crypto assets.⁴¹ Interagency coordination across banking and market regulators is key because the agencies each have relevant and sometimes overlapping authority. While the SEC and CFTC would generally oversee the use of blockchain technologies in securities and commodities markets, the FRB, OCC and FDIC together exercise broad supervisory control over US banks and their holding companies, which impacts the ability of these financial institutions to use blockchain technologies, including to provide crypto asset services. While there is not a settled regulatory framework to date, bank regulators have a number of policy levers at their disposal, including through their interpretation of the scope of permissible activities for banks and their holding companies, determination of the regulatory capital treatment for digital asset holdings, chartering authorities and oversight of the US payments system. However, the need for interagency coordination where there is overlapping authority or no clear authority may slow down the policy process without greater clarity from Congress. In September 2021, SEC Chair Gary Gensler noted in his testimony before the Senate Committee on Banking, Housing, and Urban Affairs that there is a regulatory gap in coordination among the agencies that needs to be filled.⁴² Regulators have also indicated that certain key policy issues regarding crypto assets may require additional congressional direction. For instance, in March 2021, Federal Reserve Chairman Jerome Powell stated at a virtual event held by the Bank for International Settlements that "To move forward on [a central bank digital currency], we would need buy-in from Congress . . ."⁴³

At the state level, legislatures have been more active, mainly in the cryptocurrency sphere (see question 9), but these range from outright hostility to the technology

to blanket exemptions from applicable rules. In particular, the state of Wyoming has made a name for itself by passing particularly crypto-friendly legislation and regulation. For instance, in 2019, the Wyoming legislature enacted the Special Purpose Depository Institutions Act, which created a new type of financial institution named a special purpose depository institution ("SPDI") – state-chartered banks with a focus on digital assets that are permitted to provide typical banking services, such as custody services and fiduciary asset management.⁴⁴ The state requires SPDIs to maintain liquid asset reserves valued at 100% of all depository liabilities and prohibits SPDIs from making loans with customer deposits of fiat currency.⁴⁵ To date, Wyoming has granted four SPDI charters to financial institutions interested in providing banking services for digital assets.⁴⁶ Since 2015, the New York State Department of Financial Services ("NYDFS") has required a "BitLicense" for engaging in any "virtual currency business activity" as part of its virtual currency regulation.⁴⁷ Since its inception, the NYDFS has granted 29 virtual currency licenses (see question 14).

The US generally prefers case-by-case enforcement on specific applications of blockchain technologies (see question 18); however, there have been active attempts to put blockchain bills in front of the Senate and the House of Representatives. In July 2021, The Digital Asset Market Structure and Investor Protection Act was introduced in the House of Representatives with the goal of incorporating digital assets into existing financial regulatory structures.⁴⁸ Among other things, the Digital Asset Market Structure and Investor Protection Act would provide the CFTC and SEC with authority over statutorily defined "digital assets" and "digital asset securities", respectively, subject digital assets and digital asset securities to antimoney laundering, recordkeeping and reporting requirements and authorize a US CBDC. In May 2021, the Blockchain Promotion Act of 2021 was introduced in the Senate and re-introduced in the House of Representatives. The Blockchain Promotion Act would establish a blockchain working group within the Department of Commerce to provide a formal definition of blockchain that is able to keep abreast of the fast evolution of the technologies and application of blockchain, which would be another step in the direction of enabling coherent legislation.⁴⁹ In March 2021, another blockchain-related bill was re-introduced, the Token Taxonomy Act, which could clarify the status of certain cryptocurrency activities.⁵⁰ In June 2021, the Consumer Safety Technology Act, which includes the Blockchain Innovation Act and the Digital Taxonomy Act, was passed in the House of Representatives. This pending legislation would direct the Secretary of Commerce, in consultation with the Federal Trade Commission ("FTC"), to conduct a study and submit to

Congress a report on the state of the blockchain technology, covering (i) trends in the commercial use of and investment in blockchain technology, (ii) best practices in facilitating public-private partnerships in blockchain technology, (iii) potential benefits and risks of blockchain technology for consumer protection, (iv) how blockchain technology can be used by industry and consumers to reduce fraud and increase the security of commercial transactions, (v) areas in federal regulation of blockchain technology where greater clarity would encourage domestic innovation, and (vi) any other relevant observations or recommendations related to blockchain technology and consumer protection.⁵¹ In addition, the Consumer Safety Technology Act would require a yearly report by the FTC on any actions or efforts taken to prevent unfair or deceptive acts by third parties relating to digital tokens, along with any recommendations for legislation that would improve the FTC's ability to protect consumers.⁵² Whether the Senate will follow suit and pass the Consumer Safety Technology Act into law is not clear at this time. Nonetheless, these bills demonstrate willingness on the part of some in the US Congress to carefully consider blockchain technology and examine how best to facilitate and support its adoption. In June 2021, Representative Maxine Waters (D-CA), Chairwoman of the House Committee on Financial Services, announced that she has organized a "Digital Assets Working Group of Democratic Members" to investigate issues in the digital assets space.⁵³

6. What is the current attitude of the government and of regulators to the use of blockchain technology in your jurisdiction?

Despite the US's legislative "wait-and-see" approach, certain US financial regulators are active on the enforcement front to address case-by-case issues when they are perceived to violate the existing legal framework, while others are beginning to develop an approach to blockchain and cryptocurrency issues. The SEC has continued to bring enforcement actions against unregistered issuers and exchanges of digital tokens (see question 19), including an action brought against BitConnect in September 2021 relating to allegedly fraudulent behavior involving digital assets dating back to 2017, not shying away from using the courts as a tool to address allegedly unlawful applications of blockchain technology. In addition, US agencies have started to take a close look at the potential risks to the financial system posed by blockchain and crypto assets and the need for additional regulatory frameworks to address these risks (see question 5). Providing additional legal clarity on blockchain and crypto assets has become a priority for many agencies as the technology continues to become

more and more prevalent in the financial markets. For instance, FinCEN released its first list of anti-money laundering and countering the financing of terrorism priorities in June 2021, which included consideration of "virtual assets" and their uses for illicit activities.⁵⁴ Regulators continue to be concerned about blockchain's potential uses for such illicit activities, with SEC Chair Gary Gensler recently expressing his views that digital assets are too often used to "skirt [the US's] laws with respect to anti-money laundering, sanctions, and tax collection" and that "legislative priority should center on crypto trading, lending, and DeFi platforms."⁵⁵ In September 2021, Gensler testified before the US Senate Committee on Banking, Housing, and Urban Affairs, once again noting that the US does not have "enough investor protection in crypto finance, issuance, trading or lending."⁵⁶

As the agencies examine the risk of blockchain and crypto assets, their public reports and other work products may provide more insight on the agencies' views on blockchain technology and digital assets. For instance, at the time of this writing, the PWG is preparing a report on stablecoins that will cover potential benefits and risks, the current US regulatory framework and recommendations for addressing any regulatory gaps.⁵⁷ More broadly, at the time of this writing, the FRB is preparing a white paper that will cover a range of digital-asset issues including those related to stablecoins, other crypto assets and CBDC.⁵⁸ To date, the view on a US CBDC has been varied at the FRB.⁵⁹

Other than in a few states that have been expressly hostile, blockchain is generally viewed by the states as an opportunity to attract investment and even local governments have started implementing blockchain-centered initiatives.⁶⁰ Nonetheless, many state officials remain skeptical about digital assets, and enforcement actions brought by state attorneys general against private entities are not uncommon in the cryptocurrency space. For example, NYDFS has had cryptocurrency regulations in place since 2015 (see question 5) and the New York Attorney General's office ("NYAG") has issued alerts to investors recommending "extreme caution when investing in virtual currencies".⁶¹ Notably, in February 2021, the NYAG reached an \$18.5 million settlement with cryptocurrency exchange Bitfinex and stablecoin issuer Tether that required both entities to cease all trading activity in New York. New York Attorney General Letitia James has stated that the NYAG will "not hesitate to take action against anyone who violates the law".⁶² States will need to continue to balance the potential economic opportunities that blockchain technology can provide with the need to protect investors new to the space.

7. Are there any governmental or regulatory initiatives designed to facilitate or encourage the development and use of blockchain technology (for example, a regulatory sandbox)?

The US is following its European counterparts with a largely regulatory sandbox approach to develop blockchain in the financial technology industry. The Consumer Financial Protection Bureau (“CFPB”) and Commodity Futures Trading Commission (“CFTC”) have joined forces to create a regulatory sandbox for fintech companies, similar to those created in the U.K., aimed at, amongst others, cryptocurrencies and other financial technologies based on blockchain (the “Disclosure Sandbox”).⁶³ Some states, including Arizona, Florida, West Virginia, Wyoming and Utah, have also enacted legislation to create regulatory sandbox initiatives related to cryptocurrency⁶⁴ and more states are actively considering similar legislation.⁶⁵ As these sandboxes are still works in progress (Florida, Wyoming and Utah are still seeking applicants, West Virginia accepted a digital asset management platform as its first approved participant in June 2021, Arizona has had ten participants in its regulatory sandbox,⁶⁶ and the CFPB and CFTC have had two companies participate in the Disclosure Sandbox, with another nine receiving no-action letters confirming that enforcement actions will not be brought for the specific activities contemplated⁶⁷), the legal field has yet to see the outcome of these initiatives, but the goal (per Mick Mulvaney, acting director of the CFPB in 2018) is to find the regulatory “sweet spot” with respect to regulation to protect investors and instill confidence in the markets, without discouraging people from entering the marketplace in the first place due to overregulation.

In addition to regulatory sandboxes, US agencies have given consideration to broad safe harbors for entities in the blockchain or cryptocurrency space. For example, in April 2021, the SEC set forth a five-year temporary safe harbor for broker-dealers seeking to custody digital assets. While not a formal rule, the SEC’s statement states that it will not subject such broker-dealers to enforcement actions on this basis.⁶⁸ In April 2021, SEC Commissioner Hester Peirce published the Token Safe Harbor Proposal 2.0, which would, if officially promulgated, provide a time-limited safe harbor for token-based startups to launch blockchain networks before having to comply with federal securities laws.⁶⁹ While this proposal does not currently have significant support among other regulators and government officials in the space, given the lack of participation in regulatory sandboxes, broad safe harbors may be a more effective mechanism for encouraging businesses to engage with

and develop blockchain-based technologies.

Finally, some federal and state bank regulators have started to license novel banking charters for crypto asset services (see question 5). However, this type of licensing is still in the early stages and the regulatory landscape remains uncertain.

While the Boston Federal Reserve, a branch of the United States’ central bank, has been researching the technology needed to implement a CBDC through a partnership with the Massachusetts Institute of Technology and its Digital Currency Initiative,⁷⁰ the US is still very much in an exploratory phase. As noted above, views on a US CBDC vary at the FRB; however, at the time of this writing, the agency is working on a white paper covering a range of digital-asset issues including CBDCs (see questions 5 and 6).

8. Have there been any recent governmental or regulatory reviews or consultations concerning blockchain technology in your jurisdiction and, if so, what are the key takeaways from these?

The federal government has created various task forces to address the various blockchain issues, ranging from the specialized Cyber Unit, created in 2017 by the Securities and Exchange Commission (“SEC”), in charge of securities violations pertaining to cryptocurrency and digital assets, to the more recent formation of a working group within the Department of Commerce to define blockchain in 2019. Consultations have also taken the shape of calls for public comment. For example, the SEC’s statement regarding a proposal to grant broker-dealers a five-year safe harbor (discussed above in further detail) included a request for comment from market participants in an attempt to gain insight into best practices relating to the custody of digital asset securities.⁷¹ As noted above, the FDIC recently set forth a request for information and comment from interested parties regarding regulation of depository institutions’ current and potential activities relating to digital assets (see question 5). At the time of this writing, the FRB is preparing a white paper that will cover a range of digital-asset issues including issues related to stablecoins, other cryptoassets and CBDCs (see question 6). The PWG is also preparing a report on stablecoins that will cover potential benefits and risks, the current US regulatory framework and recommendations for addressing any regulatory gaps (see question 6). In addition, the US banking regulators typically adopt prudential standards formulated by the Basel Committee on Banking Supervision. Accordingly, the public consultation on preliminary proposals for the prudential treatment of

banks' cryptoasset exposures issued by the Basel Committee on Banking Supervision in June 2021 is also relevant for our jurisdiction.⁷² For the more recent projects, the takeaways are still to be seen but from the analysis to date, blockchain will not escape the existing legislative and regulatory framework and the agencies are keen to avoid possible issues of fraud and manipulation that can be caused by such technologies.

9. Has any official guidance concerning the use of blockchain technology been published in your jurisdiction?

At the federal level, agency guidance thus far provides the best insight into the application of the legal framework to blockchain. With the rise of ICOs in 2016 and 2017, the SEC issued various statements to investors warning about the risks and potential for fraud when investing in ICOs.⁷³ To complement these initial releases, in April 2019, the SEC also published specific regulatory guidance for token issuers that outlines when these may fall under securities classifications.⁷⁴ The SEC is not the only agency to become involved, and as early as 2014, the CFTC found Bitcoin to be a commodity, subject to sales regulations, but stopped short of expanding the commodity designation to other cryptocurrency assets and announced it would decide individual cryptocurrency asset designations on a case-by-case basis. Separately, the CFTC released guidance in October 2020 specifically addressing best practices for how futures commission merchants should hold customer virtual currency funds, including guidance relating to segregation of virtual currencies and depositing such currencies with financial institutions.⁷⁵ The Internal Revenue Service ("IRS") also released guidance regarding the tax implications of transactions involving virtual currencies. The guidance on virtual currencies is a bit dated, going back to March 2014 and treats virtual currencies as property for US federal tax purposes without a de minimis exemption.⁷⁶ This was followed in July 2018 by a virtual currency compliance campaign and in 2019, the IRS started sending letters to taxpayers regarding reporting of past virtual currency transactions.⁷⁷ In April 2021, the IRS released guidance stating that taxpayers who received Bitcoin Cash as a result of the 2017 Bitcoin hard fork had reportable gross income, the value of which would be determined as of the date the taxpayer obtained control over the newly minted cryptocurrency.⁷⁸ While specific to Bitcoin Cash, this guidance may gain significance and applicability due to a growing practice by NFT creators involving the distribution of bonus digital assets to purchasers of NFTs as a means of rewarding individuals who have supported their projects.

Over the past year, the OCC released a series of interpretive letters under former Acting Comptroller Brian Brooks that opened the door to and signaled support for the expansion of banking services relating to cryptocurrencies and stablecoins. In July 2020, the OCC issued guidance allowing national banks and federal savings associations to provide custody services for cryptocurrencies, including the safekeeping of cryptographic keys.⁷⁹ In September 2020, after a review of the authority of national banks to hold "reserves" on behalf of customers who issue stablecoins backed on a one-to-one basis by fiat currencies, the OCC determined that banks that otherwise comply with applicable laws and regulations and conduct adequate due diligence are authorized to hold stablecoin "reserves" as a service to bank customers.⁸⁰ The SEC concurrently released a staff statement encouraging stablecoin issuers to engage with the agency in structuring token offerings to ensure compliance with federal securities laws and noting that SEC staff is prepared to provide confirmation on an ad hoc basis that it will not take enforcement action against particular market participants with respect to specific digital tokens.⁸¹ In January 2021, the OCC published another interpretive letter clarifying the authority of national banks and federal savings associations to use stablecoins to conduct bank-permissible functions and to validate, store and record customer transactions by participating in independent node verification networks.⁸² However, it remains to be seen whether this guidance will still be relevant following the agency's review of its prior policies relating to digital asset activities under current Acting Comptroller Michael Hsu (see question 5).

A common thread with regard to the various pieces of official guidance from financial regulators is that they mainly relate to the application of blockchain to cryptocurrency assets, rather than the overarching technology of blockchain, for which the US has yet to see any detailed guidance. Any future rulemaking will likely follow this trend. For example, the proposal for prudential treatment of crypto assets put forth by Basel Committee on Banking Supervision in its public consultation applies the concept of "technology neutrality".⁸³ The US banking regulators typically adopt prudential standards from the Basel Committee of Banking Supervision. SEC Chair Gary Gensler has also publicly claimed that he is "technology-neutral".⁸⁴

10. What is the current approach in your jurisdiction to the treatment of cryptocurrencies for the purposes of financial regulation, anti-money laundering

and taxation? In particular, are cryptocurrencies characterised as a currency?

Cryptocurrency is the focus of most of the blockchain-related questions arising in the US. However, there is not currently a settled approach to their regulatory treatment as agencies continue to examine their risks. As noted above, at the time of this writing, the PWG is preparing a report on stablecoins that could call for greater oversight of cryptocurrencies (see question 6). The FRB is also preparing a white paper that would look into risks related to stablecoins and CBDCs (see question 6) and reviewing its methods for evaluating requests for accounts and payment services at Federal Reserve Banks by new charter types that may custody cryptocurrencies (see question 5).

At the state level, the US has a split between pro-blockchain states, which pass favorable regulations such as cryptocurrency exemptions from state securities laws,⁸⁵ blockchain-cautious states, which issue warnings mainly related to cryptocurrency investments,⁸⁶ and blockchain-restrictive states, which issue cryptocurrency restrictions.⁸⁷ While there is not complete regulatory clarity, currently cryptocurrencies are generally treated as property, rather than as a currency, including by the IRS for tax purposes,⁸⁸ while the CFTC has deemed virtual currencies such as Bitcoin to be commodities.⁸⁹ As cryptocurrency trading becomes more popular, the IRS and the federal government have become more focused on ensuring tax compliance. In August 2021, the Senate and the House of Representatives passed the Infrastructure Investment and Jobs Act, a \$1 trillion infrastructure bill aimed at replacing and repairing bridges and roads in the United States.⁹⁰ To partially fund this expensive undertaking, the bill imposes stricter tax-reporting requirements on cryptocurrency brokers.⁹¹ While many in the cryptocurrency industry are concerned that the definition of “broker” is too broad and will impose reporting obligations on software developers and crypto miners that do not have the information necessary to comply with such obligations, Congress’ joint committee estimates that these stricter requirements would generate \$28 billion over the next decade.⁹²

One issue attracting particular attention from US regulators is the potential for cryptocurrency exchanges to facilitate money-laundering activities. Regulators have honed in on ensuring that cryptocurrency exchanges and other actors implement sufficiently robust anti-money laundering compliance programs. With the passing of the Anti-Money Laundering Act of 2020, which became law on January 1, 2021, cryptocurrencies and other

digital assets were officially brought within the scope of the Bank Secrecy Act – an act that imposes obligations on financial institutions aimed at preventing money laundering and terrorism financing.⁹³ The Anti-Money Laundering Act, in conjunction with the FinCEN notice of proposed rulemaking in December 2020 that proposed more stringent reporting and identity verification obligations on banks and money service businesses for transactions involving certain cryptocurrency wallets,⁹⁴ illustrate the federal government’s focus on ensuring the threat of money laundering through the use of Bitcoin and other cryptocurrencies is being adequately addressed. In October 2020, the Department of Justice announced the indictment of the founders of BitMEX and certain related entities, charging them with conspiracy to violate the Bank Secrecy Act by willfully failing to establish, implement and maintain an adequate anti-money laundering program.⁹⁵ In August 2021, the US District Court for the Southern District of New York entered a consent order requiring the five entities charged with operating the BitMEX cryptocurrency platform to pay a \$100 million civil monetary penalty for various violations, including failure to adequately implement an anti-money laundering program.⁹⁶

11. Are there any prohibitions on the use or trading of cryptocurrencies in your jurisdiction?

The US has no outright ban on the use or trading of cryptocurrencies. That said, any such use or trading remains subject to various non-cryptocurrency-specific rules governing the financial regulations imposed by: (i) the CFTC, which, for example, found Bitcoin to be a commodity and subject to its jurisdiction; (ii) the SEC, if the cryptocurrency is deemed to be a security; and (iii) the IRS and FinCEN’s applicable regulations. The US may not have an entire regulatory framework specific to cryptocurrencies yet, but this does not exempt cryptocurrency from the regulations which are already in place and may be triggered by such transactions; however, the status of any particular cryptocurrency under existing regulations may not be entirely clear.

12. To what extent have initial coin offerings taken place in your jurisdiction and what has been the attitude of relevant authorities to ICOs?

With the development of ICO funding beginning in 2014, and following its initial rise in 2016, the SEC created a new Cyber Unit to, among other things, investigate and bring charges against ICOs and issue various statements to investors warning about the risks and potential for

fraud when investing in ICOs.⁹⁷ ICOs reached their peak in late 2017 and early 2018, but with the increased scrutiny by the SEC, which published additional guidance in April 2019 further reinforcing that ICOs could fall under the purview of securities laws and therefore under the SEC, ICOs are no longer viewed as a medium to bypass the regulatory framework associated with traditional funding sources to raise money. Since then, the SEC has continued to bring enforcement actions against unregistered digital token issuers and exchanges, and SEC Chair Gary Gensler has called for more comprehensive regulation of the space, expressing serious concern relating to fraud, tax compliance and anti-money laundering issues that he views as rampant in the cryptocurrency sphere.⁹⁸

13. If they are permissible in your jurisdiction, what are the key requirements that an entity would need to comply with when launching an ICO?

Securities laws are the main concern when it comes to ICOs. The issue is whether the cryptocurrency underlying the ICO qualifies as a security under the Howey test, which looks at the four factors in light of the April 2019 SEC guidance, including whether there is: (1) an investment of money; (2) a common enterprise; (3) a reasonable expectation of profits; and (4) managerial or entrepreneurial effort from others.⁹⁹ If found to be a security, a public offering or sale must be made pursuant to either an effective registration statement on file with the SEC or under an exemption from registration.¹⁰⁰ An ICO is not de facto categorized as a securities offering. However, the SEC has stated that a great many ICO tokens are in fact securities and it can be challenging to determine that a token sale does not involve the sale of securities. Given the attitude of both past and present SEC Chairman that “every ICO [they] have seen is a security”,¹⁰¹ the safest approach to avoid violating the securities laws is for companies to either (i) register the ICO and issue a prospectus, or (ii) seek No Action Letters (“NALs”) from the SEC’s Division of Corporation Finance to confirm no enforcement actions will be undertaken should the company sell the cryptocurrency assets without first registering them under the Securities Act of 1933 and the Securities and Exchange Act of 1934.¹⁰² Such action will prevent a situation such as the SEC issuing a cease-and-desist order if it determines an ICO is an unregistered, non-exempt securities offering.¹⁰³ Some companies have relied on exemptions from registration to sell ICO tokens, in particular Regulation D. However, this approach has significant risk as highlighted by the Telegram ICO. In 2018, Telegram sold approximately 2.9 billion tokens, raising more than \$1.7

billion in capital. While it claimed the exemption from registration under Regulation D, the SEC brought an action¹⁰⁴ that, in June 2020, resulted in a court-approved settlement under which Telegram agreed to return \$1.2 billion to investors and pay an \$18.5 million penalty,¹⁰⁵ which demonstrates the uncertainty of relying on such exemptions in the ICO context.

Other than complying with the securities law requirements or requesting an NAL, there is no bright-line approach to determining the status of the cryptocurrency asset tied to the ICO.¹⁰⁶ The determination as to whether an ICO cryptocurrency asset is a “security” is very fact-specific and there have already been disagreements between the SEC and the courts on this issue.¹⁰⁷ While it has not yet gained significant traction or support, the Token Safe Harbor Proposal 2.0 could provide additional clarity if promulgated. The proposal would provide a three-year exemption from registration requirements under federal securities law to token issuers attempting to reach network maturity, assuming the following conditions are met: (i) the token issuer intends to develop a network that will reach network maturity within three years of the date of first sale of the token; (ii) the token issuer makes publicly available certain disclosures relating to its network and tokens; (iii) the tokens are offered and sold to facilitate access to the network; (iv) the token issuer files a notice of reliance with the SEC prior to the first sale of the token; and (v) the token issuer files an exit report with the SEC at the end of the three-year safe harbor.¹⁰⁸ While the three-year exemption would be welcomed by entities in the space, defining network maturity clearly to provide adequate guidance has been a concern, with the updated version of the proposal steering clear of a bright-line test.¹⁰⁹

14. Is cryptocurrency trading common in your jurisdiction? And what is the attitude of mainstream financial institutions to cryptocurrency trading in your jurisdiction?

There are a multitude of cryptocurrency exchanges, which allow consumers to exchange their cryptocurrency into various assets, whether it be fiat currencies or other cryptocurrencies. These are, for the most part, available online, but there are a few brick-and-mortar businesses as well. There are also a few mainstream financial institutions that offer limited access to a limited number of cryptocurrencies. More recently, mainstream industry players have become less hesitant and are actively becoming involved with cryptocurrency in different capacities. For instance, the Bank of New York Mellon announced in February 2021 that it would begin offering its current service offerings for digital assets, including

custodian services for institutional investors. The Bank of New York Mellon has since invested in a cryptocurrency startup, Fireblocks, that develops technology related to the secure storage and transfer of cryptocurrencies, in a move seemingly aimed at providing the bank with the necessary tools to safely and effectively act as a cryptocurrency custodian.¹¹⁰ U.S. Bank, Goldman Sachs and J.P. Morgan Chase have also either started or plan to start offering services and investment offerings relating to cryptocurrency.¹¹¹

While Bitcoin-backed Exchange Traded Funds (“ETFs”) have previously faced rejection by the SEC, there is renewed optimism that a Bitcoin-backed ETF will soon be approved, with more than a dozen applications filed since December 2020 pending before the SEC.¹¹² In addition to federal regulation, some states have been active in regulating exchanges and trading activity; for example, the NYDFS adopted a set of regulations requiring a “BitLicense” to engage in any “virtual currency business activity”.¹¹³ Since its inception, the NYDFS has granted 29 virtual currency licenses, including a virtual currency license to Bakkt, a Bitcoin futures exchange and digital assets platform, launched in 2019 as a product of the Intercontinental Exchange, the parent company of the New York Stock Exchange.¹¹⁴

15. Are there any relevant regulatory restrictions or initiatives concerning tokens and virtual assets other than cryptocurrencies (e.g. trading of tangible property represented by cryptographic tokens)?

At the federal level, the SEC and CFTC have not distinguished between types of cryptocurrency, e.g., asset-backed tokens (deriving value based on the underlying asset that does not exist on the blockchain) or utility tokens (deriving value from the demand for the issuer’s service or product). However, in March 2021, members of the US House of Representatives reintroduced the Token Taxonomy Act, which would establish digital tokens as a new digital asset, and would mainly address utility tokens, which would be exempt from securities laws and subject to a different tax structure.¹¹⁵ The Digital Asset Market Structure and Investor Protection Act introduced in the House of Representatives in July 2021 would create statutory definitions for digital assets and digital asset securities and provide the CFTC and SEC with respective authority over them, providing greater legal certainty.¹¹⁶

16. Are there any legal or regulatory issues concerning the transfer of title to or the granting of security over tokens and virtual assets?

In addition to the securities law issue (see question 11), another issue specific to tokens and virtual assets that have properties other than as a store of value and medium of exchange is the accounting for such assets. There is little guidance on the accounting treatment of such assets, which could fall under a variety of different standards.¹¹⁷ For example, if purchased with the intention of resale, the tokens partially meet the definition of “inventory” under both US GAAP and IFRS, despite not being tangible in nature. There is also the potential for treating these as “intangible assets” for accounting purposes because tokens and virtual assets have the potential for indefinite use, with no expiration date or limit of the period within which they can be exchanged for cash, goods or services. However, the Financial Accounting Standards Board, the entity that sets accounting standards for US companies, has yet to provide guidance on accounting for cryptocurrencies, stating that cryptocurrency investment is not widespread enough to warrant consideration¹¹⁸ and leaving companies wishing to buy and sell such assets uncertain of accounting requirements for applicable transactions.

El Salvador’s decision to formally adopt Bitcoin as legal tender in September 2021¹¹⁹ raises separate legal issues in the United States, including with respect to the Uniform Commercial Code (“UCC”). The UCC is a set of laws adopted by the states that govern commercial transactions. Notably, UCC § 1-201(a)(24) defines “money” as “a medium of exchange currently authorized or adopted by a domestic or foreign government”.¹²⁰ El Salvador’s adoption of Bitcoin as legal tender could indicate that Bitcoin qualifies as money under the UCC, leading to some concerns about how to perfect a security interest in Bitcoin under the UCC. Per the UCC, a security interest in money may only be perfected through possession,¹²¹ a concept that is inconsistent with virtual assets like Bitcoin. The UCC’s board is currently working on updating certain articles of the UCC to address digital assets and some of these concerns.¹²²

One issue that has recently garnered attention in the United States involves the transfer, or lack thereof, of an NFT’s associated intellectual property rights upon a sale. Under US copyright law, a transfer of copyright ownership requires a signed writing to be valid.¹²³ In the absence of an agreement to the contrary, the transfer of title to or sale of an NFT does not itself transfer ownership of the underlying copyright associated with

the NFT. For instance, upon the sale of an NFT involving a piece of digital art, the buyer would own certain rights to that specific piece of art, but only the copyright holder, likely the artist, would have the right to create copies or derivative works of the digital art or otherwise exploit its associated intellectual property.

17. How are smart contracts characterised within your legal framework? Are there any enforceability issues specific to the operation of smart contracts which do not arise in the case of traditional legal contracts?

The US is still relying on its traditional legal contract regime to account for smart contracts, including state law implementation of the statute of frauds and the UCC; some non-blockchain-specific technology-related updates, such as the Electronic Signatures in Global and National Commerce Act; and state laws modelled on the Uniform Electronic Transactions Act ("UETA"). Both at the federal and state level, these laws ensure a general recognition that e-signatures are legal and can create a binding contract.¹²⁴ There has been little litigation, so it is difficult to determine if the current infrastructure is sufficient. There is some debate as to whether states that do not expressly recognize that contracts can be formed via an "electronic agent" technically recognize smart contracts.¹²⁵ Over the past few years, several states have sought to clarify the enforceability of smart contracts, treating them akin to legal agreements.¹²⁶ However, similar to the issues with blockchain legislation as a whole, there remains no uniform definition of "smart contracts" and what they encompass. From this seminal issue of what is being legislated flows the uncertainty of which legal regime to apply. As a consequence, there have been movements urging for a clear classification of smart contracts and even urging for the creation of a new category specific to smart contracts affecting blockchain-based assets.¹²⁷

18. To what extent are smart contracts in use in your jurisdiction? Please mention any key initiatives concerning the use of smart contracts in your jurisdiction, including any examples relating to decentralised finance protocols.

One main proponent of the movement to provide a clear classification of smart contracts is the Smart Contracts Alliance, which is an initiative by the Chamber of Digital Commerce, an American advocacy group founded in 2014 that promotes the emerging industry behind

blockchain technology, Bitcoin, digital currency and digital assets.¹²⁸ More focused initiatives that promote the use of smart contracts in specific industries have also launched. For instance, Blockchain for Energy, a blockchain consortium of energy companies, including Chevron, ConocoPhillips and ExxonMobil, recently launched its smart contracts research and development program that independently certifies industry-grade contracts and smart contract templates, offering opportunities for members of the consortium to experiment with their use.¹²⁹ As illustrated in the 2018 CFTC primer on smart contracts, there is a plethora of uses for smart contracts from the very basic use in vending machines, to more complex transactions such as credit default swaps. To help navigate this technology, the CFTC issued a primer to be used as an educational tool to understand the implications as well as highlight some of the risks and challenges associated with smart contracts.¹³⁰

From a technical perspective, there have been industry initiatives focused on implementing standards to simplify the technical difficulties inherent in coding smart legal contracts. For example, an initiative named the Accord Project is currently developing open source smart contract implementation software, including one such program that transforms natural language legal contracts into smart legal contracts through the use of contract templates.¹³¹ As the technology relating to smart contracts develops, providing more ease of use and availability to the general public, the legal framework governing smart contracts will be more thoroughly delineated.

With announcements from the Maker Foundation that one of the earliest decentralized autonomous organizations, MakerDao, will move back to full decentralization¹³² and from Square, a US-based payment processing company, that it plans to develop a Bitcoin-based decentralized finance platform for developers,¹³³ decentralized finance protocols (applications that rely on smart contracts to execute transactions as opposed to a central authority) are gaining recognition. As private companies begin to experiment with decentralized finance platforms, one state, Wyoming, is encouraging their creation and use through a recently passed law recognizing decentralized autonomous organizations ("DAOs") as their own form of a limited liability company.¹³⁴ In July 2021, Wyoming officially recognized the American CryptoFED DAO, a decentralized organization focused on monetary policy and the utilization of digital assets to encourage currency stabilization, as the first entity recognized under this new law.¹³⁵

19. Have there been any governmental or regulatory enforcement actions concerning blockchain in your jurisdiction?

The federal agencies have been actively bending blockchain to the existing legal framework, especially as it relates to its cryptocurrency applications. The SEC has been active in the ICO sphere, examining unregistered, non-exempt ICOs involving securities, starting with the DAO ICO in 2016 and continuing to this day. In the span of a week in August 2021, the SEC announced three different settlements reached with defendants allegedly involved in unregistered offerings and exchanges of digital assets.¹³⁶ In September 2021, the SEC announced an enforcement action against BitConnect, an online crypto lending platform, alleging a global unregistered offering of investments relating to digital assets that allegedly defrauded investors out of \$2 billion.¹³⁷ Perhaps the highest profile example is the SEC's enforcement action against Ripple Labs, Inc. The SEC filed suit in December 2020 alleging that Ripple raised over \$1.3 billion through an unregistered, ongoing digital asset securities offering of XRP.¹³⁸ At the time of the suit, XRP was the third largest cryptocurrency by market value.¹³⁹

In conjunction with pursuing securities law enforcement actions, former SEC Chairman Jay Clayton emphasized that cyber-enabled crime is a focus of the SEC and that the regulators should work together to find solutions for these risks.¹⁴⁰ Since then, the FTC has clamped down on alleged pyramid schemes involving cryptocurrencies, the DOJ has initiated suits regarding alleged schemes to defraud investors through the marketing and selling of fraudulent virtual currency and the CFTC plays an active role in cryptocurrency enforcement.¹⁴¹ The IRS, through its recent guidance and IRS 6173 letters, has indicated that there will be enforcement action should corrective filings for cryptocurrency transactions not be reported.¹⁴² In June 2021, the IRS requested an additional \$32.3 million in funding to facilitate its efforts relating to tax collection and cryptocurrency¹⁴³ and, only a month earlier, a federal court in California authorized the IRS to serve a summons on a cryptocurrency trading platform requesting information on US taxpayers involved in transactions over a certain monetary threshold.¹⁴⁴ Due to the global nature of blockchain, enforcement is not limited to US-centric actions and the Treasury Department, through FinCEN and the Office of Foreign Asset Control ("OFAC"), cannot be excluded from this discussion. For example, OFAC, a federal agency that administers and enforces economic sanctions programs, recently announced settlements with BitGo, Inc. and BitPay, Inc. relating to separate enforcement actions brought against the two entities for allegedly failing to prevent users located in certain countries, including

Cuba and Iran, from using their services.¹⁴⁵

States have also gotten involved in litigation surrounding cryptocurrencies; the NYAG has been particularly active in the space. For example, in February 2021, the NYAG entered into an \$18.5 million settlement with Bitfinex and Tether relating to Tether's allegedly fraudulent representation that it maintains US dollar reserves adequate to back up the amount of Tether in circulation.¹⁴⁶ In addition to the monetary penalty, Tether also agreed to cease trading with residents and entities in New York and to provide more regular and transparent disclosures.¹⁴⁷ The NYAG also filed a lawsuit in February 2021 against Coinseed, a cryptocurrency trading company, alleging that the company was illegally trading cryptocurrencies without being registered as a broker-dealer in New York. In June 2021, Coinseed ceased operations.¹⁴⁸

20. Has there been any judicial consideration of blockchain concepts or smart contracting in your jurisdiction?

Federal enforcement actions, especially in the ICO sphere, rely on the courts to interpret blockchain concepts and enforce federal securities laws against infringers. One example involves an enforcement action brought against Kik Interactive by the SEC relating to a \$100 million ICO of digital tokens. A US federal court recently granted summary judgment in favor of the SEC after finding that the digital tokens involved in the offering were investment contracts and that, therefore, Kik's offering constituted an unregistered sale of securities.¹⁴⁹ The SEC's enforcement action against Ripple Labs may provide the courts with another opportunity to weigh in on the considerations relevant to the determination of whether a cryptocurrency is a security. Other examples include recent court decisions holding that Bitcoin is money for purposes of interpreting money transmission laws in Florida¹⁵⁰ and Washington D.C.¹⁵¹ At the same time, private litigation, mainly pertaining to cryptocurrency, is also developing at the state and federal levels and has brought to light other kinds of legal violations related to the use of blockchain beyond those connected to federal securities laws, including patent infringement, breach of contract and antitrust issues.¹⁵²

21. Are there any other generally-applicable laws or regulations that may present issues for the use of blockchain technology (such as privacy and data

protection law or insolvency law)?

Due to blockchain's applicability across a range of industries, a vast range of laws are triggered by its use, including laws relating to insolvency, where issues around whether cryptocurrency of a debtor constitutes part of the debtor's estate are still undecided. With the spread of blockchain applications come additional layers of regulatory hurdles, such as the data privacy requirements of the California Consumer Privacy Act ("CCPA") and Health Insurance Portability and Accountability Act of 1996. The CCPA provides California residents certain rights relating to their personal information, including the right to notice relating to collection and the right to request deletion of personal information.¹⁵³ While not yet in effect, Colorado and Virginia have also recently enacted privacy laws that provide their residents similar rights as the CCPA, including the right to request the correction or deletion of their personal information. Any personal information stored on a permissionless, decentralized blockchain will be difficult, if not impossible, to manage if businesses must comply with a data subject request that such personal information be deleted. Instead, businesses

must consider keeping such information off the blockchain to the extent feasible or relying on private blockchains to ensure an individual's rights under applicable data privacy frameworks can be maintained. Generally, there remains great uncertainty as to whether blockchain should be governed by its own regulatory scheme and regarding the scope of applicability and transferability of the current legal regime to blockchain issues.

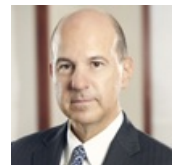
22. Are there any other key issues concerning blockchain technology in your jurisdiction that legal practitioners should be aware of?

With the lack of an established blockchain framework at a federal level, the US has developed a broad and somewhat inconsistent approach to blockchain at the state level. This double layer of complexity is not unheard of in other areas and, until federal law preempts state law, as proposed by the Token Taxonomy Act, it is something to consider carefully when transacting in the US.

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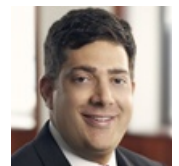
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