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CRYPTOCURRENCY AND BLOCKCHAIN TECHNOLOGY

This memorandum provides an overview of the functions of cryptocurrency and blockchain technology and describes relevant federal and state regulation. The appendix provides a detailed list of state action with regard to cryptocurrency and blockchain technology.

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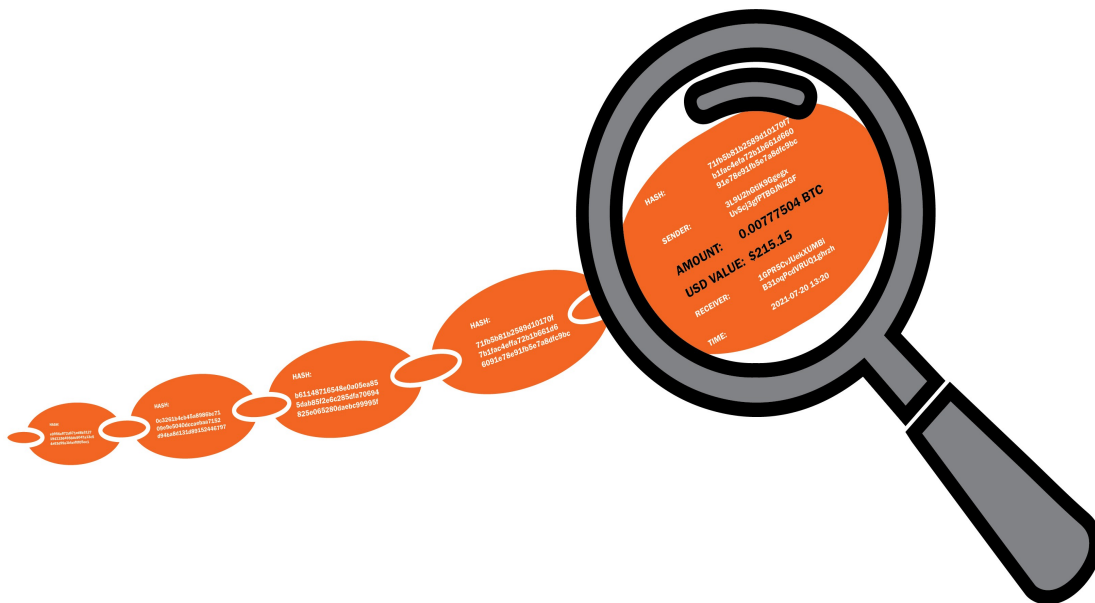


Figure A: Blockchain ledger illustration.

Cryptocurrency and the Exchange of Digital Money

According to the [Internal Revenue Service](#), virtual currency, or cryptocurrency, is “a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value.”¹ Rather than using traditional intermediaries to facilitate currency transfers or transactions, owners rely on a cryptographic procedure for exchange and production of the digital money. This procedure, called blockchain technology, uses a decentralized public ledger to record the movement and ownership of cryptocurrency units. Owners of cryptocurrency will often have personal passcodes to use, exchange, and store their currency tokens. Generally, passcodes are known only to the holder of the cryptocurrency account, but the ledger of transactions is visible to the entire network of account holders of a particular cryptocurrency.

Blockchain Technology

Most cryptocurrencies are exchanged and produced using blockchain technology.² On a blockchain, a network of computer users certifies the legitimacy of each cryptocurrency transaction through a public ledger. The ledger shows the location of, and any transactions involving, each unit of cryptocurrency. Transactions could involve securities and commodities other than cryptocurrencies, such as non-fungible tokens (NFTs), which are unique assets recorded and exchanged on blockchains and usually indicate ownership of a digital product, such as a video or image. Unique digital signatures identify each party in the transaction. Proponents of cryptocurrency point to the ledger’s transparency and decentralization as the primary advantages of cryptocurrency.³

Since all transactions are public to the blockchain network and each unit of currency requires private credentials to access, the cryptographic protocols serve the same function as a bank in facilitating the electronic transfer of funds among parties. Thus, according to supporters, cryptocurrencies are more efficient and less prone to manipulation than conventional banking practices and institutions. However, the anonymity of blockchain transactions has popularized the technology among criminals. In 2020, victims of ransomware attacks paid hackers an amount of cryptocurrency equivalent to \$350 million.⁴ Recently, the cybercriminal group DarkSide received 75 bitcoin (equivalent to about \$5.0 million at the time) as ransom after its hack of Colonial Pipeline Co. in May 2021. Shortly after the ransom payment, U.S. federal law enforcement officials traced and recovered nearly 90 percent of the bitcoin used in the ransom exchange with DarkSide, raising hopes that the transparency of blockchain transactions could aid governments in their attempt to recoup future ransom payments and deter criminal use of cryptocurrencies. However, since the successful recovery of the bitcoin ransom, hackers have

1 State statute and federal regulation use various terms to refer to cryptocurrency, including “virtual currency” and “digital tokens.” In this memorandum, “cryptocurrency” is used to differentiate between currency that relies on cryptographic procedures and proprietary tokens, such as digital casino credits, that private businesses may accept but whose value is normally not reducible to fiat currency, which is a government-issued currency not backed by a commodity.

2 Blockchain technology is not used just for cryptocurrency accounting. Digital, decentralized ledgers are relatively new technologies, but various industries, from agriculture to health care, are testing the potential utility of the ledgers. See appendix for information on state action authorizing the use of blockchain technology. For more on the uses of blockchain, see The World Bank, “Blockchain and Distributed Ledger Technology (DLT),” April 12, 2018. For an illustration of a blockchain ledger, see Figure A.

3 Users might still be identified by pseudonyms only.

4 The actual amount is probably much higher, considering many cyberattacks go unreported.

started to prefer so-called “privacy coins,” which do not leave digital “trails” of visible transactions. According to Europol, the European Union’s law enforcement agency, the criminal use of such coins has “rendered cryptocurrency investigations more challenging.”

Shifts in Technological Structure

Blockchain technology continues to evolve, and changes in the technical structure of cryptocurrency exchanges have the potential to alter fundamentally the value and use of each currency. For example, Bitcoin and Ethereum, the two most widely used cryptocurrencies, rely upon “proof-of-work” systems, wherein users verify the coins’ blockchains through energy-intensive computer use. Analysts speculate Ethereum will soon shift to a “proof-of-stake” system, wherein owners validate blockchain transactions if they can provide their own cryptocurrency as collateral and have established such a “stake” longer than those of other blockchain users. Such a change would signal a major technological shift in how the cryptocurrency is produced, exchanged, and valued by its owners. This change, and other transformations in blockchain technology, have the potential to unsettle markets and cryptocurrency exchange rates.

Blockchain technology also could provide the digital architecture for a new, more decentralized internet, generally referred to as Web3. Web3 is an emergent technology, and little consensus exists about what it would look like or how it would differ from the current architecture of the platform- and application-based internet. According to the Congressional Research Service, in a “Web3 architecture, NFTs or cryptocurrencies could be used to purchase items online, represent digital ownership, pay royalties, or access certain applications and services,” without the need for intermediary entities such as web-hosting corporations.

Functions of Cryptocurrency

The two primary functions of cryptocurrency are as units of exchange and as stores of value. Despite the rapid growth in cryptocurrency usage over the past decade, relatively few entities own or use cryptocurrency. Few businesses accept any cryptocurrencies as payment. Only in El Salvador is a cryptocurrency official legal tender.⁵ Generally, cryptocurrency values are independent of those of fiat currency. “Stablecoins,” which are designed to reflect certain fiat currency values, are an exception to this. Cryptocurrency usage among consumers is still rare. In 2020, the 30-day average of Bitcoin transactions per day peaked at about 330,000, representing a fraction of the billions of financial transactions made daily around the world. Surveys estimate 16 percent of adult Americans have invested in, traded, or owned cryptocurrencies.

Over the past decade, more businesses have begun to invest in, trade, and accept Bitcoin.⁶ Consequently, platforms for trading, exchanging, and storing cyptocurrencies have become more widely available. In April 2021, Coinbase became the first major cryptocurrency exchange platform to become a publicly traded company in the United States. In April 2022,

5 In June 2021, El Salvador enacted law recognizing Bitcoin as legal tender in the country and requiring private businesses to accept the cryptocurrency as payment. It became the first government in the world to do so.

6 Among the major companies now accepting Bitcoin are Microsoft, Home Depot, and Whole Foods. The electric vehicle company Tesla started accepting Bitcoin for car purchases in early 2021 but ended the policy weeks later. J.P. Morgan is considering launching an actively managed Bitcoin fund.

Fidelity, the largest provider of 401(k) retirement plans in the U.S., announced it will allow plan enrollees to invest in Bitcoin with their employer's permission. Still, according to the consulting group Deloitte, only 2,300 out of 31 million American businesses accept any type of cryptocurrency.

Bitcoin

Created in 2008 by a pseudonymous computer programmer, Bitcoin was the first, and is still the most widely used, cryptocurrency. As of May 2021, Bitcoin accounted for about 39 percent of total cryptocurrency value, though that share can fluctuate significantly over short periods of time.⁷ Bitcoin, like other currencies, is still often traded in and measured in U.S. dollars.

Bitcoin, like other cryptocurrencies, is scarce. In contrast, governments can usually create more units of fiat currencies. The only way to acquire more bitcoin is to either purchase existing units or “mine” for more. Cryptocurrency “mining” requires solving complex mathematical problems using significant computing power. Miners are awarded more bitcoin through their verification of other transactions on the blockchain network. Often, miners will establish large complexes of supercomputers to collect more bitcoin. Total bitcoin supply, however, is limited—only about 21 million bitcoin are ultimately available to be mined. Additionally, each subsequent harvest of bitcoin yields less than the previous one, meaning an increase in demand cannot produce an equal increase in supply.

Compared to the production of other cryptocurrencies, Bitcoin mining expends large amounts of energy. Because the costs of running supercomputers are extraordinarily high, purchasing an existing bitcoin is easier than securing a new one. Other cryptocurrencies do not typically require as many resources to mine and can have many more tokens in circulation than Bitcoin. However, Bitcoin can be traded fractionally, and the value of one whole bitcoin currently far exceeds that of any other cryptocurrency. The cost of cryptocurrency production, particularly Bitcoin mining, has drawn international attention from regulators and companies. The Cambridge Center for Alternative Finance estimates Bitcoin mining and usage requires 108.4 terawatt hours of electricity annually.⁸

Regulation

Because cryptocurrencies do not require intermediaries or government backing, some proponents state the digital assets fall outside the traditional scope of government regulation. Others argue the instability of cryptocurrency valuations and the assets' increasing integration into the global financial system necessitate regulation. With the growing acceptance of cryptocurrencies at major corporations and financial institutions, industry and government experts have begun to consider in more detail how to protect consumers and financial institutions from the volatility and uncertainties of the novel technology.⁹

7 Market value calculation accessed *via* CoinMarketCap on May 18, 2021.

8 For context, the Netherlands consumed about the same amount of electricity in 2019.

9 International governments have begun to regulate the financial as well as the environmental consequences of cryptocurrencies. As of May 2021, China has issued a regional ban and Iran a national ban on cryptocurrency mining. Both countries cited the extreme energy costs of mining as the primary reason.

Federal Regulation

The federal government has extended some of its authority to regulate traditional financial activity to cryptocurrencies, including:

- The U.S. Department of the Treasury's Financial Crimes Enforcement Network (FinCEN) has announced that certain cryptocurrency activities qualify as "money services businesses" and thus parties to certain transactions must report suspicious activities. Additionally, those parties must operate anti-money-laundering compliance programs;
- The Internal Revenue Service treats virtual currencies as property, so users must pay taxes on any realized gains from the sale of cryptocurrency; and
- The Consumer Financial Protection Bureau and the Securities and Exchange Commission (SEC) have issued alerts about the high risk for financial scams involving cryptocurrency investments and transactions.

Federal regulation remains preliminary, however. Officials continue to study cryptocurrencies, including potential risks. Regulatory authority is dispersed across several entities, including the Federal Reserve, the SEC, the Commodity Futures Trading Commission, and the Treasury Department. The SEC, for one, has taken action to regulate cryptocurrency exchanges. In February 2022, the agency reached a settlement with the cryptocurrency company BlockFi after the SEC accused it of selling billions of dollars in unlicensed investment products. Included among its cryptocurrency investment products, BlockFi offered "yield farms," which allow investors to lend their cryptocurrencies to other investors in exchange for a return, either in other cryptocurrencies or U.S. dollars. As part of the settlement, the SEC required BlockFi to register the "yield farm" product as BlockFi Yield, which allowed current investors to keep their accounts with the company. Experts in the finance industry considered the settlement a significant federal recognition of cryptocurrency activity.

In May 2021, U.S. senators Cynthia Lummis and Kyrsten Sinema announced the creation of the Financial Innovation Caucus, which will study "responsible innovation" in financial technologies, including cryptocurrencies. The same month, after the price of Bitcoin dropped over 50.0 percent in a week, the U.S. Department of the Treasury briefed White House officials on potential "gaps" in cryptocurrency market regulation, including the risk of turmoil and devaluation in the broader financial system.

On March 9 2022, President Biden signed an Executive Order that outlined the first "whole-of-government" plan to address the risks posed by digital assets, including cryptocurrency. Among other things, the Executive Order:

- Directed the Department of the Treasury to assess and develop policy recommendations to address the implications of the growing digital asset sector;
- Encouraged the Financial Stability Oversight Council to identify and mitigate economy-wide financial risks posed by digital assets;

- Directed coordinated action across all relevant U.S. Government agencies to mitigate the illicit finance and national security risks posed by the illicit use of digital assets;
- Direct the Department of Commerce to establish a framework to drive national competitiveness and leadership in, and leveraging of, digital asset technologies;
- Affirmed the critical need for safe, affordable, and accessible financial services as a U.S. national interest;
- Directed the U.S. government to support technological advances and ensure responsible development and use of digital assets; and
- Directed the U.S. government to assess the technological infrastructure and capacity needs for a potential U.S. Central Bank Digital Currency.

State Regulation

State action concerning cryptocurrencies varies widely. For example, some states have:

- Defined virtual currencies as “money” or “property”;
- Applied existing money transmitter law to cryptocurrencies; and
- Debated the applicability of consumer protection laws.

Wyoming has enacted the most legislation related to cryptocurrency. As of June 2021, Wyoming is the only state to create an entirely new category of assets (“utility tokens”) for cryptocurrencies. When the cryptocurrency exchange Coinbase tried to operate in the state, Wyoming restricted the company’s business activities because the State’s Money Transmitter Act of 2003 did not define “virtual currency.” As a result, the State required Coinbase to hold equal amounts of fiat currency for all cryptocurrencies traded in the state. Coinbase suspended activities in Wyoming rather than comply with the regulations. In 2018, the Governor approved legislation allowing transactions involving “smart contracts,” including blockchain transactions. In 2019, the Legislature created a new category of banks, the Special Purpose Depository Institution, that can perform custodial and management services for owners of cryptocurrencies, among other digital assets. In 2021, the State legalized Decentralized Autonomous Organizations. These limited liability corporations are managed according to a set of “smart contracts” established on a blockchain.

Kansas

On May 18, 2021, the Office of the State Bank Commissioner (OSBC) updated a guidance document concerning the regulation of virtual currencies under the Kansas Money Transmitter Act (Act). The guidance applies to money transmission involving “decentralized cryptocurrencies,” such as Bitcoin, which have no primary administrator. While the Act does not address two-party currency exchange, the involvement of a third party would likely qualify the

exchange as “money transmission” under the Act.¹⁰ Because “money” is not defined in Kansas statute, and no governmental entity in the United States has adopted a cryptocurrency as fiat money, the OSBC does not consider cryptocurrency “money” under the Act. Therefore, the Act does not currently apply to cryptocurrencies.¹¹

The OSBC clarified the Act’s applicability to select uses of cryptocurrency, including:

- The exchange of cryptocurrency for sovereign currency between two parties is similar to a sale of goods and therefore does not qualify as money transmission;
- Since Kansas statute does not consider cryptocurrency money, the exchange of one cryptocurrency for another does not count as money transmission; and
- If an entity that expects to regularly handle cryptocurrencies seeks a money transmitter license, the OSBC requires the applicant to submit a third-party security audit of its information systems due to the increased risk to consumers posed by a cryptocurrency exchange.

State Actions

The types of legislation state legislatures have passed with respect to cryptocurrency, virtual exchanges, and blockchain technology are reviewed below. The appendix contains a detailed table of enacted legislation through 2020, as well as pending and enacted 2021 legislation.

Blockchain Technology

Arizona (2018 HB 2602, 2017 HB 2417, and 2017 HB 2216), Delaware (2017 SB 69), Illinois (2019 HB 2540 and HB 3575), and Maryland (2019 SB 136) have passed laws related to the use of blockchain technology.

Crimes

Several new laws in Michigan in 2019 amended definitions in the Michigan Penal Code to add virtual currency. Other state legislatures, including those of Nevada (2019 AB 15), Texas (2019 SB 207), and Florida (2017 HB 1379), passed laws adding virtual currency to definitions related to certain crimes, including money laundering.

10 KSA 9-508(h) defines “money transmission” as engaging “in the business of the sale or issuance of payment instruments or of receiving money or monetary value for transmission to a location within or outside the United States by wire, facsimile, electronic means or any other means, except that money transmission does not include currency exchange where no transmission of money occurs.”

11 KSA 9-508(f) defines “monetary value” as “a medium of exchange, whether or not redeemable in money.” Because cryptocurrencies are generally not accepted as means of payment, the OSBC does not define cryptocurrencies as having “monetary value.”

Exemption from Certain Securities Laws

Montana (2019 HB 584) and Wyoming (2018 HB 70) have exempted virtual currencies from certain securities laws. Wyoming (2019 HB 62) made “open blockchain tokens” not subject to securities exemptions.

Money Transmission

Alabama (2017 HB 215), Arkansas (2021 SB 150), Connecticut (2017 HB 7141), Georgia (2016 HB 811), Vermont (2017 B 182), and Washington (2017 SB 5031) have all approved regulation of virtual currency transmitters. New Hampshire (2017 HB 436) and Wyoming (2018 HB 19) exempted persons using virtual currency from being licensed as money transmitters, and Utah (2019 SB 213) exempted a person who facilitates the creation, exchange, or sale of certain blockchain technology-related products from money transmission laws.

Task Forces and Study Committees

Arizona (2021 HB 2544), California (2018 AB 2658), Colorado (2021 HB 1247), Connecticut (2018 SB 443), Indiana (2019 SR 9), Kentucky (2020 SB 55), Maryland (2018 HB 1634), New York (2020 SB 7508), North Dakota (2019 HB 1048), Vermont (2018 SB 269), and Wyoming (2020 HB 27) have requested or directed their legislatures to establish committees dedicated to studying virtual currencies and related issues.

Virtual Currency as Property

Wisconsin (2019 HB 62) and Wyoming (2019 SF 125) categorized virtual currency as property. Delaware (2021 SB 103), Illinois (2017 SB 868), Indiana (2021 SB 188), Kentucky (2018 HB 394), Nevada (2019 SB 44), New Hampshire (2021 SB 71), North Dakota (2021 SB 2048), South Dakota (2021 SB 2048), Tennessee (2017 HB 420), Utah (2017 SB 175), and Vermont (2019 HB 550) added virtual currencies to their unclaimed property statutes.

Sources

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- Janet Yellen, “Finance Committee Questions for the Record,” U.S. Senate Committee on Finance, January 21, 2021

APPENDIX: STATE CRYPTOCURRENCY AND BLOCKCHAIN LEGISLATION

State	2014-2021 Enacted Legislation ¹²	2022 Legislation ¹³
Alabama	<p>HB 470 (2018) added the provisioning of virtual currencies to the definition of “marketplace facilitator” in its taxation statute.</p> <p>HB 215 (2017) included virtual currency within the regulation of money transmission.</p>	HB 127 would exempt all virtual currency from <i>ad valorem</i> taxes.
Alaska	None enacted	None
Arizona	<p>HB 2544 (2021) established the Blockchain and Cryptocurrency Study Committee.</p> <p>HB 2601 (2018) made exempt from certain securities statutes transactions involving virtual coin offerings if the coin issuer meets certain requirements and allows all proceeds from such offerings to be deposited into any depository institution, physical or virtual, that is authorized to do business in the state. The bill also prescribes arbitration, underwriter, and facilitator regulations as they relate to virtual coin offerings.</p> <p>HB 2062 (2018) prohibited a city or town from prohibiting a person “running a node on blockchain technology” (mining for cryptocurrency) in a residence.</p> <p>HB 2417 (2017) made signatures, records, and</p>	<p>HB 2204 would provide that specified amounts shall be subtracted from state gross income, including the value of virtual currency. (Passed House)</p> <p>SB 1127 would, among other things, allow a state agency to accept cryptocurrency as a payment method of fines, civil penalties, or other penalties, rent, rates, taxes, fees, charges, and other financial obligations. (In Committee)</p> <p>SB 1128 would make virtual currency exempt from taxation. (In Committee)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
	<p>contracts secured through blockchain technology legally valid.</p> <p>HB 2216 (2017) prohibited requiring a person to use or be subject to electronic firearm tracking that uses blockchain technology.</p>	<p>SB 1341 would make bitcoin legal tender. (In Committee)</p> <p>SB 1383 would include cryptocurrency in the definition of liquid assets in law relating to dissolution of marriages. (Passed Senate)</p> <p>SB 1493 would allow the state or a political subdivision to pay its employees in virtual currency. (In Committee)</p> <p>SCR 1013 would amend the Constitution of Arizona to recognize the right of the people to own, hold, and use a mutually agreed on medium of exchange, including digital currency. (In Committee)</p>
Arkansas	<p>HB 1926 (2021) clarified control of virtual currency under the Uniform Commercial Code.</p> <p>SB 150 (2021) amended the definition of “money transmission” in the Uniform Money Services Act to include virtual currency.</p> <p>HB 1944 (2019) amended the Uniform Electronic Transactions Act to add the definitions of “blockchain distributed ledger technology” and “smart contract.”</p>	None
California	<p>AB 147 (2019) added the provisioning of a virtual currency to the definition of “marketplace facilitator” in the California Revenue and Taxation Code.</p> <p>AB 2658 (2018) defined “blockchain” and required the appointment of a Blockchain Working Group.</p>	<p>AB 2689 would authorize a private or public entity in the state to accept virtual currency as a method of payment for the provision of any good or service, including any governmental service. (In Committee)</p> <p>SB 1275 would authorize a state agency to accept cryptocurrency as a method of payment for the provision of government services. (In Committee)</p>
Colorado	<p>HB 1247 (2019) created an advisory group to study the use and benefits of blockchain technology in agriculture.</p> <p>SB 23 (2019), the Colorado Digital Token Act, provides exemptions from securities registration and salesperson licensing requirements for digital token dealers.</p>	<p>HB 1053 would instruct the Commission of Agriculture to create and deploy an online program that educates agricultural producers about blockchain technology and classify various types of digital assets as the appropriate type of property under the Uniform</p>

State	2014-2021 Enacted Legislation	2022 Legislation
		<p>Commercial Code. (In Committee)</p> <p>SB 25 would expand the the types of collateral that could be used to secure state capital financing managed by the state treasurer, including digital contracts secured through blockchain technology. (Passed Senate)</p>
Connecticut	<p>SB 443 (2018) directed the Department of Economic and Community Development to study all facets of blockchain technology.</p> <p>HB 7141 (2017) made virtual currency subject to money transmission laws, including requiring each licensed money transmitter that controls virtual currency on behalf of another person to hold currency of the same type and amount owed to such other person.</p>	<p>HB 5320 would require the registration of virtual currency businesses, establish consumer protections concerning virtual currency, and allow the acceptance of credit and debit cards for the purchase of virtual currency. (Passed out of House Committee)</p>
Delaware	<p>SB 103 (2021) amended the Delaware Code relating to unclaimed property; required the liquidation of and conversion to U.S. dollars of virtual currency prior to reporting and remitting the property to the State; limited the exposure of the State to claims by the putative owners of this property type for subsequent gains in value, given the volatility inherent in the value of virtual currency; and added “virtual currency” to the definition of “property.”</p> <p>SB 69 (2017) authorized corporations to use blockchain to create and maintain corporate records on the blockchain, including stock ledgers.</p>	None
Florida	<p>HB 1391 (2020) created the Financial Technology Sandbox program to allow financial technology innovators to test new products and services in a supervised, flexible regulatory sandbox using exceptions to specified general law.</p> <p>HB 1393 (2019) established the Blockchain Task Force.</p> <p>HB 1379 (2017) defined “virtual currency” and expanded the Florida Money Laundering Act to prohibit the laundering of virtual currency.</p>	<p>HB 273, among other things, would revise requirements for a written contract between a money transmitter or payment instrument seller and an authorized vendor, provide requirements for a money transmitter that receives virtual currency, and exclude virtual currency in the calculation of permissible investments under certain circumstances. (Enrolled for presentation to Governor)</p>
Georgia	<p>SB 301 (2018), the Revised Uniform Fiduciary Access to Digital Assets Act, defined a digital asset as an electronic record in which an individual has a right or interest that shall not include an underlying asset or liability unless the asset or liability is itself an electronic record.</p>	<p>HB 1342 would have exempted the sale or use of electricity used in the commercial mining of digital assets from sales and use tax. (Died in Committee)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
	<p>HB 811 (2016) authorized the Georgia Department of Banking and Finance to enact rules and regulations that apply solely to persons engaged in money transmission or the sale of payment instruments involving virtual currency.</p>	
Hawaii	<p>HR 94 (2021) requests the Hawaii Department of Commerce and Consumer Affairs reconsider its ruling on asset reserve requirements for virtual currency companies and to align the state's asset reserve requirements with those of other states.</p>	<p>HB 2018 would establish a program for the licensure, regulation, and oversight of digital currency companies. (Passed House)</p> <p>HB 2287 would exclude the electronic transfer of virtual currency through virtual currency and cryptocurrency companies from the Money Transmitters Act. (In House Committee)</p> <p>SB 2695 would establish the Blockchain and Cryptocurrency Task Force. (In Conference Committee)</p> <p>SB 2696 would permit any state agency that would enter into a virtual currency payment agreement with a person or virtual currency issuer to accept convertible virtual currency. (In Committee)</p> <p>SB 2698 would prohibit any encumbrance on the right to own, possess, and use any medium of exchange. (In Committee)</p> <p>SB 3025 would, among other things, establish a program for the licensure, regulation, and oversight of special purpose digital currency companies. (Passed Senate)</p> <p>SCR 31 would request the state Department of Commerce and Consumer Affairs create a task force to study the approval of blockchain technology and cryptocurrency in the state. (In Committee))</p>
Idaho	None enacted	<p>HB 583 creates the Digital Assets Act, provide for the classification of digital assets, and provide for purchase and sale of digital</p>

State	2014-2021 Enacted Legislation	2022 Legislation
Illinois	<p>SB 338 (2021) amends the definition of “virtual currency” and provides that virtual currency is presumed abandoned if it is unclaimed by the apparent owner five years after the last indication of interest in the property.</p> <p>HB 2540 (2019), or the Blockchain Business Development Act, created and provided for the regulation of blockchain-based limited liability corporations as businesses.</p> <p>HB 3575 (2019), the Blockchain Technology Act, provided for the use of blockchain technology in certain transactions and proceedings and prohibited local governmental units from restricting the use of blockchain technology.</p> <p>SB 868 (2017) amended the Revised Uniform Unclaimed Property Act to include virtual currency.</p>	<p>assets. (Signed by Governor)</p> <p>HB 3968 would, among other things, amend the Blockchain Business Development Act to provide that the state Department of Financial and Professional Regulation would have the authority to adopt rules, opinions, or interpretive letters regarding the custody of digital assets, including digital consumer assets, digital securities, and virtual currency. (Passed House)</p> <p>HB 5287 would provide that the state Department of Revenue could adopt rules for payment by cryptocurrency of any amount due only when the Department is not required to pay a discount fee or charge to convert the cryptocurrency to U.S. dollars. (Passed House)</p> <p>HB 5427 would amend the Blockchain Technology Act to provide that a court permit discovery of electronic records if the existence or ownership of a digital asset secured by a blockchain is factually in dispute and create the Digital Asset Discovery Task Force to conduct a review of the court-ordered discovery of digital asset procedures. (In Committee)</p> <p>SB 3643 would amend the Civil Administrative Code of Illinois to, among other things, define “cryptocurrency” and “cryptocurrency mining.” (In Committee))</p>
Indiana	<p>SB 188 (2021) defines “virtual currency: and includes virtual currency in the definition of “property” in the Revised Unclaimed Property Act.</p> <p>SR 9 (2017) urged the Legislative Council to assign a study committee to consider enactment of the Uniform Regulation of Virtual Currency Business Act or other virtual currency regulation.</p>	<p>SB 351 adds new law to the Uniform Commercial Code to, among other things, specify the rights and interests in controllable electronic records. (Signed by Governor)</p>
Iowa	None enacted	<p>SB 2333 would create new law in the Uniform Commercial Code covering commercial transactions</p>

State	2014-2021 Enacted Legislation	2022 Legislation
		involving controllable electronic records. (In Committee)
Kansas	None enacted	None
Kentucky	<p>HB 230 (2021) defines various terms relating to commercial mining of cryptocurrency using blockchain technology and provides sales and use tax exemptions on the personal property and electricity used in such mining.</p> <p>SB 255 (2021) renames the Energy Independence Act the Incentives for Energy-related Business Act and adds to the list of qualifications for incentives the minimum capital investment for cryptocurrency mining facilities.</p> <p>SB 55 (2020) established a Blockchain Technology Working Group that is to evaluate the usefulness and applicability of blockchain technology in the state’s critical infrastructure.</p> <p>HB 204 (2019) amended the Developmental Disabilities Assistance and Bill of Rights Act to provide the holder of virtual currency shall liquidate and remit the proceeds.</p> <p>HB 354 (2019) added the providing of a virtual currency to the definition of “marketplace facilitator” for state tax law purposes.</p> <p>HB 394 (2018) added virtual currency to the definition of “property” in the Kentucky Unclaimed Property Act.</p>	<p>SB 17 would, among other things, define and establish property classifications for digital assets. (In Committee)</p> <p>SB 67 would, among other things, establish definitions, scope, purchaser rights, debtor discharge obligations, control requirements, and jurisdictional rules relating to controllable electronic records. (In Committee)</p>
Louisiana	<p>HR 33 (2021) commends Bitcoin for its success and encourages the state and local governments to consider ways that it could help them benefit from the increased use of this technology.</p> <p>HB 701 (2020) defined terms related to virtual currency businesses, required licensure of virtual currency businesses, required security deposits from applicants for licensure, and provided for related matters.</p>	<p>HB 170 would allow a candidate to receive campaign contributions in the form of cryptocurrency. (In Committee)</p> <p>HB 741 would require the Department of Revenue to accept virtual currency as a form of payment of taxes, licenses, fees, penalties, and interest due to the state. (In Committee)</p> <p>HB 802 would allow banks to provide custodial services relative to digital access. (In Committee)</p>
Maine	None enacted	None
Maryland	<p>SB 136 (2019) authorized corporations to maintain certain records on a distributed electronic network or database, or a blockchain.</p> <p>HB 1634 (2018), the Financial Consumer Protection Act of 2018, directed the Maryland</p>	None

State	2014-2021 Enacted Legislation	2022 Legislation
	Financial Consumer Protection Commission to study, among other topics, cryptocurrencies, initial coin offerings, cryptocurrency exchanges, and other blockchain technologies.	
Massachusetts	None enacted	HB 4513 would establish a special commission on blockchain and cryptocurrency. (In Committee)
Michigan	<p>HB 4103 (2019) amended the penal code to modify the definition of “financial transaction device” to include the use of cryptocurrency and blockchain technology.</p> <p>HB 4105 (2019) amended the penal code to specify the definition of “money or other personal property” includes cryptocurrency.</p> <p>HB 4107 (2019) amended the penal code to include cryptocurrency in the definition of “monetary instrument.”</p>	SB 888 would establish the Blockchain and Cryptocurrency Commission. (In Committee)
Minnesota	None enacted	<p>SF 970 would, among other things, include cryptocurrency in the definition of “money” as it relates to forfeiture. (In Conference Committee)</p> <p>HB 2730 would allow a corporation to issue all or a portion of its shares as certificate tokens, or a representation of shares that is stored in an electronic format and is either entered into a blockchain or linked to or associated with the certificate token.</p> <p>S 2940 would allow for the use of electronic networks and databases to record stock ownership and other records.</p>
Mississippi	None enacted	<p>HB 1152 would have amended the Money Transmitters Act to provide an exemption for the buying, selling, issuing, or taking custody of payment instruments or stored value in the form of virtual currency or receiving virtual currency for transmission. (Died in Committee)</p> <p>HB 1153 would have authorized security interests in digital assets and classified digital assets as property. (Died in Committee)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
		<p>HB 1154 would have, among other things, provided that a person who developed, sells or facilitates the exchange of an open blockchain token is not subject to certain securities and money transmission laws. (Died in Committee)</p> <p>SB 2632 would have created the Digital Asset Act, specified that digital assets are property within the Uniform Commercial Code, and clarified the jurisdiction of state courts relating to digital assets. (Died in Committee)</p> <p>SB 2633 would have, among other things, created an exemption for open blockchain tokens from securities laws.</p>
Missouri	None enacted	<p>HB 1472 would amend statutes related to money laundering to include cryptocurrency in the definition of “monetary instruments.” (Passed House)</p> <p>HB 2127 would include digital currencies in the definition of “teller machine” in criminal law. (Passed House)</p> <p>HB 2672 would exempt virtual currencies from taxation. The also would define several terms, including “open blockchain token.” (In Committee)</p>
Montana	HB 584 (2019) revised laws relating to cryptocurrency, amended exempt transactions from certain securities laws, and allowed certain digital transactions.	None
Nebraska	<p>LB 649 (2021) enacted the Nebraska Financial Innovation Act, which authorized digital asset depositories to conduct business in Nebraska, defined “blockchain,” and outlined powers and rights of control over electronic records.</p> <p>LB 284 (2019) added the providing of virtual currency to the definition of “marketplace facilitator” for state sales tax law purposes.</p>	<p>LB 648, the Transactions in Digital Access Act, would define terms related to digital assets; classify such asset types, including virtual currency; and outline rights of control as they relate to smart contracts and private keys. (In Committee)</p> <p>LB 993 would limit digital asset and cryptocurrency custody services. (In Committee)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
Nevada	<p>SB 71 (2021) revised provisions governing unclaimed property and defined “virtual currency” for these purposes.</p> <p>AB 15 (2019) revised provisions governing crimes related to certain financial transactions by adding virtual currency to the definition of “monetary instrument.”</p> <p>AB 445 (2019) adds the providing of virtual currency to the definition of “marketplace facilitator” for state tax purposes.</p> <p>SB 44 (2019) revised provisions of the Uniform Unclaimed Property Act to include virtual currency.</p> <p>SB 164 (2019) defined virtual currencies as “intangible personal property” and exempted them from taxation.</p>	None
New Hampshire	<p>HB 436 (2017) exempted persons using virtual currency from being licensed as money transmitters.</p>	<p>HB 1502 would specify that digital assets are property within the Uniform Commercial Code, authorize security interests in digital assets, and allow banks to provide custodial services for digital asset property. (In Committee)</p> <p>HB 1503 would exempt the developer, seller, or facilitator of the exchange of an open blockchain token from certain securities laws. (Passed House)</p>
New Jersey	<p>SB 2527 (2016) authorized estate executors to manage digital assets, including virtual currencies.</p>	<p>AB 385 would require the state Department of the Treasury to review and approve a digital payment platform.</p> <p>AB 1975 would enact the Virtual Currency and Blockchain Regulation Act, which would, among other things add the definition of “virtual currency” to several locations in statute relating to investments and debt. (In Committee)</p> <p>AB 2371 would enact the Digital Asset and Blockchain Technology Act, which would, among other things, regulate digital asset business activity. (In Committee)</p> <p>AB 3287 would prohibit public</p>

State	2014-2021 Enacted Legislation	2022 Legislation
		officials from accepting virtual currency and non-fungible tokens as gifts. (In Committee)
New Mexico	None enacted	None
New York	SB 7508 (2020), among other things, established the Digital Currency Task Force.	<p>AB 3336 would create a regulatory sandbox program to test financial technology products or services, including cryptocurrencies. (In committee)</p> <p>AB 3747 would establish a task force to study the potential designation of economic empowerment zones for the mining of cryptocurrencies in the state of New York. (In committee)</p> <p>AB 3860 would establish a task force to study the impact of a state-issued cryptocurrency on the state of New York. (In committee)</p> <p>AB 3906 would establish that state agencies are allowed to accept cryptocurrencies such as Bitcoin, Ethereum, Litecoin, and Bitcoin cash as payment. (In committee)</p> <p>AB 7389 would establish a moratorium on the operation of cryptocurrency mining centers and provide that authorization of such facilities requires a full environmental impact statement review. (In committee)</p> <p>AB 5044 would create the Digital Currency Task Force to provide the Governor and Legislature with information on the potential effects of the widespread implementation of digital currencies on financial markets in the state. (In committee)</p> <p>AB 6584 would direct the New York State Energy Research and Development Authority to conduct a study on powering cryptocurrency mining facilities with renewable energy. (In committee)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
		<p>AB 7742 would, among other things, include unclaimed virtual currency as abandoned property. (In Committee)</p> <p>AB 8598 would prohibit the investment of certain public funds with companies conducting a cryptocurrency business activity. (In Committee)</p> <p>AB 8820 would establish the offenses of virtual token fraud and others. (In Committee)</p> <p>SB 8009 includes in the definition of “financial institution” any virtual currency business licensed by the superintendent of financial services. (Signed by Governor)</p> <p>AB 9028 would require certain disclosures in advertisements involving virtual tokens. (In Committee)</p> <p>AB 9275 would establish the New York State Cryptocurrency and Blockchain Study Task Force to provide the governor and the legislature with information on the effects of the widespread use of cryptocurrencies and other forms of digital currencies and their ancillary systems, including blockchain technology. (Passed Assembly)</p>
North Carolina	HB 229 (2017) defined virtual currency traders as money transmitters and required each obtain a money transmitter license.	HB 631 would authorize and regulate sports wagering and include cryptocurrency in the definition of “cash equivalent.” (Passed Senate)
North Dakota	<p>SB 2021 (2021) directed Legislative Management to consider studying the feasibility and desirability of regulating special purpose depository institutions and other entities engaged in virtual currency business activities.</p> <p>SB 2048 (2021) amended the Revised Uniform Unclaimed Property Act to include virtual currency.</p> <p>HB 1048 (2019) directed Legislative Management to research and develop the use of distributed ledger-enabled platform technologies, such as</p>	

State	2014-2021 Enacted Legislation	2022 Legislation
	blockchains, for computer-controlled programs, data transfer and storage, and program regulation to protect against falsification, improve internal data security, and identify external hacking threats.	
Ohio	None enacted	<p>HB 348 would include virtual currency in law related to unclaimed funds. (Passed House)</p> <p>HB 585 would amend the Uniform Commercial Code to address the classification of and perfection of security interests in digital assets and to allow banks to provide custodial services of digital assets. (In Committee)</p>
Oklahoma	None enacted	<p>HB 3279 would, among other things, create the Distributed Ledger Technology Assets Offering Act, authorize the State to develop and use distributed ledger technologies, provide requirements for digital and smart contracts, and prescribe procedure for payment. (Passed House)</p> <p>HB 4046 would add the commercial mining of cryptocurrency to the definition of “manufacturing facilities” in statute. (In Committee)</p> <p>SB 590 would create the Commercial Digital Asset Mining Act, define certain terms, provide sales tax exemptions for the sale of certain equipment and machinery related to digital asset mining, and state the intent of the Legislature to provide incentives to attract investments and jobs in innovative technological industries such as blockchain technology. (In Senate)</p> <p>SB 1425 would include cryptocurrency and non-fungible tokens in the definition of “security” in the Uniform Securities Act of 2004. (In Committee)</p>
Oregon	HB 2488 (2019) prohibited the State from accepting payments using cryptocurrency and	

State	2014-2021 Enacted Legislation	2022 Legislation
	candidates for public office from accepting campaign contributions using cryptocurrency.	
Pennsylvania	None enacted	<p>HB 1724 would establish a task force on digital currency and the impact on widespread use of cryptocurrency and other forms of digital currencies. (In Committee)</p> <p>SB 1053 would require the establishment of a system for the payment of tolls or charges by an operator of a vehicle using alternative electronic payment options. (In Senate)</p>
Rhode Island	HB 5847 (2019) added virtual currency to the existing electronic money transmission and sale of check licenses for regulation purposes.	HB 5425 would establish the Rhode Island Economic Growth Blockchain Act, which would offer a regulatory technology sandbox for “technology innovators” to test new products and services. (In committee)
South Carolina	None enacted	<p>HB 3495, among other things, would enact the South Carolina Blockchain Industry Empowerment Act; provide that a person who develops, sells, or facilitates the exchange of an open blockchain token is not subject to specified securities and money transmission laws; and specify that digital assets are property within the Uniform Commercial Code. (In committee)</p> <p>HB 3529 would, among other things, provide that candidates and committees may accept digital currency as contributions. (In committee)</p> <p>HB 3849 would enact the Revised Uniform Unclaimed Property Act and include virtual currency in the definition of “property.” (In committee)</p>
South Dakota	HB 1196 (2019) amended the State’s electronic transactions statute to add the definition of “blockchain technology” and amend other definitions to include “blockchain technology.”	SB 47 revises certain provisions regarding money transmission and requires a licensee transmitting virtual currencies to hold like-kind virtual currencies of the same volume as that held by the licensee in lieu of the permissible investments otherwise required. (Signed by

State	2014-2021 Enacted Legislation	2022 Legislation
		Governor)
Tennessee	<p>HB 420 (2017) included virtual currency in the Uniform Unclaimed Property Act.</p> <p>SB 1662 (2018) recognized the legal authority to use distributed ledger technology and smart contracts in conducting electronic transactions.</p> <p>SB 2508 (2018) prohibited trustees of any defined contribution plan or related investment vehicle established as a health benefit by the state insurance company from investing in any cryptocurrency.</p>	<p>SB 2855 would establish the Blockchain and Cryptocurrency Study Committee. (In Committee)</p> <p>HB 2644 would authorize a county, municipality, or the state to invest in cryptocurrency, blockchains, and non-fungible tokens. (In Committee)</p>
Texas	<p>HB 4474 (2021) amended law relating to the control of virtual currency and the rights of purchasers who obtain control of virtual currency for the purposes of the Uniform Commercial Code.</p> <p>SB 207 (2019) amended the Penal Code to include a digital currency in the definition of “funds” for the purpose of money laundering.</p>	
Utah	<p>SB 175 (2017) included virtual currency in the Unclaimed Property Act.</p> <p>SB 213 (2019), the Blockchain Technology Act, defined and clarified terms related to blockchain technology and exempted a person who facilitates the creation, exchange, or sale of certain blockchain technology-related products from the Utah Money Transmitter Act.</p>	<p>HB 335 would create the Blockchain and Digital Innovation Task Force. (Sent to Governor)</p> <p>HB 456 would require the Division of Finance to contract with a third party to accept payments to participating government agencies and political subdivision in the form of digital assets. (Sent to Governor)</p> <p>SB 182 would establish a framework for the regulation of digital assets. (Sent to Governor)</p>
Vermont	<p>HB 550 (2019) added virtual currency to the definition of “property” in the Vermont Revised Uniform Unclaimed Property Act.</p> <p>SB 154 (2019) added the definition of “virtual currency” to statutory provisions governing financing and related services and licensees regulated by the Department of Financial Regulation.</p> <p>SB 269 (2018) enabled the creation of blockchain-based limited liability companies and directed an agency to study expanding the use and promotion of blockchain technology.</p> <p>HB 182 (2017) added virtual currency to the list of investments subject to certain money transmitter</p>	<p>HB 515 would amend law governing banking, securities, and insurance to provide that a licensee register each remote access unit where a consumer may access money transmission services, including buying or selling cryptocurrency. (Passed House)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
	regulations.	
Virginia	None enacted	HB 263 would permit banks in the Commonwealth to provide virtual currency custody services so long as the bank has adequate protocols in place to effectively manage the associated risks. (Passed both chambers)
Washington	SB 5031 (2017) included virtual currency in money transmitter regulations.	SB 5531 would revise the Uniform Unclaimed Property Act to include virtual currency. (Signed by Governor)
West Virginia	None enacted	HB 4511 would amend the Unclaimed Property Act to include virtual currencies. (Signed by Governor)
Wisconsin	None enacted.	None
Wyoming	<p>HB 1 (2021) created the University of Wyoming Cryptocurrency Staking Program to operate and maintain nodes and staking pools for not less than three publicly tradable cryptocurrencies.</p> <p>HB 43 (2021) amended the definition of “digital asset,” amended provisions relating to the nature of digital assets under commercial law, specified the application of commercial law to specific types of digital assets, and established that certain digital asset provisions are consumer protection statutes for commercial law purposes.</p> <p>HB 133 (2021) authorized online sports wagering and includes virtual currency in the definition of “cash equivalent.”</p> <p>SF 38 (2021) provided for the formation and management of decentralized autonomous organizations.</p> <p>SB 47 (2020) modified the means to perfect a security interest in virtual currency and digital securities, specified location requirements for digital assets used as collateral, amended the requirements for banks providing custodial services, and clarified the jurisdiction of Wyoming courts to hear cases related to digital assets.</p> <p>HB 27 (2020) established a select committee on blockchain, financial technology, and digital innovation technology.</p> <p>SF 125 (2019) classified digital assets within existing laws, specified that digital assets are property within the Uniform Commercial Code, established an opt-in framework for banks to</p>	<p>SF 68 amends statutory provisions regulating decentralized autonomous organizations. (Signed by Governor)</p> <p>SF 106 would authorize the State Treasurer to issue Wyoming stable tokens. (Vetoed by Governor)</p>

State	2014-2021 Enacted Legislation	2022 Legislation
	<p>provide custodial services for digital asset property, and clarified the jurisdiction of state courts relating to digital assets.</p> <p>HB 74 (2019) created Special Purpose Depository Institutions as a new financial institution and established procedures for incorporation.</p> <p>HB 70 (2019) authorized the Wyoming Secretary of State to develop and implement a blockchain filing system.</p> <p>HB 62 (2019) established, among other things, that open blockchain tokens with specified consumptive characteristics are intangible personal property and not subject to a securities exemption, among other things.</p> <p>HB 57 (2019), the Financial Technology Sandbox Act, provided that a person who makes an “innovative financial product or service” available to consumers in the financial technology sandbox may be granted a waiver of specified requirements imposed by statute or rule if those statutes do not permit the product or service to be made available to consumers.</p> <p>HB 70 (2018) provided that a person who develops, sells, or facilitates the exchange of an open blockchain token is not subject to specified securities and money transmission laws.</p> <p>HB 101 (2018) authorized corporations to use electronic networks or databases for the creation or maintenance of corporate records.</p> <p>HB 19 (2018) amended the Wyoming Money Transmitter Act to provide an exemption for virtual currency.</p> <p>SF 111 (2018) exempted virtual currencies from state property taxes.</p>	