Assessment of Commerce and Regulatory Issues Presented by Blockchain Technology and Virtual Currency

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Commissioner Russell C. Weigel, III

To: The Financial Services Commission and the Florida Legislature

The Office of Financial Regulation (OFR) presents the following whitepaper as its initial assessment of issues arising in Florida's financial services marketplace stemming from the rapid growth of blockchain technology applications and virtual currencies. The whitepaper is designed to serve as a tool for policymakers, evaluates developments in financial technology, and identifies potential issues which Floridians may face. It does not make policy recommendations.

Effective July 1, 2022, Florida's General Appropriations Act provided funding and authority for the OFR to create an office of blockchain, virtual currency, and fintech policy. Once the Financial Services Commission formally establishes this new policy office by rule promulgation, policy staff will further refine the whitepaper and identify additional issues and areas of interest related to developments in financial technology and the regulation thereof.

The OFR welcomes your feedback and hopes this whitepaper facilitates policy discussions aimed at growing Florida's financial services marketplace and developing appropriate regulatory frameworks.

Sincerely,

Russell C. Weigel, III
Commissioner

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I. Executive Summary

The Office of Financial Regulation (OFR) regulates the financial services industry and protects consumers using those services. The OFR's registrants and licensees are experiencing ever-increasing consumer demand for digital asset and blockchain products and services and, in response, are seeking regulatory guidance. The OFR realizes that the exponential growth of the digital asset and blockchain technology industry creates both opportunities for economic growth and potential for consumer harm, each of which reaches beyond financial services businesses and their consumers. Accordingly, the OFR recognizes the importance of cooperating with other regulators, as well as lawmakers, to develop a sound policy regarding digital assets and blockchain technology which minimizes consumer harm and encourages economic growth.

This whitepaper is an initial effort by the OFR to provide background information and insight into the current use and regulation of digital assets and blockchain technology and to identify initial policy considerations for regulators and lawmakers.[1] The first part of this whitepaper analyzes the impact of digital assets and blockchain technology on Florida's financial services industry. Specifically, this part discusses decentralized finance and money laundering concerns affecting the financial services industry generally, as well as concerns specific to each organizational unit within the OFR. The second part of this whitepaper discusses potential changes to Florida's Uniform Commercial Code, Florida's Disposition of Unclaimed Property Act, and Florida's Business Organizations Code to accommodate the use of digital assets and blockchain technologies. The third part of this whitepaper highlights potential cryptocurrency and blockchain

[1] The OFR notes that there are many issues surrounding digital assets and blockchain technology that remain to be identified and/or discussed in detail, and it is fully anticipated that this whitepaper will be supplemented to address such issues. The OFR anticipates incorporating comments received from stakeholders and the public, as well as, input from the recently established OFR Office of Blockchain, Virtual Currency and Fintech Policy in any supplements to this whitepaper.

technology use cases for state government and discusses current government implementations of blockchain, including implementations in Florida. Potential uses for cryptocurrency and blockchain technology discussed in this section include accepting cryptocurrency as payment for taxes, fees, and services; paying employees in cryptocurrency; generating revenue through cryptocurrency; performing healthcare, real estate, and personal identity recordkeeping functions; voting; and procurement of goods and services. The fourth part of this whitepaper discusses federal initiatives related to digital assets. Finally, the whitepaper concludes with a summary of the policy considerations discussed in the preceding sections.

II. Background and Terminology

The term "digital assets" broadly refers to "accounts, documents, information, records, and photos that are accessible via an electronic device."[2] A type of digital asset, "digital currency," also referred to as "electronic money," is defined as "'a record of the funds or 'value' available to a consumer stored on an electronic device in his or her possession, either on a prepaid card or on a personal computer for use over a computer network such as the internet'" and includes virtual currencies and online bank deposits.[3] Once a digital currency is no longer available in tangible form it is deemed a "virtual currency."[4]

"Cryptocurrency" is a type of virtual currency. Cryptocurrency is defined as a digital decentralized medium of exchange that is encrypted using cryptography.[5] Cryptocurrency

[2] Patricia Sheridan, *Article: Inheriting Digital Assets: Does the Revised Uniform Fiduciary Access to Digital Assets Act Fall Short?*, 16 ISJLP 363, 364 (2020).
[3] Scott D. Hughes, *Article: Cryptocurrency Regulations and Enforcement in the U.S.*, 45 W.St.L.Rev. 1, 8 (2017) (*quoting* Mohamad Al-Laham et al., *Development of Electronic Money and Its Impact on the Central Bank Role and Monetary Policy*, 6 Issues in Informing Sci. & Info. Tech. 339 (2009)).
[4] *Id.* at 9-10.
[5] Kate Ashford and John Schmidt, *What is Cryptocurrency?*, Forbes Advisor, https://www.forbes.com/advisor/investing/what-is-cryptocurrency/ (last visited August 29, 2022).

transactions are completed over the internet on a distributed ledger and are not denominated in fiat currency such as the U.S. Dollar or the Euro.[6] Cryptographic proof is used to verify each cryptocurrency transaction before the transaction is recorded on the distributed ledger.[7] Bitcoin is one well-known example of the thousands of different cryptocurrencies existing today.[8] Cryptocurrency, can be used for many purposes, including for the purchase of goods or services, or for investment purposes.[9]

Most cryptocurrencies are supported by "blockchain" a form of "Distributed Ledger Technology" (DLT).[10] While there are many other forms of DLT, this paper primarily discusses blockchain. A blockchain is made up of a series of blocks (bundles of transactions), each new block is added to the chain comprised of previous blocks.[11] The transparency of the information contained on a blockchain is flexible; a record can be plain text or it can be subject to various degrees of encryption.[12] New records may be added to the chain, once added, become nearly immutable and may not be easily removed or altered.[13] Adding a record to the ledger requires some form of consensus, and there are various mechanisms by which a consensus can be achieved.[14] The consensus mechanism ensures the integrity of the blockchain and creates a verifiable audit trail.[15]

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[6] Hughes, *supra* note 3, at 9-10.
[7] Ashford and Schmidt, *supra* note 5.
[8] *Id*.
[9] *Id*.
[10] Drew Diedrich, *Article: Distributed Ledger Technology*, 4 Geo.L.Tech.Rev. 673, 673 (2020).
[11] *Id*. at 676.
[12] Public-Private Analytic Exch. Program, *Blockchain and Suitability for Government Applications*, pg. 27 (2018), file:///C:/Users/whiter3/Downloads/825735.pdf; *see also* Piotr Hejwowski, *Do you need private blockchain*? Softwaremill (June 2, 2021), https://softwaremill.com/do-you-need-private-blockchain (last visited Dec. 2, 2022). Note, private blockchains can rewrite or edit data on already confirmed blocks, but all validators must agree to "rewind" the block.
[13] Public-Private Analytic Exch. Program, *supra* note 12, at 6.
[14] *Id*. at 27.
[15] *Id*. at 6.

There are three main participants that interact directly with cryptocurrencies: validators, Virtual Asset Service Providers (VASPs), and consumers or traders.[16] Validators are responsible for verifying transactions in a blockchain and are rewarded for their efforts.[17] VASPs are businesses that conduct one or more of the following actions on behalf of their clients: 1) "exchange between [digital] assets and fiat currencies;" 2) "exchange between one or more forms of [digital] assets;" 3) "transfer of [digital] assets;" 4) "safekeeping and/or administration or [digital] assets or instruments enabling control over [digital] assets;" and 5) "participation in and provision of financial services related to an issuer's offer and/or sale of a [digital] asset."[18] Worldwide there are around 500 VASPs.[19] Traders or consumers are the individuals or entities that actively hold, trade, or exchange cryptocurrencies. To transact in cryptocurrency, consumers or traders must establish a cryptocurrency wallet and decide whether to use a VASP or transact directly with another trader or consumer without the involvement of an intermediary.[20]

Blockchain also supports "smart contracts," automatic software programs used to establish an agreement between participants. Once the programmed parameters are met, the smart contract is automatically executed, and the agreement is fulfilled without the need for intermediary parties.[21] Smart contracts can be "code-only" smart contracts, i.e., created and implemented

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[16] *Crypto Market Participants*, Crosstower (Feb. 9, 2021), https://crosstower.com/resources/education/crypto-market-participants/ (last visited Nov. 15, 2022).
[17] *Who Are the Blockchain Validators: Network Users Powering the Blockchain Functionality* (Nov. 26, 2021), https://phemex.com/academy/blockchain-validator-process; *see also Crypto Market Participants*; Ashford and Schmidt, *supra* note 5.
[18] Financial Action Task Force, *Virtual Assets and Virtual Asset Service Providers*, pgs. 13-14 (2019), https://www.fatf-gafi.org/media/fatf/documents/recommendations/RBA-VA-VASPs.pdf.
[19] Forbes Advisor, *10 Best Crypto Exchangers of 2022* (Dec. 1, 2022), https://www.forbes.com/advisor/investing/cryptocurrency/best-crypto-exchanges/ (last visited Dec. 1, 2022).
[20] Jeffery Mazer, *Demystifying Cryptocurrencies, Blockchain, and ICOs*, https://www.toptal.com/finance/market-research-analysts/cryptocurrency-market (last visited Nov. 30, 2022).
[21] Victoria Puzhevich, *The Role of Smart Contracts in the Government Sector*, Scand (Jan. 27, 2022), https://scand.com/company/blog/the-role-of-smart-contracts-in-the-government-sector/ (last visited Sept 1, 2022); CFI Team, *What are Smart Contracts*, CFI (Nov. 10, 2022), https://corporatefinanceinstitute.com/resources/knowledge/deals/smart-contracts/ (last visited Dec. 4, 2022).

without any text-based contract, or they can be used as a means to effectuate certain parts of a text-based contract.[22] The automatic payment of royalties to a songwriter for the purchase of the songwriter's music on the internet could be an example of the use of a smart contract.

The global market for blockchain technology was $4.7 billion in 2021 and is projected to grow to $163.8 billion in the next six years.[23] This growth was accelerated in recent years by the COVID-19 pandemic, which pushed financial institutions, government entities, and other businesses to explore the possibility of accepting and using virtual currency or developing applications for blockchain technology.[24] LinkedIn Corporation reported that cryptocurrency-related job postings skyrocketed 395% from 2020 to 2021, as compared to the tech industry in general, which saw a 98% job growth over the same period.[25] A similar report from Indeed saw a 118% increase in postings for cryptocurrency and blockchain jobs from 2020 to 2021.[26] Both reports indicated that recruitment was not just in technology-related roles, but included support functions like accounting, consulting, marketing, and human resources.[27] However, the rapidly expanding crypto-industry, also provides bad actors with the opportunity to prey upon the unwary. The number of individual cryptocurrency scam victims rose by more than 48% from 2019 to

[22] Stuart D. Levi & Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations*, Harvard Law School F. on Corp. Governance (May 26, 2018), https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/.
[23] *Market Research Report*, Fortune Business Insights (Mar. 2022), https://www.fortunebusinessinsights.com/industry-reports/blockchain-market-100072.
[24] Lubinor Tassev, *US Pharmacy Chain Pharmcorx Accepts Cryptocurrency for Fast Covid Testing*, Bitcoin.com (June 6, 2021), https://news.Bitcoin.com/us-pharmacy-chain-pharmcorx-accepts-cryptocurrency-for-fast-covid-testing; *see also* Remko van Hoek and Mary Lacity, *How the Pandemic is Pushing Blockchain Forward*, Harvard Bus. Rev., (Apr. 27, 2021), https://hbr.org/2020/04/how-the-pandemic-is-pushing-blockchain-forward (last visited Dec. 4, 2022).
[25] LinkedIn, https://www.linkedin.com/news/story/crypto-sees-hiring-boom-4639913/?msclkid=87cdc3eeabb611ecb4ce899d81f0a9ec (last visited Mar. 24, 2022).
[26] Ann Elizabeth Konkel, *Job Seeker Interest Spikes in Crypto and Blockchain*, Indeed (Aug. 3, 2021), https://www.hiringlab.org/2021/08/03/job-seeker-interest-spikes-crypto-and-blockchain/.
[27] Konkel, *supra* note 26; LinkedIn, *supra* note 25.

2020.[28] In addition to facilitating fraud, virtual currencies and blockchain can also be utilized by bad actors to engage in activities such as trafficking in illicit goods, money laundering, illegal gambling, and ransom schemes.[29] It is the responsibility of policymakers to create sound policy that encourages economic growth and technological innovation but also protects consumers by making sure they are aware of the risks and can take appropriate steps to safeguard against loss.

III. Digital Assets' Impact on the Financial Services Industry

The OFR provides regulatory oversight for Florida's financial services industry. The OFR's mission is to protect Florida's financial services consumers, promote a safe and sound financial marketplace, and contribute to the growth of Florida's economy through fair, innovative, and excellent regulation. Virtual currencies impact the entire financial services industry and, in the performance of its duties, the OFR has been studying the products, services, and risks created by these technologies. Accordingly, the OFR is uniquely positioned to serve as a resource to the industry, consumers, and policymakers regarding virtual currencies and blockchain.

A. Virtual Currency and Blockchain Issues Affecting the Financial Services Industry

1. Decentralized Finance

"Decentralized finance" (DeFi) is a collective term for financial products and services that use blockchain technologies and operate autonomously, often using smart contracts, to provide financial services without the use of intermediaries, such as brokerages, exchanges, or banks.[30]

[28] *The 2021 Crypto Crime Report*, Chainalysis, 71 (Feb. 16, 2021), https://go.chainalysis.com/rs/503-FAP-074/images/Chainalysis-Crypto-Crime-2021.pdf.
[29] Damien Black, *US Congress Targets Bad Actors on the Crypto Stage*, CyberNews, (Feb. 11, 2022), https://cybernews.com/crypto/us-congress-targets-bad-actors-on-the-crypto-stage-but-is-it-savvy-enough-to-catch-them/.
[30] *Decentralized Finance (DeFi)*, https://ethereum.org/en/defi/ (last visited Dec. 2, 2022).

DeFi provides a decentralized alternative to many existing financial services and creates the opportunity to develop new financial products.

DeFi lending, for example, is where autonomous platforms aggregate lender virtual currency funds and offer virtual currency to borrowers.[31] As of January 2022, there was an estimated $20 billion in loans secured by virtual currency outstanding, with another $22 billion on deposit with DeFi applications as potential collateral for additional loans.[32] Lending products utilizing virtual currency may be higher risk than traditional lending products, and loan terms tend to be predatory in nature.[33] One such risk is the volatility of value in the underlying virtual currency.[34] Significant fluctuations in value during the loan period may require the borrower to provide additional collateral mid-loan or pay back a greater value of the underlying virtual currency at the conclusion of the loan term.[35]

Often, regulating decentralized finance platforms and protocols is extremely difficult because they are not created by a centralized organization, and their generally anonymous creators can reside anywhere in the world. The lack of regulation, including essential safeguards such as "know your customer" and anti-money laundering procedures, is likely one of the reasons that the primary destination for stolen funds was decentralized finance applications in 2021.[36] Consumers

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[31] *Id.*

[32] Chris Brookins, *DeFi Lending Platforms Continue To Attract Capital In 2022*, https://www.forbes.com/sites/christopherbrookins/2022/01/04/defi-lending-platforms-continue-to-attract-capital-in-2022/?sh=6306f2344e6f (last visited Sept. 14, 2022).

[33] Georgia Weston, *3 Major DeFi Lending Risks that You Should Know*, 101 Blockchains, https://101blockchains.com/defi-lending-risks/ (last visited Dec. 2, 2022); Jacob Fiddy, *6 Major DeFi Lending Risks and How to Minimize Them*, https://definoobs.com/what-are-the-risks-of-defi-lending-the-ultimate-guide/ (last visited Dec. 2, 2022); *see generally*, Caroline A. Crenshaw, *Statement on DeFi Risks, Regulations, and Opportunities* (Nov. 9, 2021), https://www.sec.gov/news/statement/crenshaw-defi-20211109.

[34] Weston, *supra* note 33; *supra* note 33.

[35] DeFi Rate, *Collateralized Loans in DeFi* (last visited May 23, 2022), https://defirate.com/borrow/.

[36] *Crypto Crime Report*, Chainalysis, 2022, https://go.chainalysis.com/rs/503-FAP-074/images/Crypto-Crime-Report-2022.pdf.

should be cautious, do their own research, and understand the risks when utilizing decentralized finance platforms.[37]

2. Anti-Money Laundering

Money laundering is the process of taking money obtained by illegal means or through criminal activity and making it look like it came from a legitimate source.[38] Money laundering negatively impacts the national economy by decreasing tax revenues, increasing the funding available to criminal and terrorist organizations, and generating liability for financial institutions, which could harm law-abiding customers of such institutions.[39] Billions of dollars are laundered globally each year. Once money is generated through a criminal offense, there are three stages in the money laundering process.[40] First, that money is placed into the financial system, typically through banks.[41] Second, the money is "layered," or passed through multiple institutions, through complex transactions to obscure the money's illegal origin.[42] Lastly, the money is integrated into the legal economy to give it the appearance of legitimate money.[43]

Congress first addressed money laundering when it passed the Currency and Foreign Transactions Reporting Act of 1970 (BSA).[44] The BSA requires all financial institutions in the

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[37] Yaffe-Bellany, M*illions for Crypto Start-Ups, No Real Names Necessar*y, The N.Y. Times (Dec. 1, 2022), https://www.nytimes.com/2022/03/02/technology/cryptocurrency-anonymity-alarm.html.

[38] James Chen, *Money Laundering: What it is and How to Prevent it*, Investopedia (June 29, 2022), https://www.investopedia.com/terms/m/moneylaundering.asp (last visited Dec. 4, 2022).

[39] *Effects of Money Laundering on Development*, Sanction Scanner, https://sanctionscanner.com/blog/effects-of-money-laundering-on-development-291#:~:text=The%20Adverse%20Money%20Laundering%20Implications%20for%20Developing%20Countries,may%20surpass%20legitimate%20buyers%20of%20former%20state-owned%20businesses (last visited Sept. 14, 2022).

[40] *Id.*

[41] *Id.*

[42] *Id.*

[43] *Id.*

[44] 31 USC 5311 *et seq.*; *see* Ivana Krouparová, Money Laundering and Suspicious Activity Reporting in the United States, pg. 17 (July 27, 2021) (B.A. thesis, Charles University),

United States to submit currency transaction reports (CTRs) to the Financial Crimes Enforcement Network (FinCEN) under specified circumstances.[45] For example, an institution must file a CTR for any aggregated transactions, occurring within a 24-hour period, that exceed $10,000 and are received in a trade or business.[46] Additionally, the BSA requires each agent, agency, branch, or office located within the United States of a bank to make and retain records for any transfer of funds that exceeds $3,000.[47] Congress again addressed money laundering when it passed the Anti-Money Laundering Act of 2020 (AMLA).[48] The AMLA brings five new features to U.S. anti-money-laundering regulation by: 1) requiring certain companies to disclose their beneficial owners to the government; 2) requiring FinCEN to maintain a private national database of such owners; 3) creating a new whistleblower program; 4) authorizing subpoenas to foreign banks that have accounts in the United States; and 5) including financial institutions that exchange or transmit cryptocurrencies.[49]

While most money laundering is conducted using fiat currency, many government regulators and industry professionals are concerned that cryptocurrencies may provide an alternative and more straightforward way to launder money. There are several reasons why criminals may be incentivized to use cryptocurrencies to launder money. First, although blockchains have a public record of all the transactions that occur on the blockchain, this record contains no identifying information about the parties. Instead, it uses pseudonyms or randomly

https://dspace.cuni.cz/bitstream/handle/20.500.11956/147904/130317091.pdf?sequence=1&isAllowed=y#page=47&zoom=100,101,566.

[45] 31 CFR 1010.306(a)(3); *see* Krouparová, *supra* note 44.

[46] 31 CFR 1010.311(b).

[47] 31 C.F.R. § 1020.410.

[48] Public Law No.: 116-283, §§ 6001-6511.

[49] Public Law No.: 116-283, §§ 6001-6511; *The Anti-Money Laundering Act of 2020: 5 Key Takeaways*, Latham & Watkins (Jan. 5, 2021), https://www.lw.com/admin/upload/SiteAttachments/Alert%202844v2.pdf.

generated numbers to identify parties to a transaction.[50] This level of anonymity makes it more difficult for law enforcement to track criminals through the blockchain record. In contrast, traditional financial institutions require varying levels of identification authentication to process transactions. Second, the transfer of cryptocurrency through the blockchain can be a peer-to-peer process that requires no intermediaries or oversight and be irrevocable.[51] This makes it easier for criminals to transfer digital assets without interference. In contrast, a traditional fiat currency transaction is made through a third-party, typically a bank, which can identify, and must report, suspicious activity and may be able to reverse illicit transactions when needed. Third, digital assets enjoy instantaneous transferability, which gives authorities little time to halt a transaction.[52] In contrast, traditional fiat currency transactions typically take multiple days to process.

To combat the incentives mentioned above, FinCEN, in response to the AMLA, proposed new rules requiring financial institutions to report virtual currency transactions with wallets which are not hosted with a VASP and valued at over $10,000.[53] FinCEN received a largely negative industry response, with costs and privacy concerns being some of the issues raised. The rules have not been adopted.

Others suggest that the use of blockchain analysis should be required to prevent fraudulent digital asset transactions. Blockchain analytics, or on-chain analysis, is the process of analyzing a

[50] Christian Brenig, Rafael Accorsi, Günter Müller, *Economic Analysis of Cryptocurrency Backed Money Laundering*, 2015 ECIS Proc. 20, 8 (May 29, 2015), https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1019&context=amcis2025.

[51] *Id.*

[52] *Id.* at 10.

[53] Requirements for Certain Transactions Involving Convertible Virtual Currency or Digital Assets, 85 Fed. Reg. 83840 (proposed Dec. 23, 2020), https://www.federalregister.gov/documents/2020/12/23/2020-28437/requirements-for-certain-transactions-involving-convertible-virtual-currency-or-digital-assets.

blockchain's data to assess its fundamental value and overall utility.[54] Data that can be retrieved through on-chain analysis includes the number of active addresses on the blockchain, the count of valid transactions on a given day, and the average value of transactions on a given day.[55] This data is strictly historical and mainly provides insight into the activity level of a blockchain and its corresponding addresses.[56] For example, a financial institution could run an on-chain analysis to learn that a specific wallet address has only been used once in its history to transfer a digital asset worth $100,000. This could be flagged by the financial institution as suspicious activity since most addresses are used for more than a single transaction. The financial institution could then investigate further to determine if an illicit transaction occurred and what further action is necessary. This could mitigate a financial institution's liability for participating in an illicit transaction and allow the reporting of suspicious activity.

B. OFR Virtual Currency and Blockchain Impact Analysis

1. OFR Division of Financial Institutions

This section discusses guidance issued by the OFR's Division of Financial Institutions regarding digital asset activities for Florida state-chartered financial institutions. It also examines Wyoming special purpose depository institutions, highlighting the need for cooperation between state and federal regulators.

The Division of Financial Institutions conducts periodic risk-based examinations to ensure that each Florida state-chartered financial institution is operating in a safe and sound manner.[57]

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[54] Peter Foy, *Blockchain Analytics: 14 On-Chain Metrics to Know*, MLQ.ai (2021), https://www.mlq.ai/blockchain-analytics-terms/#:~:text=Blockchain%20analytics%2C%20otherwise%20known%20as%20on-chain%20analysis%2C%20refers,analyst%2C%20trader%2C%20or%20investor%20should%20be%20aware%20of.
[55] *Id.*
[56] *Id.*
[57] § 655.005(1)(i), Fla. Stat. (defining "financial institution" as "a state or federal savings or thrift association, bank, savings bank, trust company, international bank agency, international banking corporation, international branch, international representative office, international administrative office, international trust entity, international trust

Due to consumer interest, financial institutions regulated by the Division have sought guidance from the OFR regarding custodial services for digital assets and the collateralization of digital assets.

In response, in January 2022, the OFR issued guidance to Florida state-chartered financial institutions stating that Florida's Financial Institutions Codes do not prohibit state-chartered financial institutions from providing virtual currency services to their customers, inclusive of custodial services.[58] The guidance advises state financial institutions who wish to engage in such activities to conduct due diligence and carefully examine the risks involved in offering virtual currency custodial services through a methodical and comprehensive risk assessment process.[59] The guidance contains best practices including: performing adequate customer due diligence; reviewing the virtual currency and custodial program for legal compliance; ensuring adequate administrative, technical and physical controls specific to virtual currency are in place prior to providing virtual currency custody services; ensuring compliance with anti-money laundering obligations for cryptocurrencies; ensuring compliance with any OFR, Securities and Exchange Commission (SEC), Commodity Futures Trading Commission (CFTC), FinCEN, or U.S. Treasury requirements for record-keeping and confirmations; and having adequate knowledge of the assets and manage them properly.[60] Further, the guidance recommends that financial institutions providing virtual currency custodial services take reasonable care to ensure that they are fulfilling any agreed upon duties, that they have the appropriate powers to provide the agreed upon services,

company representative office, qualified limited service affiliate, credit union, or an agreement corporation operating pursuant to s. 25 of the Federal Reserve Act, 12 U.S.C. ss. 601 et seq. or Edge Act corporation organized pursuant to s. 25(a) of the Federal Reserve Act, 12 U.S.C. ss. 611 et seq."); s*ee generally,* § 655.041, Fla. Stat. (regarding OFR's examination mandate and how examinations are scheduled with federal counterparts).

[58] *See* OFR, *Guidance to Florida State-Chartered Financial Institutions Regarding the Provision of Virtual Currency and Digital Asset Custody Services* (Jan. 2022).

[59] *Id.*

[60] *Id.*

and that they are providing appropriate oversight of any third-party vendor used to provide such services.[61]

While this guidance provides that the activities mentioned above are not prohibited under Florida's financial institutions codes, most states, including Florida, have yet to amend their laws to expressly contemplate virtual currency activities.[62] At this time, Florida's financial institutions codes do not expressly prohibit the OFR from chartering a financial institution engaged exclusively in such activities; however, they assume the use of fiat currency and do not expressly authorize such a charter. Additionally, state-chartered financial institutions are subject to dual regulation; i.e., they have both a state and federal regulator and must comply with state and federal law. As such, amending the Florida financial institutions codes alone may be insufficient to create a regulatory framework amenable to such a charter. Due to the interconnection of the dual regulatory system, there are instances where compliance with Florida law necessitates compliance with federal law, such as the requirement that state-chartered banks and credit unions must be federally insured to maintain their Florida charter.[63] In order to obtain and maintain deposit insurance, and thus maintain their Florida charter, Florida state-chartered banks and credit unions must adhere to the restrictions and requirements of their federal regulator. This system of dual regulation is not only applicable to Florida financial institutions but exists in some form in all 50 states.

Yet, Wyoming has attempted to create an alternative bank charter with digital assets and virtual currency in mind. In 2019, Wyoming enacted House Bill 74, which authorized the creation

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[61] *Id.*

[62] § 655.005(1)(k), Fla. Stat. (defining "financial institutions codes" as chapters 655, 657, 658, 660, 662, 663, 665, and 667, Florida Statutes).

[63] Florida state-chartered banks must obtain and maintain insurance of deposits with the Federal Deposit Insurance Corporation (FDIC), and Florida state-chartered credit unions must maintain insurance of deposits with the National Credit Union Administration (NCUA). *See* §§ 658.38 and 657.033(9), Fla. Stat.

of Wyoming-chartered special purpose depository institutions (SPDIs).[64] SPDIs are "banks that receive deposits and conduct other activity incidental to the business of banking, including custody, asset servicing, fiduciary asset management and related activities . . . [and] will likely focus on digital assets, such as virtual currencies, digital securities and digital consumer assets."[65] Wyoming's Division of Banking began accepting SPDI applications on October 1, 2019, and Wyoming's Banking Board has approved at least four SPDI charters.[66] At least one of these SPDIs has had legal woes with federal regulators. In June 2022, Custodia, a SPDI charter recipient, sued the Federal Reserve Board of Governors and the Federal Reserve Bank of Kansas City, alleging that the regulator "unlawfully" delayed acting on their application for a master account.[67] The following November, the judge denied the Federal Reserve's motion to dismiss the lawsuit, ruling that Custodia had sufficiently argued that the Federal Reserve engaged in unreasonable delay.[68] Although the Federal Reserve's standard form agreement states that processing may take five to seven business days, Custodia's application has been pending for two years.[69] While the fate of Wyoming's SPDIs remains to be seen, what is clear is the need for cooperation between state and federal regulators in the regulation of this rapidly evolving industry.

2. OFR Division of Consumer Finance

This section provides a summary of the effect digital assets have on non-depository financial service providers and analyzes Florida's existing regulatory framework as it relates

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[64] WY HB 74 (2019).
[65] *Special Purpose Depository Institutions*, Wyoming Division of Banking https://wyomingbankingdivision.wyo.gov/banks-and-trust-companies/special-purpose-depository-institutions?msclkid=5deb1a28b68911ecacdbf052e9052e7a (last visited Dec 2, 2022).
[66] *Id.*
[67] Michel del Castillo, *Bitcoin Bank Custodia Sues Federal Reserve, Demanding Decision on Master Account*, June 7, 2022, https://www.forbes.com/sites/michaeldelcastillo/2022/06/07/bitcoin-bank-custodia-sues-federal-reserve-demanding-decision-on-master-account/?sh=6c60ab3c5f72.
[68] Anna Hrushka, *Custodia Bank's Master Account Lawsuit Against Fed Advances*, BankingDive (Nov. 15, 2022), https://www.bankingdive.com/news/custodia-banks-master-account-lawsuit-against-fed-advances/636599/.
[69] *Id.*

thereto. Specifically, this section explains how recent legislation addresses virtual currency as it relates to money transmission. This section also discusses the cybersecurity threats faced by the financial services businesses engaging with virtual currencies.

The Division of Consumer Finance licenses and regulates non-depository financial service providers, including money transmitters, and conducts examinations of licensed entities and complaint investigations to determine compliance with Florida law. Activities currently regulated by the Division of Consumer Finance likely to involve virtual currencies include funds transmission, currency exchange, payment instrument sales, stored value mechanisms, consumer lending, and debt collection.[70]

Money transmitters are some the most active participants in virtual currency activities because they are utilized to purchase, exchange, and transmit virtual currency to third parties, including entities located outside the United States. The Florida legislature amended chapter 560 and section 559.952, Florida Statutes, to specifically include virtual currencies and related activities with respect to money transmitters.[71] In addition to definitional changes, Chapter 2022-113 amends the Florida Control of Money Laundering in Money Services Business Act to specify retention and maintenance requirements for records relating to virtual currency.[72] However, the Florida legislature has not considered whether virtual currency should be regulated in transactions conducted by businesses other than money transmitters, nor has it considered whether financial institutions' safety and soundness principles should be extended to non-bank businesses holding customer's virtual currencies. Model legislation adopted in some states applies safety and

[70] *See generally*, Chs. 516, 520, 559, and 560, Fla. Stat.
[71] Ch. 2022-113, Laws of Fla.
[72] *Id*.

soundness principles to money transmitters but not necessarily those transmitting virtual currency.[73]

Should Florida require minimum standards for cybersecurity and privacy practices for records and information kept by money transmitters and other money services businesses engaging with virtual currency? In Florida, money transmitters and other money services businesses *may* be required to take reasonable measures to protect and secure data in electronic form containing personal information pursuant to section 501.171(2), Florida Statutes, which treats a violation of section 501.171, Florida Statutes, as an unfair or deceptive trade practice and provides for civil penalties.[74] Section 501.171, Florida Statutes, also requires entities subject to the section to notify the Department of Legal Affairs with the Office of the Attorney General of any breach of security affecting 500 or more individuals in the state and to each individual in Florida whose personal information was, or the covered entity reasonably believes to have been, accessed as a result of the breach.[75] However, section 501.171, Florida Statutes, does not require a money transmitter or other money services business to establish a program, policy, or procedure to protect personal information or provide for examinations of such entities to determine whether "reasonable measures" to protect and secure personal information are in place.

An example of regulation specifying cybersecurity requirements for financial services companies can be found in New York.[76] New York promulgated a rule that applies to any person

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[73] *CSBS Model Money Transmission Modernization Act*, CSBS (Jan. 6, 2022), https://www.csbs.org/sites/default/files/2023-02/CSBS%20Money%20Transmission%20Modernization%20Act.pdf (last visited Apr. 4, 2022); Uniform Money Services Act, Uniform Law Commission (2000), https://www.uniformlaws.org/committees/community-home?CommunityKey=cf8b649a-114c-4bc9-8937-c4ee17148a1b (last visited Dec. 5, 2022).

[74] §501.171(1)(b), Fla. Stat. (applies to covered entities, which means "a sole proprietorship, partnership, corporation, trust, estate, cooperative, association, or other commercial entity that acquires, maintains, stores, or uses personal information").

[75] §501.171(3), (4), Fla. Stat.

[76] 23 NYCRR 500.00 (2017).

operating under, or required to operate under, a license, registration, charter, certificate, permit, accreditation or similar authorization under New York's Banking Law, Insurance Law, or Financial Services Law, which includes money transmitters.[77] The rule requires the aforementioned entities to maintain a cybersecurity program "designed to protect the confidentiality, integrity and availability of the [entity's] Information Systems" and to perform the following functions: 1) identify and assess cybersecurity risks, 2) implement policies and procedures to protect information systems from unauthorized access or malicious acts, 3) detect cybersecurity events, 4) respond to cybersecurity events, 5) recover from cybersecurity events and restore normal operations and services, and 6) fulfill applicable regulatory reporting obligations.[78] Entities subject to this rule are also required to implement and maintain a written policy or policies for the protection of their information systems and nonpublic information stored on those information systems.[79] The OFR does not have authority to promulgate a rule of this nature.

3. OFR Division of Securities

This section discusses how cryptocurrencies and certain transactions involving cryptocurrencies may be deemed "securities" for purposes of Florida's securities laws. This section also outlines how Florida's securities laws may apply to different participants in the digital securities market. Further, this section examines the risks inherent in digital asset securities and the need for possible additional disclosure. Finally, this section concludes with a discussion of stablecoins.

[77] 23 NYCRR 500.01(c) (2017).
[78] 23 NYCRR 500.02(a) (2017).
[79] 23 NYCRR 500.03 (2017).

The Division of Securities administers and enforces compliance with the Florida Securities and Investor Protection Act, which is designed to protect the investing public and promote economic growth.[80] The Division regulates the sale of securities in, to, or from Florida to determine compliance with state law.[81] The OFR also regulates certain participants in the securities markets including issuers of securities, and the intermediaries involved in securities transactions, i.e., securities dealers and investment advisers.[82]

There are strong parallels between the regulated securities industry and the digital asset industry, such as how cryptocurrencies are issued, how digital assets are traded and sold on the secondary market, and the activities of intermediaries facilitating the buying and selling of digital assets.

For example, a technology business creating and issuing a digital asset offered for investment purposes or having the characteristics of a traditional security, such as common stock, a bond, or an investment contract, in an initial coin offering (ICO) is not unlike an initial public offering (IPO) of securities.[83] A digital asset or certain transactions involving digital assets which meet the definition of "security" under Florida law (digital asset securities) may be subject to the Florida Securities and Investor Protection Act and the rules promulgated thereunder. Such digital

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[80] §517.03(1), Fla. Stat.
[81] §517.07(1), Fla. Stat.
[82] §517.12(1), (4), Fla. Stat.
[83] §517.021(15) and (22)(a) and (q), Fla. Stat.; 15 U.S.C. §§77b and 78c; *see also Mehl v. Office of Fin. Regulation*, 859 So. 2d 1260, 1264-65 (Fla. 1st DCA 2003) quoting *Rudd v. State*, 386 So. 2d 1216 (Fla. 5th DCA 1980) ("[F]orm should be disregarded for substance and the emphasis should be on economic reality, with a transaction excluded from the act if not within its spirit and intention."); *SEC v. W.J. Howey Co.,* 328 U.S. 293, 66 S. Ct. 1100, 90 L. Ed. 1244 (1946)(holding that an investment of money in a common enterprise with the expectation of profit to be derived from the efforts of others is an investment contract and therefore a security). The "Howey test" has been adopted and applied in Florida for purposes of determining whether an arrangement is an "investment contract," and therefore a security, under Florida law. *Brown v. Rairigh, 3*63 So. 2d 590 (Fla. 4th DCA 1978)(applying the *Howey* test). *Reves v. Ernst & Young*, 494 U.S. 56, 64-66, 108 L. Ed. 2d 47, 110 S. Ct. 945 (1990) (holding whether an instrument denominated a "note" is a "security," within the meaning of the securities laws, court should apply "family resemblance" test); *Bookhardt v. State,* 710 So.2d 700 (Fla. 5th DCA 1998) (holding that an unsecured promissory note was a security citing *Reves*).

asset securities may be required to satisfy the securities registration requirements under section 517.07, Florida Statutes. Further, the offer and sale of digital asset securities are subject to the anti-fraud provisions of section 517.301, Florida Statutes.

Additionally, intermediaries who open accounts for digital asset securities traders or investors, facilitate transactions in digital asset securities, create a market for digital asset securities, or give advice to those seeking to purchase digital asset securities are performing activities similar to those performed by traditional securities intermediaries, such as securities broker-dealers, and investment advisers. Participants in the digital asset securities ecosystem who offer, sell, or recommend digital asset securities to Florida residents must register as a dealer or investment adviser under section 517.12, Florida Statutes, unless exempt or excluded from the requirements.

While similar to existing securities on the market, digital asset securities represent a new product dependent on novel technology with certain inherent risks. Further, the cryptocurrency marketplace's extraordinary growth over the past several years has attracted bad actors. Cryptocurrency can be illiquid, and its value is highly speculative, which poses price volatility risks to investors and traders. Furthermore, there are clearance, settlement, and custody risks that are unique to digital asset securities. Bad actors also create risk through scams, fraud, and hacking or manipulation of the blockchain technology on which the cryptocurrencies are based. In 2017, the Satis Group LLC, an investment group focused on blockchain and digital finance, investigated 1,500 ICOs and concluded that 78% were scams. Fortunately, Satis also concluded that only one-tenth of all ICO fundraising went to such scams.[84] Common digital asset securities scams include

[84]*Cryptoasset Market Coverage Initiation: Network Creation*, pgs. 24-25, Satis Group, LLC (July 11, 2018), https://research.bloomberg.com/pub/res/d28giW28tf6G7T_Wr77aU0gDgFQ (last visited Dec. 4, 2022).

promoters holding an ICO and absconding with the proceeds and Ponzi schemes.[85] Importantly, Satis also noted a decline in projects launching ICOs within the U.S. from 2017 (32%) to 2018 (10%) and determined the loss was due to the application of the U.S. regulatory regime.[86]

One possible way to offset some of these inherent risks associated with digital asset securities is to provide investors with appropriate disclosures. Specifically, the OFR is considering whether disclosures should address: 1) the high degree of fraud associated with digital asset securities offerings; 2) cybersecurity risks, including theft of digital asset securities by hackers; and 3) the lack of liquidity, volatility, and pricing speculation in the digital asset securities market. Additionally, the OFR is evaluating whether Florida's securities laws adequately regulate all the appropriate participants in the digital asset securities markets, and, if not, whether any identified inadequacy may be addressed through modification of Florida's existing securities laws or if a separate regulatory scheme is necessary. For instance, the OFR is considering whether it is appropriate to regulate certain VASPs as "dealers."

Finally, regulators, including the OFR, are closely monitoring "stablecoins," a product presenting potential systemic risks to participants in the financial system. Stablecoins are digital assets pegged in value, typically to fiat currency such as the U.S. Dollar, issued to facilitate transfers of monetary value between different cryptocurrencies.[87] Regulators are concerned that the firms issuing stablecoins may become financially unsound and, unlike regulated banking institutions, such firms likely are not insured for risks of loss. In 2022, such concerns led California

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[85] *A Comprehensive Guide on ICO Scams and How to Identify Them*, Blockchain Council, https://www.blockchain-council.org/blockchain/a-comprehensive-guide-on-ico-scams-and-how-to-identify-them/ (last visited Sept. 7, 2021).

[86] Satis Group, LLC, Cryptoasset Market Coverage Initiation: Network Creation (July 11, 2018) https://research.bloomberg.com/pub/res/d28giW28tf6G7T_Wr77aU0gDgFQ.

[87] Sumedha Deshmukh ET AL., *Crypto crash: How the algorithmic stablecoin UST failed and what we can learn from it,* World Economic Forum (May 25, 2022), https://www.weforum.org/stories/2022/05/crypto-crash-ust-luna/ (last visited Dec 2, 2022).

to pass a bill regulating stablecoin issuers domiciled in the state. However, it was subsequently vetoed.[88] Stablecoins will likely be addressed in more detail in a supplement to this whitepaper.

4. Challenges for Enforcement Actions Involving Digital Assets

a) Statutes of Limitations

The Bureau of Financial Investigations is the criminal justice arm of the OFR. The Bureau maintains investigative teams throughout the state who have expertise in financial record analysis, forensic accounting, interviewing witnesses, and legal case preparation. The Bureau also participates in joint investigations with local, state, and federal law enforcement agencies. Based on the experience of the OFR investigators, investigations involving digital assets and blockchain technologies tend to take more time than investigations involving traditional assets and existing statutes of limitations may, in some cases, not provide adequate time for identifying and bringing an action related to digital assets and/or blockchain technologies. The relevant statute of limitations is determined by the underlying cause of action, whether criminal prosecution or civil action is being pursued, and the facts of the particular case.[89] Depending on the circumstances, the applicable statute of limitations may be as short as two years.[90] Investigations involving complex digital asset transactions often require multiple layers of investigation and analysis. For example,

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[88] Sebastion Sinclair, *California Governor Newsom Vetoes Crypto Bill*, (Sept. 26, 2022), https://blockworks.co/news/california-governor-vetoes-crypto-bill (last visited Dec. 2, 2022).

[89] *See* §§ 95.11(4)(e) (within two years for an "action founded upon a violation of any provision of chapter 517, with the period running from the time the facts giving rise to the cause of action were discovered or should have been discovered with the exercise of due diligence, but not more than 5 years from the date such violation occurred"); 517.191(7) (Notwithstanding s. 95.11(4)(e), an enforcement action brought under this section based on a violation of any provision of this chapter or any rule or order issued under this chapter shall be brought within 6 years after the facts giving rise to the cause of action were discovered or should have been discovered with the exercise of due diligence, but not more than 8 years after the date such violation occurred); 517.302(5) ("Criminal prosecution for offenses under this chapter is subject to the time limitations in s. 775.15"); and 775.15(8), ("a prosecution for a felony violation of chapter 517 or s. 409.920 must be commenced within 5 years after the violation is committed"), Fla. Stat.

[90] § 95.11(4)(e) (within two years for an "action founded upon a violation of any provision of chapter 517, with the period running from the time the facts giving rise to the cause of action were discovered or should have been discovered with the exercise of due diligence, but not more than 5 years from the date such violation occurred").

investigators may have to first track and analyze multiple asset transactions on a blockchain, then analyze interactions with one or more VASPs, then conduct additional tracking and analysis of asset transactions on a blockchain and/or conduct a traditional fiat currency analysis. Therefore, by necessity, the investigation takes place in phases: information is gathered, analysis is conducted, which then necessitates the need for additional information. An investigator typically waits four to six weeks to receive information produced in response to a subpoena. When the amount of time it takes for information to be supplied in response to a subpoena is multiplied across the number of subpoenas needed, the time it takes to conduct an investigation involving digital assets or blockchain technology is typically measured in months, not weeks.

The length of time needed for this type of investigation is further extended when records and information must be obtained from jurisdictions outside the United States. The marketplace for digital assets is borderless, and many international VASPs facilitate transactions for United States citizens and Florida residents. To obtain complete and appropriately certified records and information from such providers, it is necessary to follow all applicable processes and procedures as agreed to and outlined in Mutual Legal Assistance Treaties (MLATs) or other agreements.[91] The process for obtaining records and information pursuant to such international agreements is again measured in months, often six to nine (or longer) for each request.

b) Seizure of Digital Assets

Digital assets, including cryptocurrency, are property subject to seizure by law enforcement or pursuant to court order.[92] Effecting a seizure of digital assets may be difficult in some cases.

[91] *See generally* U.S. Department of State, Treaties and Agreements, https://2009-2017.state.gov/j/inl/rls/nrcrpt/2012/vol2/184110.htm?msclkid=1d9173d6b05611ec976442914d0b8244 (last visited Dec. 2, 2022). Mutual Legal Assistance Treaties (MLATs) generally allow for the exchange of evidence and information in criminal and related matters between the US and another nation.

[92] Press Release, U.S. Dept. of Justice, Justice Department Announces Report on Digital Assets and Launches Nationwide Network, (September 16, 2022), https://www.justice.gov/opa/pr/justice-department-announces-report-digital-assets-and-launches-nationwide-network.

Cryptocurrency assets are controlled by their underlying software rules, and access to those assets is controlled by large, randomly generated numbers known as "private keys." Put simply, a "private key" is a mathematically secure password to a given cryptocurrency public key, or "address" that you need to access and withdraw funds.[93] Typically, a public key has a single private key, however, there are exceptions such as multisignature wallets where more than one key is needed.[94] In practice, cryptocurrency assets can only be used by the person who has control of the private key, whether that person is the asset owner, a custodian, or another third party.

Cryptocurrency and other blockchain-based digital assets are seized by gaining control of the relevant private key. When assets are stored in a custodial wallet, the custodian maintains control of the private keys. A search warrant or court seizure order, when served on such custodian, grants control over the private keys and, thus, the cryptocurrency assets managed by that custodian to the agency named in the warrant or order. In the event cryptocurrency assets are maintained in a noncustodial wallet, control over the private key or seed key phrase must be obtained by different means including through a search warrant and/or seizure order on both a subject's electronic devices (including phones, tablets, and computers) and physical spaces where a subject may maintain a copy of the private key or seed key phrase.

Once seized, assets must be sent to a government agency, such as the OFR, or a receiver-controlled wallet pending a forfeiture order. Taking custody of digital assets prompts dozens of questions regarding the proper maintenance of the assets. For example, is the OFR or a court-appointed receiver liable if a seized asset decreases in value? Should the assets be converted into

[93] Jake Frankenfield, *Private Key: What It Is, How It Works, Best Ways to Store* (Mar. 24, 2022), https://www.investopedia.com/terms/p/private-key.asp#:~:text=our%20editorial%20policies-,What%20Is%20a%20Private%20Key%3F,ownership%20of%20a%20blockchain%20address (last visited Dec. 4, 2022).

[94] Colin Harper *Multisignature Wallets Can Keep Your Coins Safer (If You Use Them Right)*, (Nov. 10, 2020), https://www.coindesk.com/tech/2020/11/10/multisignature-wallets-can-keep-your-coins-safer-if-you-use-them-right/ (last visited December 2, 2022).

a stablecoin or fiat currency to maintain value? Should a wallet hosted by a VASP be used? The OFR is currently considering these questions, consulting with other states and partner agencies, and developing an internal policy regarding the mechanics of seizing and holding cryptocurrency.

IV. Digital Assets and Blockchain's Impact Outside Florida's Financial Services Industry

Blockchain technology created a new asset class or type of property in the form of digital assets. Digital assets, as a type of property, are not easily incorporated into Florida's commercial laws without some change. Amendments to Florida's Uniform Commercial Code, Florida's Business Organization Code, and Florida's Unclaimed Property Act are needed to accommodate digital assets in Florida's commercial laws and to facilitate commerce and the development of the blockchain technology industry in Florida. Further, as new technologies are developed additional amendments are likely.

A. Florida's Uniform Commercial Code

Commercial practices have changed with the advent of digital assets such as virtual currency, electronic promissory notes, and securities maintained on a blockchain. The widespread use of these assets necessitates that need to address the commercial laws which govern the transfer of property rights in these assets, the security interests in these assets, and the rights to payment that are embedded in these assets and to accommodate these assets when they are used to make payments or as collateral to secure a loan.

The UCC is a model act consisting of a comprehensive set of laws governing all commercial transactions.[95] In July 2022, the author of the UCC, the Uniform Law Commission

[95] Uniform Law Commission, Uniform Commercial Code, https://www.uniformlaws.org/acts/ucc?msclkid=aed508f6b0ff11ec99f94ea803be70f6 (last visited Dec. 2, 2022); Chs. 670-680, Fla. Stat.

(ULC), through its Emerging Technologies Committee, released an amended model uniform commercial code addressing the use of emerging technologies and electronic assets in commercial transactions.[96] State uniformity in commercial transactions is essential to interstate commerce. All 50 states have adopted the UCC and its corresponding amendments.[97] Therefore, it is likely that all 50 states will adopt the ULC's amendment to the UCC.

The amendment addresses many issues, including the transfer of property rights in intangible assets, which include virtual currency and nonfungible tokens (NFTs) ("controllable electronic records"), intangible money, chattel paper (e.g., installment sale contracts and personal property leases), payments, and bundled transactions.[98] The amendment changes Article 1 (General Provisions), Article 3 (Negotiable Instruments), Article 4 (Bank Deposits and Collections), Article 4A (Funds Transfers), Article 5 (Letters of Credit), and Article 9 (Secured transactions).[99] The amendment also creates new Article 12, "Controllable Electronic Records."[100] Article 12 is meant to apply not only to controllable electronic records that are created using existing technology such as blockchain, but also to controllable electronic records that may be created using technologies not yet developed or imagined.[101] Proposed section 12-102 defines a "Controllable Electronic Record" as "an electronic record that can be subjected to control under Section 12-105."[102] Section 12-105 defines under what circumstances a person has control of a

[96] Edwin Smith, *The Uniform Commercial Code and Digital Assets: Legislative Initiatives*, Uniform Law Commission, https://www.uniformlaws.org/blogs/edwin-smith/2019/03/13/ucc-and-digital-assets-legislative-initiatives?msclkid=a79a645eb10111ecafc902ee60495634 (last visited Dec. 4, 2022).
[97] *States Adopting the UCC*, USLegal, https://uniformcommercialcode.uslegal.com/states-adopting-the-ucc/ (last visited Dec. 2, 2022).
[98] *See* ULC, Draft Amendments to the Uniform Commercial Code (2021), https://uniformlaws.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=36a12016-c502-2458-d6a0-0dbe3fddaff7&forceDialog=0&msclkid=c1269ce1b1b711ec8f8e7c6a31d8006f.
[99] *Id*.
[100] *Id*. at 8-21.
[101] *Id*. at 2.
[102] *Id*. at 8.

controllable electronic record.[103] Control is important because a person having control of a controllable electronic record is eligible to become a "qualified purchaser."[104] Similar to a holder in due course of a negotiable instrument, a qualifying purchaser of a controllable electronic record takes such record free of property claims.[105] Additionally, under the amendment to Article 9, obtaining control of a controllable electronic record is one method by which a security interest in the controllable electronic record can be perfected.[106] Accordingly, the ability to perfect a security interest in a controllable electronic record through control of the electronic record allows digital assets to serve as collateral for lending and other financing transactions.

Practically speaking, to enable a lender to secure a lien with a digital asset represented on a blockchain, the lender must possess an exclusive right of access to the electronic code that uniquely represents the digital asset. The amendment to the UCC recognizes that control of a controllable electronic record equals possession, and thereby, the traditional rights, privileges, and remedies associated with possession of collateral and transactions in fungible mediums of exchange apply in the realm of digital assets. The Florida Bar's Business Law Section, Bankruptcy and UCC Committee created a task force in 2022 to study the ULC's new Article 12 model amendment and compare it to Florida's existing UCC.[107] Adoption of a legal framework for securitization of digital assets, such as the new amendment to the UCC, will benefit Florida's financial services marketplace.

[103] *Id*. at 15-16.
[104] *Id*. at 16.
[105] *Id*. at 4.
[106] *Id*. at 16. Compare to section 679.5011(2), Florida Statutes, where perfecting a security interest in property is achieved through the filing of a notice in a database maintained by the Florida Secretary of State.
[107] Florida Bar Business Law Section Committee Agenda (Sept. 2022) https://flabizlaw.org/wp-content/uploads/2022/08/BDA-Committee-Agenda.pdf.

B. Florida's Disposition of Unclaimed Property Act

The Florida Department of Financial Services, Bureau of Unclaimed Property, administers the Florida Disposition of Unclaimed Property Act (the "Act"). Under the Act, intangible property or tangible property held by banking, financial organizations and certain other entities in a safe-deposit box or other safekeeping repository in Florida which the owner fails to claim.[108] Section 717.101(14), Florida Statutes, defines "intangible property" as follows:

> (14) 'Intangible property' includes, by way of illustration and not limitation:
>
> a. Moneys, checks, drafts, deposits, interest, dividends, and income.
> b. Credit balances, customer overpayments, security deposits and other instruments as defined by chapter 679, refunds, unpaid wages, unused airline tickets, and unidentified remittances.
> c. Stocks, and other intangible ownership interests in business associations.
> d. Moneys deposited to redeem stocks, bonds, bearer bonds, original issue discount bonds, coupons, and other securities, or to make distributions.
> e. Amounts due and payable under the terms of insurance policies.
> f. Amounts distributable from a trust or custodial fund established under a plan to provide any health, welfare, pension, vacation, severance, retirement, death, stock purchase, profit sharing, employee savings, supplemental unemployment insurance, or similar benefit.

While the definition of "intangible property" is illustrative and not limited, it does not expressly incorporate mediums of exchange, virtual currency, digital assets, or balances in accounts in which they are held for the benefit of their owners. Greater clarity could be provided in the definition by recognizing digital assets specifically for the protection of their owners.

C. Florida's Business Organizations Code

Florida's business organizations are governed by chapters 605-623, Florida Statutes. These chapters discuss corporate formations and the legal duties of the corporations and their directors.

[108] See §§ 717.102 and 717.116, Fla. Stat; see also § 717.101(10), Fla. Stat.

Blockchain technology has led to the rise of decentralized autonomous organizations or DAOs which promote oversight and management of an entity similar to a corporation.

A DAO is currently not recognized as a type of business association under Florida's Business Organizations Code. A DAO is a "blockchain-based form of organization or company that is often governed by a native crypto token. Anyone who purchases and holds these tokens may vote on important matters directly related to the DAO."[109] DAOs typically use smart contracts in place of traditional corporate structures to coordinate the efforts and resources of many participants toward a common goal.[110] However, unlike traditional business organizations, the distributed nature of a DAO can mean that it is owned by many transnationals and — without a government authorization to be recognized as a business entity — may not have a headquarters or domicile like traditional state corporate organizations which may limit remedies available to aggrieved participants. Conceptually, a DAO is central to the government-avoidance or government independence philosophy, in that it provides a means for democratization of decision-making without oversight by any person or government entity. In theory, DAOs can efficiently execute corporate governance matters by allowing voting members to vote on proposed transactions over the blockchain. Governmental sponsorship and judicial remedies for investors in a DAO therefore seem contrary to the underlying philosophy of a DAO. Yet, when problems with the functioning of a DAO occurred, some investors resorted to real world civil litigation remedies instead of DAO conflict resolution protocols.[111] For example, there has been at least one very public incident in

[109] *What is a DAO?*, Ethereum, https://www.coindesk.com/learn/what-is-a-dao/ (last visited Sept 8, 2022).
[110] *Id*.
[111] Nikhilesh De, *Interpreting the CFTC's Lawsuit Against Ooki DAO*, CoinDesk (Sept. 27, 2022). https://www.coindesk.com/policy/2022/09/27/interpreting-the-cftcs-lawsuit-against-ooki-dao/ (last visited Dec. 4, 2022).

which a DAO was hacked resulting in a loss of tokens. A software update to its blockchain was implemented by developers to reverse the loss of the tokens that were the object of the hack.[112]

In 2021, Wyoming enacted legislation permitting a DAO to be organized under its limited liability company code.[113] Wyoming requires a Wyoming limited liability company DAO to have a Wyoming registered agent and declare whether the DAO will be governed by humans or an algorithm.[114] However, whether a Wyoming LLC DAO provides actual benefit to the blockchain technology industry is unclear.

V. Current Government Implementations of Cryptocurrencies and Blockchain and Use Cases

A. Government Implementations of Cryptocurrencies and Blockchain

In 2019, the Florida Legislature created the Blockchain Task Force within the Florida Department of Financial Services to "explore and develop a master plan for fostering the expansion of the blockchain industry in the state, to recommend policies and state investments to help make this state a leader in blockchain technology, and to issue a report to the Governor and the Legislature."[115] The task force is responsible for studying how "state, county, and municipal governments can benefit from a transition to a blockchain-based system for recordkeeping, data security, financial transactions and service delivery, and identify ways to improve government interaction with businesses and the public."[116] The task force's report highlights potential use cases for state governments and discusses current government implementations of blockchain, including

[112] What was the DAO?, Cryptopedia, (updated Mar. 16, 2022), https://www.gemini.com/cryptopedia/the-dao-hack-makerdao?msclkid=2e682ef9b1eb11ecad2d5ec11adcaf98 (last visited Sept. 8, 2022).
[113] *See* Wyoming Statutes §§ 17-31-101, et seq., entitled "Decentralized Autonomous Organization Supplement."
[114] S.F. 73, 66th Leg., 2021 Gen. Sess. (WY 2021).
[115] Ch. 2019-140, Laws of Florida.
[116] Ch. 2019-140, Laws of Florida.

implementations in Florida.[117] Florida's county and municipal governments have implemented blockchain applications in their respective jurisdictions by, among other things, accepting cryptocurrency as a means of payment for taxes, fees and services, paying employees in cryptocurrency, and using cryptocurrency to increase local revenues.

1. Cryptocurrency as Payment for Taxes, Fees and Services

Accepting Bitcoin or other cryptocurrencies for the payment of taxes, fees, and services may provide many benefits for government and its citizens including, reducing costs, increasing accessibility, and assisting in creating an overall crypto-friendly marketplace. There are two means of accepting cryptocurrency for payment, either use a third-party service provider, such as PayPal or BitPay, or accept and hold cryptocurrency, directly or through a custodian.[118] Using a third-party service provider which immediately converts cryptocurrency to U.S. dollars is likely more practical for government purposes as it has the benefit of reducing risks associated with cryptocurrency volatility and may more easily fit into existing legal frameworks surrounding the acceptance of payments.

Florida laws, for example, do not expressly contemplate a government entity holding cryptocurrency, but section 215.322, Florida Statutes, permits an agency to accept payments by "means of electronic funds transfer."[119] Any payments collected or received by the state must be deposited in the State Treasury, and immediately credited to the appropriate fund.[120] The rules implementing section 215.322, Florida Statutes, do not specifically define "means of electronic

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[117] Florida Blockchain Task Force Report, pgs. 7-9, https://www.myfloridacfo.com/docs-sf/cfos-executive-offices-libraries/cos-documents/bctf-final-report.pdf.

[118] Gabriela Henriquez Stoikow, *Cryptocurrency Team Looks at Broad County Opportunities*, MIAMI TODAY (Sept. 21, 2021), https://www.miamitodaynews.com/2021/09/21/cryptocurrency-team-looks-at-broad-county-opportunities/.

[119] *Id.*

[120] § 215.31, Fla. Stat.; § 215.32, Fla. Stat.

funds transfer" and it is somewhat unclear as to what procedure an agency should follow to seek approval from the Chief Financial Officer ("CFO") for a VASP that would accept payments in cryptocurrency on behalf of the state, convert the cryptocurrency into U.S. dollars, and then electronically transfer the funds to the state.[121]

However, the rules mentioned above may be changing. Governor DeSantis, in his "Freedom First Budget" for fiscal year 2022-2023 proposed allocating $200,000 to the Department of Financial Services to "competitively procure cryptocurrency conversion services from a vendor, which will convert the cryptocurrency into dollars and then transmit the converted dollars to the Department of State.[122] While the proposal was not approved for the 2022-2023 fiscal year, it is possible that a similar proposal will be made for fiscal year 2023-2024.

Despite this uncertainty at the state level, local governments have begun to implement cryptocurrency payment systems. On May 14, 2018, Joel Greenberg, the Seminole County Tax

[121] § 215.322, Fla. Stat. (providing that a state agency "may accept credit cards, charge cards, debit cards, or electronic funds transfers in payment for goods and services with the prior approval of the Chief Financial Officer."); Rule chapter 69C-4, Florida Administrative Code, implements section 215.322, Florida Statutes, and provides specific procedures "for the establishment of an electronic payment operation, and acceptance of electronic payments by state agencies.;" See also Rule 69C-4.0035(1), (2), Fla. Admin. Code (providing an agency "desiring to accept electronic payments through the use of credit cards, charge cards, debit cards, electronic checks" shall submit a written request to the Chief Financial Officer and justify its request using a cost benefit analyses.); Rule 69C-4.0035(3), Fla. Admin. Code (providing an agency "desiring to accept electronic payments through the use of credit cards, charge cards, debit cards, electronic checks" shall submit a written request to the Chief Financial Officer and justify its request using a cost benefit analyses). Rule 69C-4.004, Florida Administrative Code, does not provide a standard contract for a cryptocurrency converter as it does for electronic payment services with Bank of America, N.A., and Banc of America Merchant Services LLC, for Visa, Master Card, and discover and American Express Travel Related Services Company, Inc. Also, Rule 69C-4.004(3), Florida Administrative Code, requires an agency which desires to use an alternative contractor must justify why the standard contract is not acceptable and receive approval from the CFO before seeking an alternative contractor, but does not provide any standards for such justification or specify the approval process for cryptocurrency converters.

[122] Freedom First Budget, http://www.freedomfirstbudget.com/PDFLoader.htm?file=GeneralGovernment.pdf (last visited Jan. 26, 2022). During the 2022 legislative session, the Legislature took the following actions with respect to the funding of state blockchain technology and cryptocurrency initiatives: 1) Funded three FTE at the OFR to stand up a policy unit focused on blockchain and virtual currency issues; 2) Declined to allocate $250,000 to create a program within the Department of Highway Safety and Motor Vehicles to make vehicle titles available and transferable through blockchain technology; 3) Declined to allocate $250,000 to the Agency for Health Care Administration to use blockchain technology to uncover Medicaid fraud and verify Medicaid transactions; 4) Declined to allocate $200,000 to the Department of Financial Services to accept payments in cryptocurrency.

Collector, announced that his office would start accepting Bitcoin and Bitcoin Cash for tax payments and other various services, making his office the first in the country to do so.[123] The Seminole County Tax Collector Office utilized BitPay, a payment processing company, to quickly convert Bitcoin and Bitcoin Cash to U.S. dollars in exchange for a one percent fee.[124] BitPay was founded in 2011 and currently offers many products for both individuals and businesses including products which allow businesses to accept Bitcoin on their website or via email.[125] However, following Joel Greenberg's indictment on multiple federal charges and resignation from the position of Seminole County Tax Collector, the Seminole County Tax Collector's Office stopped accepting Bitcoin and Bitcoin Cash.[126] Yet, the events which unfolded in Seminole County did not deter others, and in January 2021, Miami commissioners passed a resolution to study the feasibility of allowing residents to pay fees and taxes in Bitcoin and directing the city manager to procure a vendor.[127] Additionally, in March 2021, the town of Miami Lakes began accepting cryptocurrency as payment for all fees collected by the town via its credit card merchant, PayPal.[128] PayPal launched its "Checkout with Crypto" feature in March 2021.[129] The feature allows a customer to

[123] Seth Powers, *Seminole County Tax Collector to Accept Bitcoin*, FLORIDA POLITICS (May 14, 2018), https://floridapolitics.com/archives/263617-seminole-county-tax-collector-to-accept-Bitcoin/.

[124] Ryan Gillespie, *Seminole Tax Collector Joel Greenberg Begins Accepting Bitcoin as Payment*, ORLANDO SENTINEL (May 14, 2018), https://coindesk.com/markets/2018/05/14/florida-tax-collector-to-accept-bitcoin-bitcoin-cash-payments.

[125] BitPay, https://bitpay.com/about (last visited Jan. 21, 2022).

[126] Seth Powers, *Joel Greenberg Resigns as Seminole County Tax Collector*, FLORIDA POLITICS, (June 24, 2020), https://floridapolitics.com/archives/343623-joel-greenberg-resigns-as-seminole-county-tax-collector/; Seminole County Tax Collector, Property Tax FAQs, Payment Options, https://spectrumlocalnews.com/tx/austin/beyond-the-soundbite-podcast/2021/01/26/secrets-of-the-tax-collectors-office-revealed-.

[127] Paul Best, *Bitcoin by the Beach: Miami Eyes Paying Workers and collecting Taxes in Cryptocurrency*, FOXBusiness (Feb 12, 2021), https://www.foxbusiness.com/markets/crypto-forward-miami-to-study-paying-workers-in-bitcoin-and-allowing-residents-to-pay-taxes-in-bitcoin.

[128] *Miami Lakes to Accept Cryptocurrency Payments as Digital Currency Expands Throughout South Florida*, CBS Miami, https://miami.cbslocal.com/2021/05/11/miami-lakes-accepting-cryptcurrency-payments/ (last visited Jan. 25, 2022).

[129] PayPal Newsroom, *PayPal Launches "Checkout with Crypto,"* https://newsroom.paypal-corp.com/2021-03-30-PayPal-Launches-Checkout-with-Crypto (last visited Jan. 25, 2022).

select a cryptocurrency and confirm the purchase.[130] Once the purchase is confirmed, the cryptocurrency is converted to fiat currency by PayPal.[131]

2. Cryptocurrency as Employee Wages

Paying employees in cryptocurrency may also assist in creating an overall crypto-friendly ecosystem. Mayor Francis Suarez of Miami is encouraging tech and finance companies to relocate to Miami and in furtherance of that goal has suggested that, among other things, Miami pay municipal workers in Bitcoin.[132] On November 2, 2021, in support of his plan to pay Miami municipal workers in Bitcoin, Miami Mayor Suarez commented that he would take his next paycheck 100% in Bitcoin, positioning himself to be the first American politician to do so.[133] In response to Suarez's comment, New York City Mayor, Eric Adams, declared that he would take his first *three* paychecks in Bitcoin and indicated his intention to make New York City the center of cryptocurrency and other financial innovations.[134] However, being paid directly in Bitcoin or any cryptocurrency is not as simple as it may seem. Both Mayor Suarez and Mayor Adams had to convert their paychecks to cryptocurrency before depositing it in their accounts.[135]

Existing law may prevent many government entities from paying their employees entirely in cryptocurrency. The Fair Labor Standards Act (FLSA) requires employers to pay employees in

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[130] *Id.*.

[131] *Id.*

[132] Andrew Ross Sorkin, Jason Karaian, Michael J. de la Merced, Ephrat Livni, & Sarah Kessler, *Miami Wants to be Hub for Bitcoin*, THE NEW YORK TIMES, (Mar. 23, 2021), https://www.nytimes.com/2021/03/23/business/dealbook/miami-suarez-crypto.html.

[133] Will Feuer, *Miami Mayor Francis Suarez Says He'll Take Next Paycheck in Bitcoin*, NEW YORK POST (Nov. 3, 2021), https://nypost.com/2021/11/03/miami-mayor-francis-suarez-to-take-next-paycheck-in-bitcoin/.

[134] Brendan O'Brien and Michelle Price, *New York Mayor-elect Adams Says He will Take his First Three Paychecks in Bitcoin*, REUTERS (Nov. 4, 2021), https://web.archive.org/web/20211104191103/https:/www.reuters.com/world/us/new-york-mayor-elect-eric-adams-says-he-will-take-his-first-paychecks-bitcoin-2021-11-04/.

[135] David Thomas and Ryan James, *Mayor Suarez Wants to Add Bitcoin to 401(k)*, MARKETS (Dec. 11, 2021), https://beincrypto.com/mayor-suarez-wants-to-add-Bitcoin-to-401k/; Strike, FAQ; What is Strike?, https://strike.me/en/learn/what-is-strike/; *NYC Mayor Promised to Get Paid in Bitcoin. Turns Out That's Not So Easy*, NBC NEW YORK, (Jan. 20, 2022), https://www.nbcnewyork.com/news/local/Bitcoin-cryptocurrency-nyc-mayor-eric-adams-paycheck/3505096/.

"cash or negotiable instruments at par."[136] Further, state wage and hour laws vary, some states require that wages be paid in cash, some explicitly defer to the FLSA, and some do not address the form of payment.[137] Florida, for example, defers to the FLSA and requires employers to pay employees "wages," as defined under the FLSA, no less than the minimum wage for all hours worked in Florida.[138] Thus, an employer in Florida may only be able to pay an employee in Bitcoin or other cryptocurrencies for amounts owed above the minimum wage.

3. Generating Revenue Using Cryptocurrency

Using cryptocurrency to increase revenues for a particular jurisdiction not only encourages an overall crypto-friendly marketplace but may also provide benefits to citizens including increasing funding to support local communities and allowing holders to voice support for or vote for various community programs, proposals, or initiatives.[139] In August 2021, CityCoins unveiled "MiamiCoin."[140] Since the release of MiamiCoin, CityCoins has also released NYCCoin supporting New York, New York, and is close to releasing AustinCoin supporting Austin, Texas.[141] CityCoins is a new concept that allows people to support a city of their choice while at

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[136] 29 U.S.C. §§ 206 and 207; 29 CFR § 531.27.

[137] Del. Code Ann. Tit. 19, § 901(7) ("Wage" means compensation due to an employee by reason of the employee's employment, payable in legal tender of the United States or check or bank convertible into cash on demand at full face value); KY. Rev. Stat. Ann. § 337.010(1)(c)1. ("Wages" includes any compensation due to an employee by reason of his or her employment . . . wages shall be payable in legal tender of the United States, checks on banks, direct deposits, or payroll card accounts convertible into cash on demand at full face value); 43 Pa. Cons. Stat. § 333.103(d) ("WAGES" mean compensation due to any employee by reason of his or her employment, payable in legal tender of the United States or checks on banks convertible into cash on demand at full face value); Art. X, Sect. 24(b), Fla. Const. (the terms "Employer," "Employee" and "Wage" shall have the meanings established under the federal Fair Labor Standards Act (FLSA) and its implementing regulations).

[138] Art. X, Sect. 24(b)-(c), Fla. Const.

[139] Zhon Yang Chan, *City Coins: Can it be a Solution for City Government and Local Funding?*, COINGECKO, Jan. 7, 2022, https://www.coingecko.com/buzz/citycoins-can-it-be-a-solution-for-city-government-and-local-funding (last visited Feb. 9, 2022).

[140] Dalvin Brown, *Crypto Tax: 'MiamiCoin' Has Made the City $7 Million So Far, a Potential Game-Changer for Revenue Collection*, Washington Post (Sept. 30, 2021), https://www.washingtonpost.com/technology/2021/09/30/crypto-miamicoin/.

[141] CityCoins-NYCCoin, https://www.citycoins.co/nyccoin (last visited Sept 7, 2022); CityCoins-AustinCoin, https://statescoop.com/austin-texas-citycoins-cryptocurrency/ (last visited Sept 7, 2022).

the same time earning cryptocurrency.[142] Miners mine cryptocurrency tokens and forward those tokens to CityCoins in exchange for MiamiCoin.[143] Thirty percent of the mining rewards are sent in cryptocurrency to a wallet for the city of Miami.[144] The city can then claim its cryptocurrency and convert it to U.S. dollars at any time.[145]

Following Mayor Francis Suarez's announcement that the City of Miami will give out a "Bitcoin yield" from the staking of MiamiCoin to its residents and that MiamiCoin has the potential to eventually eliminate the need for Miami residents to pay taxes to the city, Miami accepted a cash out from MiamiCoin totaling $5.25 million.[146] Despite its initial success, it remains to be seen whether MiamiCoin will be able to continue to generate income.[147] MiamiCoin was launched without having any utility besides earning cryptocurrency.[148]. Skeptics believe that Miami has yet to build out the utility of the coin, and without a utility to prove its worth and incentivize Miami residents to hold MiamiCoin, the project will not continue on its current track.[149] They also point out that funding for cities or projects may be unstable due to fluctuations in MiamiCoin's value.[150] However, others are more optimistic and see the blockchain technology on which MiamiCoin is built as creating the necessary utility for MiamiCoin to succeed. Such

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[142] CityCoins-About, https://www.citycoins.co/ (last visited Sept 7, 2022).
[143] CityCoins-MiamiCoin, https://www.citycoins.co/miamicoin (last visited Sept 7, 2022).
[144] *Id*.
[145] *Id*.
[146] Helene Braun, *Miami to Give 'Bitcoin Yield' from MiamiCoin to Its Citizens*, COINDESK (Nov. 11, 2021), https://.coindesk.com/business/2021/11/11/miami-to-give-bitcoin-yield-from-miamicoin-to-its-citizens; Dalvin Brown, *Crypto Tax: 'MiamiCoin' Has Made the City $7 Million So Far, a Potential Game-Changer for Revenue Collection*, WASHINGTON POST (Sept. 30, 2021), https://www.washingtonpost.com/technology/2021/09/30/crypto-miamicoin/ (last visited Dec. 2, 2022); Bob Mason, *Miami Receives $5.25M Payout from MiamiCoin*, FXEMPIRE, https://www.fxempire.com/news/article/miami-receives-5-25m-from-miamicoin-mia-initiative-889768 (last visited Dec. 4, 2022); Helene Braun, *Miami to Give 'Bitcoin Yield' from MiamiCoin to Its Citizens*, COINDESK, Nov. 11, 2021, https://www.coindesk.com/business/2021/11/11/miami-to-give-Bitcoin-yield-from-miamicoin-to-its-citizens/ (last visited Jan. 24, 2022).
[147] Chan, s*upra*
[148] *Id*.
[149] *Id*.
[150] *Id*.

technology includes allowing residents to store their identification, pay taxes, and vote.[151] Additionally, MiamiCoin only allows users to see what accounts own MiamiCoin or which accounts are mining it, not the real identities of the account holders, which raises concerns about who is donating money to the city, how to keep out "bad actors," and how to guard against money laundering.[152]

4. Healthcare, Real Estate, and Personal Identity Recordkeeping Using Blockchain

Blockchain's decentralized nature and secure ledger, which enables a user to locate data and monitor how it changes overtime, make it ideal for applications involving large amounts of data from many different sources which must be shared and analyzed by different users, including government entities.[153] It also has potential to automate routine tasks such as invoicing or providing assessments. Finally, by storing records electronically, it can significantly reduce or eliminate the costs associated with storing, maintaining, and analyzing paper records.

One possible application for blockchain technology is to facilitate health data sharing. Agencies like the U.S. Centers for Disease Control and Prevention (CDC) must analyze and study large amounts of data to address national health trends or crises and respond accordingly. Blockchain technology has the potential to allow an agency to access information in real-time, while addressing the privacy and security concerns which have traditionally limited access to that information. In a pilot program with National Center for Health Statistics (NCHS) and IBM, the

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[151] Thalia Beaty, *Money for Nothing: Cities' Crypto Push Draws Fans, Critics*, Associated Press (Feb. 8, 2022), https://www.wtnh.com/news/national/money-for-nothing-cities-crypto-push-draws-fans-critics/ (last visited Dec. 2, 2022).

[152] *Id.*

[153] Michael L. Gagnon & Grant Stephen, *A pragmatic solution to a Major Interoperability Problem: Using Blockchain for the Nationwide Patient Index*, Blockchain in Healthcare Today, pg. 2, https://blockchainhealthcaretoday.com/index.php/journal/article/view/28/43 (last visited Dec. 2, 2022); James Clavin, sisi Duan, Haibin Zhang, Vandana P. Janeja, Karuna P. Joshi, Yelena Yesha, Lucy C. Erickson, Justin D. Li, *Blockchains for Government: Use Cases and Challenges*, ACM, Res. Pract., Vol. 1, No.3, Art. 22, (Nov. 2020), https://dl.acm.org/doi/fullHtml/10.1145/3427097#.

CDC is examining whether blockchain can be utilized to see who accesses health data and when as the data moves through its lifecycle.[154]

Further, electronic health records have the potential to become one piece of an overall digital identity system utilizing blockchain technology. Digital identity services can either be used to provide services to citizens or potentially to refugees or other groups of people who do not have identification.[155] Digital identity services can be completely controlled by the person to whom it belongs and allow a user to share only the relevant and necessary information.[156] For example, if a user was asked to verify their age, a user could share their picture and birthdate, but withhold other information typically available on a driver's license such as driver's license number, and address.[157] In 2017, Illinois partnered with Evernym, a company building and deploying self-sovereign identity solutions, to carry out its birth registration pilot program.[158] An individual participating in the program has their birth registration information and additional attributes, including blood type, sex, date of birth, or legal name verified by government agencies and securely stored on a blockchain as "verifiable claims".[159] Each attribute is "cryptographically sealed" and can only be accessed with the individual's or his or her guardian's permission.[160]

Another use for blockchain technology is to use it to track and verify real property records. Blockchain technology has the potential to allow for the "tokenization" of assets, including real

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[154] Caroline Mohan, *CDC Tests Blockchain for Data Transparency*, GCN (Aug. 10, 2018), https://gcn.com/emerging-tech/2018/08/cdc-tests-blockchain-for-data-transparency/292276/.

[155] Victoria Heather Barbino, *Note: Finding Refuge: Blockchain Technology as the Solution to the Syrian Refugee Identification Crisis*, 48 Ga. J. Int'l & Comp. L. 523, 528 (2020).

[156] *Id*.

[157] *Id*.

[158] *Illinois Announces Key Partnership in Birth Registry Blockchain Pilot*, Government Technology, https://www.govtech.com/data/illinois-announces-key-partnership-in-birth-registry-blockchain-pilot.html (last visited Dec. 2, 2022); Evernym, https://www.evernym.com/ (last visited Feb. 21, 2022).

[159] *Illinois Announces Key Partnership in Birth Registry Blockchain Pilot*, *supra* note 172.

[160] *Id*.

property.[161] A smart contract can verify the identities of the property owner and seller, facilitate payments for the property, and register it on behalf of the new owner.[162] These functions can reduce transaction times and costs, as well as help prevent fraud. In Illinois, the Cook County recorder of deeds participated in a pilot program wherein it designed a blockchain-based real estate conveyance system which successfully allowed for the transfer of property titles and the filing of liens.[163] The pilot program also examined the compatibility between blockchain and then existing record management systems and evaluated such systems' ability to prevent fraudulent use.[164]

5. Voting Using Blockchain Technology

Public office election procedures may also be facilitated by blockchain. Proponents of the idea believe that blockchain can help overcome partisan polarization, increase voter participation, and provide a secure method of counting ballots thereby ensuring public trust in election results.[165] A blockchain voting system allows voters to maintain their anonymity, prevents voters from selecting more than one candidate for a single office, and provides a means to verify each vote, thus allowing for transparency in the electoral process.[166] While not yet widely adopted, a few

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[161] Jenny Alexandra Triana Casallas, Juan Manual Cueva Lovelle, Jose Ignacio Rodriguez Molano, *Smart Contracts with Blockchain in the Public Sector*, Int'l J. of Interactive Multimedia and A. I., Vol. 6, No. 3, pg. 66 (July 31, 2020)

[162] *Id*.

[163] For example, *see* Karen A. Yarbrough, *Blockchain Pilot Program Final Report*, Cook County Recorder of Deeds (May 30, 2017), https://www.documenters.org/documents/blockchain-pilot-program-final-report-4122/ (Cook County recorder of deeds participated in a Pilot Program wherein it assisted designed a blockchain-based real estate conveyance system which successfully secured government records on the site.)

[164] Kyle Torpey, *Chicago's Cook County to Test Bitcoin Blockchain-Based Property Title Transfer*, Bitcoin Magazine (Oct. 6, 2016), https://Bitcoinmagazine.com/business/chicago-s-cook-county-to-test-Bitcoin-blockchain-based-public-records-1475768860.

[165] Agnes Beatrice Gambill, *Article: The Future of Voting Reform with Blockchain Technology*, 56 Idaho L. Rev. 167, 175 (2020); Jane Susskind, *Decrypting Democracy: Incentivizing Blockchain Voting Technology for an Improved Election System*, 54 San Diego L. Rev. 785, 788 (2017).

[166] Jane Susskind, *Decrypting Democracy: Incentivizing Blockchain Voting Technology for an Improved Election System*, 54 San Diego L. Rev. 785, 807-08 (2017).

jurisdictions have begun testing blockchain-enabled voting systems, including Denver, Colorado; Pierce County, Washington; Utah County, Utah; Jackson and Umatilla Counties in Oregon; and the state of West Virginia.[167] Blockchain-enabled voting systems services have been provided by Voatz, Inc.[168] The Voatz system uses cellphone-enabled biometric authentication matched to government IDs to register voters as "mobile" absentee voters and then allows such voters to submit their ballots electronically.[169]

6. Procurement of Goods and Services Using Blockchain

Government entities may also find blockchain and smart contracts useful in procuring goods and services.[170] The blockchain can register purchase orders, solicit bids, automate some features of contracts, automate some bid and award procedures, and act as a guarantee of security and confidentiality to the information obtained by bidders during the procurement process.[171] These functions can increase efficiency and transparency, and make corruption, waste, and misappropriations easier to detect.[172] The U.S. Health and Human Services (HHS) department utilizes "Accelerate," a blockchain-powered program, which allows for department-wide procurement data sharing. "Accelerate" assists in the management and analysis of HHS' contract portfolios, thereby providing better information on which to base decisions, lessening acquisition times, and reducing overall costs. [173]

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[167] Jacob Beckett, *Comment: Blockchain Voting: WY Not?*, 21 Wyo. L. Rev. 411, 425 (2021); Voatz, https://voatz.com/ (last visited Sept 12, 2022).
[168] *Id*.
[169] *Id*.
[170] Alexandra ET. AL. *supra* note 175 at 68-69.
[171] *Id*. at 68-70.
[172] *Id*.
[173] Article: The Future of Voting Reform with Blockchain Technology, 56 Idaho L. Rev. 167, 174 (2020); Alex Zhou, *Tracing HHS Blockchain Adoption*, Avascent (April 28, 2021), https://www.avascent.com/news-insights/healthcare-pulse/tracing-hhs-blockchain-adoption/.

B. Government Considerations Before Utilizing Cryptocurrency and Blockchain

Government entities considering utilizing blockchain must be careful and avoid making decisions based on the "hype" surrounding this technology. A government entity's thorough understanding of blockchain technology and assessment of its different applications is made more challenging because there are few standards in the industry and little reported results from pilot programs. Additionally, the legal and regulatory landscapes surrounding the different applications of blockchain are far from settled and are constantly changing. Accordingly, government entities should take ample time to understand blockchain technology, the technical expertise required to develop and implement a blockchain application, and to consider each application's unique adoption challenges and trade-offs when compared to another more traditional mechanisms.

One such consideration is that any blockchain application adopted will have to meet applicable regulatory requirements. For example, a government entity will need to follow applicable procurement processes, which vary by jurisdiction, when entering into a service agreement with a VASP. Likewise, if a government entity is seeking to use blockchain to assist it in its procurement process, it will need to ensure that the blockchain application can satisfy applicable procurement requirements.

Additionally, blockchain applications must exist within current legal frameworks. For example, a "code-only" smart contract may be enforceable and satisfy a jurisdiction's common law requirements for a "contract" but may not be enforceable under that jurisdiction's Uniform Commercial Code or statute of frauds. To be enforceable under such laws, smart contracts may need to be written in text and may require additional formalities.[174]

[174] Levi, *supra* note 22.

Further, while it is often beneficial that blockchain is available, transparent, and immutable, these same features may be problematic, especially for government entities. First, it is important to note that blockchain does not prevent the recording of incorrect data. Yet, it does prevent the data, once recorded, from being easily corrected or removed from the ledger.[175] Incorrect data can be the result of a mistake, an attack on the system, or the failure of an off-chain resource relied on to provide information to the system.[176] This immutability feature may pose a problem for government entities, who are required to keep certain information confidential because the laws and rules defining which information is confidential change over time and are often subjective. Further, blockchain's immutability may be at odds with laws governing storage, retention, and the public accessibility of records, in addition to laws which allow records to be expunged, amended, or purged.[177] Additionally, blockchain's immutability may also pose problems when trying to amend or dissolve a smart contract.

Note, however, that private blockchains can rewrite or edit data on already confirmed blocks, but all validators must agree to "rewind" their nodes to edit the data which can prove time-consuming and costly.[178] Private, permissioned blockchains centralize an originally decentralized concept making them less attractive to those with core beliefs about the benefits of decentralization. Further, there are very few examples of public blockchains rewriting their histories. The most prominent example would be the hard fork of Ethereum to create Ethereum Classic and Ethereum 2.0. In this instance two groups could not agree on whether or not to return

[175] Clavin, *supra* note 167.

[176] *See generally, Blockchain and Suitability for Government Applications*, 2018 Public-Private Analytic Exchange Program, pg. 14, https://cointhinktank.com/upload/Blockchain_and_Suitability_for_Government_Applications-2018_AEP.pdf (last visited Sept.12, 2022).

[177] *Id*. at 16.

[178]Piotr Hejwowski, *Do you need private blockchain*? Softwaremill (Nov. 30, 2022) https://softwaremill.com/do-you-need-private-blockchain/.

DAO contributor funds that were stolen in a smart contract exploit. This resulted in two separate blockchains with two separate tokens. The Ethereum Classic chain did not return the funds and kept its blockchain transactions unaltered while the Ethereum 2.0 chain edited the ledger and returned the stolen funds.[179]

Another consideration is an application's scalability. Scalability refers to a blockchain's capacity to handle transaction throughput.[180] A blockchain's throughput capacity varies depending on the variety of blockchain, i.e., permissioned, permissionless, public or private.[181] The variety of blockchain determines the type of algorithm, consensus mechanism, and block size.[182] For example, permissionless blockchains often involve thousands of nodes, proof-of-work consensus and, as a result, have increased fees and transaction times, that make them impractical for many real-world applications.[183] Permissioned blockchains, on the other hand, generally have fewer nodes and utilize different consensus mechanisms which can increase transaction times.[184] Government applications of blockchain will require a system that can handle many users and process large amounts of data.

Estonia has been a pioneer in utilizing blockchain technology for government data. Ninety-nine percent of public services are available to Estonia's citizens as e-services.[185] Filing tax returns, voting in elections, and accessing medical records are all done through its digital identity system,

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[179] Cryptopedia, *Ethereum Classic (ETC): A Rift in the Blockchain Community*, *Cryptopedia* (Nov. *30*, 2022), https://www.gemini.com/cryptopedia/ethereum-classic-etc-vs-eth.
[180] *Blockchain and Suitability for Government Applications*, *supra* note 190, at 8.
[181] *Id.*
[182] *Id.*
[183] Clavin, *supra* note 167; *Blockchain and Suitability for Government Applications*, *supra* note 190, at 8-9.
[184] Clavin, *supra* note 167; Shafaq Naheed Khan, Faiza Loukil, Chirine Ghedira-Guegan, Elhadj Benkhelifa, and Anoud Bani-Hani, *Blockchain Smart Contracts: Applications, Challenges, and Future Trends*, PubMed Central (April 18, 2021) https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8053233/ (last visited Dec. 2, 2022).
[185] *Estonia-- the Digital Republic Secured by Blockchain*, PWC, https://www.pwc.com/gx/en/services/legal/tech/assets/estonia-the-digital-republic-secured-by-blockchain.pdf (last visited Dec. 2, 2022).

many parts of which utilize blockchain.[186] Estonia was the first nation-state to deploy blockchain technology for government records starting with their Succession Registry kept by the Ministry of Justice in 2012.[187] State records kept on blockchain include healthcare records, property records, business registry records, succession registry records, digital court records, and the Estonian legislation database.[188]

Finally, there are thousands of blockchain applications in use across various fields and more are being created daily. Yet, many of these are unable to communicate with each other directly.[189] Accordingly, government entities with overlapping jurisdictions may have to find solutions to enable cross-blockchain communication.

In conclusion, blockchain applications have many potential uses in the public sector, and government entities at all levels and across many different fields are interested in their utility. There are still many challenges to overcome before blockchain is widely adopted by government entities, but the various research being conducted and pilot projects will provide valuable insight into how these challenges can be overcome, the benefits that blockchain can provide, and more clearly define what blockchain's future in the public sector will be.

VI. Federal Initiatives Related to Digital Assets

The evolving technology associated with cryptocurrency and its nuances in the marketplace has made it a challenge for the federal government to develop a clear regulatory framework. This, in turn, has left cryptocurrencies without a primary regulator and has led federal agencies – particularly the SEC and CFTC -- to enforce piecemeal regulatory policies on the digital asset industry participants through litigation. This stems from the multiplicity of federal agencies with

[186] *Id.*
[187] *Id.*
[188] *Id.*
[189] *Blockchain and Suitability for Government Applications*, *supra* note 190, at 8-9.

overlapping jurisdictions in the financial services arena. Bills filed in Congress attempt to address various virtual currency regulatory concerns, but no federal law has been enacted. In the meantime, the Biden Administration has issued an executive order to executive branch financial regulatory agencies.

A. President Biden's Executive Order on Ensuring Responsible Development of Digital Assets

On March 9, 2022, President Biden signed Executive Order 14067, *Ensuring Responsible Development of Digital Assets*.[190] The executive order outlines the first ever, "whole-of-government approach" to addressing the risks and harnessing the potential benefits of digital assets and their underlying technology.[191] The executive order focuses on the following six policy objectives with respect to digital assets: consumer, investor and business protection; global financial stability and mitigation of systemic risk; mitigation of the illicit finance and national security risks posed by misuse of digital assets; U.S. leadership in the global financial system and in technological and economic competitiveness; promotion of safe and affordable financial services; and support technological advances promoting responsible development and use of digital assets.[192] The executive order also tasks many federal agencies with coordinating their efforts and producing reports that analyze the digital asset market and make recommendations to guide future federal regulatory policy.[193]

B. Proposed Federal Legislation Concerning Digital Assets

Senate Bill 4760/House Bill 8950, known as the Digital Commodities Consumer Protection Act of 2022, if enacted, amends the Commodity Exchange Act to provide the CFTC jurisdiction

[190] Exec. Order No. 14067, 87 C.F.R. § 49 (14143-14152).
[191] *Id*.
[192] *Id*.
[193] *Id*.

to oversee the spot digital commodity market.[194] The bill requires the registration of "digital commodity platforms" and establishes "core principles" applicable to "digital commodity trading facilities," "digital commodity dealers and brokers," and "digital commodity platforms."[195] Core principles include rules of conduct, disclosure requirements, record-keeping requirements, and risk mitigation.[196] Importantly, the bill preempts applicable state registration requirements relating to money transmission, virtual currency, and commodity brokers for digital commodity platforms and associated persons of digital commodity brokers and dealers registered under the act.[197] The bill also creates a funding instrument for CFTC oversight by enabling the regulator to impose user fees on digital commodity platforms.[198]

Other bills include the following:

- Senate Bill 4356, known as the Responsible Financial Innovation Act, grants the CFTC with exclusive registration authority over digital asset exchanges thereby preempting state registration of digital asset exchanges, provides SEC jurisdiction over digital assets that provide their holders with a financial interest in a business entity while providing the CFTC with jurisdiction over digital assets that do not. Depository institutions may issue stablecoins within prescribed conditions.[199]
- House Bill 1628, known as the Token Taxonomy Act of 2021, in pertinent part, amends the Securities Act of 1933 and the Securities Exchange Act of 1934 to exclude digital tokens from the definition of a security.[200]

[194] S. 4760, 117th Cong. (2022).
[195] *Id*. at §5i.
[196] *Id*.
[197] *Id*. at §4.
[198] *Id*. at §5i.
[199] S. 4356,117th Cong. (2021-2022).
[200] H.R. 1628, 117th Cong. (2021-2022).

- House Bill 5496, known as the Clarity for Digital Tokens Act of 2021, amends the Securities Act of 1933 to provide a limited safe harbor for transactions in certain digital tokens.[201]
- House Bill 4741, known as the Digital Asset Market Structure and Investor Protection Act, grants the CFTC authority over digital assets and the SEC authority over the regulation of digital asset securities.[202]

VII. Conclusion and Policy Considerations Summary

Florida has an opportunity to stand out through wise policy choices that will balance the needs of Florida's businesses and allow them to thrive while enabling such businesses to easily ascertain the boundaries of acceptable conduct. Jurisdictions that have laws facilitating digital asset commerce or imposing regulatory requirements enable the business community to know where they want to establish themselves. Jurisdictions lacking such guideposts, while perhaps providing some degree of liberty in the short run, neither distinguish themselves as economies nor provide certainty to businesses. To facilitate economic growth, Florida needs to establish laws that promote economic growth and keep the marketplace free from fraud and bad actors.

As this whitepaper is preliminary and is meant to provide a background for basic policy issues, the OFR provides this summary of issues for the Florida Legislature to consider:

1. Should state agencies utilize cryptocurrency or blockchain technology to facilitate public services for Floridians?
    a. What barriers need to be removed to implement these uses?
    b. Should Florida fund pilot projects?

[201] H.R. 5496, 117th Cong. (2021-2022).
[202] H.R. 4741, 117th Cong. (2021-2022).

2. Should Florida prioritize the establishment of a robust cryptocurrency or blockchain industry in the state over the development of a regulatory framework? Or vice-versa?
    a. If economic development is prioritized:
        i. should Florida focus on facilitating commercial transactions, new types of business entities, or specific industry segments?
        ii. Should the definition of "intangible property" be amended to explicitly include digital assets, such as virtual currency?
    b. If regulation is prioritized, should Florida focus on:
        i. Areas where digital assets and blockchain pose systemic risks to industry or consumers?
        ii. The firms issuing digital assets and facilitating their trading? If so, should the focus extend to other participants in the blockchain consensus process such as the miners or validators?
        iii. Regulation of the secondary market for digital asset securities in the same manner as traditional securities markets, or is the secondary market for digital asset securities different enough from traditional securities markets to require additional regulation or a separate unique regulatory scheme?
        iv. Regulating the digital assets themselves?
        v. Creating a definition for Virtual Asset Service Provider in Florida law? Should VASP's be required to provide customer's a disclosure regarding fees and charges, whether or not they are insured, and how customer funds will be used if stored with the VASP?

vi. The applicable statute of limitations being "tolled" for all periods of time during which Mutual Legal Assistance Treaties (MLAT) requests are outstanding (or otherwise being actively pursued) and/or for the time it takes for digital assets under investigation, to be recovered from a decentralized or international VASP?

vii. Money transmitters, and perhaps all money services businesses, requiring them to establish and maintain a cybersecurity program and implement and maintain written cybersecurity policies and procedures to mitigate cybersecurity risks?

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