Crypto Council for Innovation

Testimony of Sheila Warren, Chief Executive Officer, Crypto Council for Innovation

Before the United States Senate Senate

Committee on Agriculture, Nutrition, and Forestry

"Legislative Hearing to Review S.4760, the *Digital Commodities Consumer Protection Act*"

September 15, 2022
10:00 AM

I. Introduction

Chairwoman Stabenow, Ranking Member Boozman, and members of the committee –

Thank you for the opportunity to testify today on both the tremendous benefits and opportunities associated with the adoption of digital assets in the United States.

There is a pressing need for regulatory clarity that promotes innovation and protects consumers. The legislation being considered today can provide some of the certainty needed to help spur international economic growth, create jobs, improve financial inclusion, and enhance privacy and security.

I am pleased to represent the Crypto Council – a global alliance of industry leaders across the digital assets and Web3 space. We use an evidence-based approach to support institutions and leaders worldwide who are shaping and encouraging the responsible regulation of this innovation.

Over the past two decades, my time as an attorney, entrepreneur, product builder, and NGO executive has focused on the intersection of technology, law, diversity & inclusion, civil rights and Web3. Over the past 6 years, I've worked across 16 countries to advance the responsible and inclusive adoption of this new technology.

Now, I see crypto as this generation's best chance of addressing inequity in current financial and technical systems. Crypto can provide a more equal playing field for people and communities that don't have meaningful access to these systems.

And as we shift to a more ownership-based global digital economy, the building of an open and transparent regulatory framework is crucial. The *Digital Commodities Consumer Protection Act* is a pivotal step in achieving the clarity and oversight that are greatly needed, and I applaud this committee for its bipartisan work on this legislation.

II. Crypto refers broadly to a wide range of use cases and applications. At its core is the idea of an ownership-based, digital economy.

The history of crypto and explanations of the technology underpinning it are well-documented. Rather than repeat this content, I want to highlight what is new about crypto and the vast range of activities covered within the Web3 ecosystem. If I can leave you with one message, it is that the industry is wide-ranging and moving quickly. This makes nuanced policymaking and educational efforts vital.

A. Crypto's Value

First, what's new?

Crypto is a broad term that covers a wide range of use cases and applications. The core shift it represents is from the current model of intermediated interactions to an ownership-based digital economy. For a long time, we have relied on third parties to facilitate trust in many aspects of our lives, such as transactions, identity provision, and governance. In many cases, intermediaries have handsomely profited from intermediation. And, at worst, some intermediaries have exacerbated inequalities,[1] sewn distrust,[2] and restricted much-needed access to individuals.[3]

What if we could put some of this power back into the hands of individuals and give consumers a broader set of choices? This is the question at the core of Web3.

Using a unique combination of cryptography, incentive design, and decentralized operations, blockchain technology allows for a decentralized form of record keeping and value exchange. As the recent Executive Order explains, blockchain "refers to distributed ledger technologies

[1] https://journals.sagepub.com/doi/pdf/10.1177/00027642211003162
[2] https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef22042en.pdf
[3] https://documents1.worldbank.org/curated/en/552411525105603327/pdf/The-decline-in-access-to-correspondent-banking-services-in-emerging-markets-trends-impacts-and-solutions-lessons-learned-from-eight-country-case-studies.pdf

where data is shared across a network that creates a digital ledger of verified transactions or information among network participants and the data are typically linked using cryptography to maintain the integrity of the ledger and execute other functions, including transfer of ownership or value."[4]

This fundamentally new innovation has opened a new model for peer-to-peer value exchange in the digital economy. Though the first use case was financial, the innovation found in the Bitcoin white paper[5] has opened a world of possibilities. Conversations about central bank digital currencies (CBDCs),[6] digital art and non-fungible tokens (NFTs),[7] digital identity,[8] and decentralized finance[9] – some of which I will dive into shortly – would not be possible without this fundamental transformation.

B. Examples of Crypto in Action

Now, I turn to what this all means in practice. While it is important to understand the basics of the technology, I think there needs to be a shift from asking, "crypto: how does it work?" to "crypto: what is it good for?". I highlight some examples of crypto in action, though this list is by no means exhaustive.

Decentralized Finance (DeFi)

Another example is decentralized finance, or DeFi, which provides financial services without the traditional intermediaries. DeFi is perhaps one of crypto's most prominent use cases, given its market sizing and value transacted. One of the core tenets of DeFi is to be part of building an open monetary system, accessible to everyone globally to provide basic banking service options.

It is well known that there is a burgeoning fringe banking industry in the United States. Through a variety of predatory lending practices, money lenders are able to charge high fees on loaning money to individuals with pressing needs for capital.

The scale of predatory lending is massive. There are more than 23,000 payday lenders in the United States. [10] To put that into perspective, that's almost twice the number of McDonald's restaurants.[11] And that doesn't even include various other lending mechanisms, including

[4] https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/
[5] https://bitcoin.org/bitcoin.pdf
[6] https://www.bis.org/publ/bppdf/bispap125.htm
[7] https://time.com/5947720/nft-art/
[8] https://www.coindesk.com/podcasts/coindesks-money-reimagined/getting-internet-identity-right-30-years-on/
[9] https://www.weforum.org/whitepapers/decentralized-finance-defi-policy-maker-toolkit
[10] https://www.cnbc.com/2021/02/16/map-shows-typical-payday-loan-rate-in-each-state.html
[11] *Id.*

rent-to-own services, auto title loans, or pawnshops. People resort to payday loans and fringe banking because of barriers to the traditional financial system. These include the punitive nature of credit scoring in the traditional banking world, minimum balances to keep accounts open, and other barriers to participate in the traditional financial system.

There are innovative products in crypto that offer alternative ways to trustlessly take out loans without agreeing to predatory practices. Though crypto lending is not without risk, the risk factors look very different. More importantly, opting into crypto and DeFi is to opt out of predatory and discriminatory banking practices. Crypto owners were more likely than the average U.S. adult to cash checks or purchase money orders from non-bank providers, pay bills through services like MoneyGram or Western Union, take out payday loans, and take out auto title loans.[12]

Throughout crypto, the total market capitalization of lending protocols is around $4 billion, a fraction of the $8 trillion market capitalization of the world's largest banks. To date, $393 million in dollars have been lent via crypto platforms, with 95 percent of that amount from the past calendar year alone.[13] Notably, compared to the traditional loan options: the average personal loan interest rate in the US is 10 percent (9.38% in 2021),[14] while crypto loan rates tend to be significantly lower, with rates ranging from 0.01-3.8% in 2021 across four major decentralized lending platforms.[15]

DeFi can also be used beyond traditional finance. For instance, academic literature has suggested that the unique combination of decentralization, interconnected autonomy, openness, and intelligence makes blockchain technology a key enabler of various energy-related use cases.[16] These include peer-to-peer energy transactions, efficiency gains in electric vehicle charging, carbon emissions certification and trading, synergy of the multi-energy system, and more.[17] Once again, these are not theoretical propositions. Initiatives like "regenerative finance" – or ReFi – are working to bring these climate-focused projects to life.[18] In one such example, the Climate Collective mapped more than 250 projects spanning carbon credits, biodiversity, energy markets, waste management, and more.[19]

[12] https://go.morningconsult.com/rs/850-TAA-511/images/220630_State_of_Cryptocurrency_Report.pdf
[13] https://tokenterminal.com/terminal/markets/lending
[14] https://www.businessinsider.com/personal-finance/average-personal-loan-interest-rates
[15] https://linen.app/interest-rates/borrow/historical?interval=1
[16] https://pdfs.semanticscholar.org/b6b1/5293d4f0a36aa155671023062ea3fc22e64a.pdf?_ga=2.98485663.1428055600.1655216566-2003207876.1655216566
[17] https://www.researchgate.net/publication/330089877_Blockchain-Based_Management_of_Shared_Energy_Assets_Using_a_Smart_Contract_Ecosystem
[18] https://www.coindesk.com/layer2/miningweek/2022/03/27/crypto-carbon-can-blockchain-networks-fix-carbon-offsets/
[19] https://kumu.io/climate-collective/web3-climate-map

Crypto Assets in Philanthropy and Aid

Recent events in Ukraine present one such example. Following the start of the war, the crypto community quickly galvanized to raise approximately $100 million to aid the Ukrainian government.[20] Working with a local exchange, the Ukrainian government was able to receive and use the cryptocurrency quickly to buy essential items for the war effort.[21] This was supplemented by other efforts, such as crypto-based charity Ukraine DAO, which raised millions of dollars via the sale of NFTs.[22]

Michael Chobanian, a Ukrainian entrepreneur and president of the Blockchain Association of Ukraine, testified before the US Congress in May 2022, describing the essential nature of the crypto relief campaign. He detailed how "the minute the crypto landed on these addresses, the government could use them so immediately. No bureaucracy." In short, Chobanian emphasized that blockchain and crypto "will be the technology that we're going to use to rebuild our country."[23]

Crypto has also provided immediate aid in other high-stake crisis situations. Following the second wave of COVID-19 in India, the crypto community quickly mobilized to raise money for the "India COVID Crypto Relief Fund.[24]" Several key players in the space donated and encouraged others to do the same. This included a donation from Ethereum co-founder Vitalik Buterin, which was worth more than $1 billion at the time of donation.[25] The funds were used for beds, training, and augmenting the country's public health infrastructure. Importantly, the fund was community driven and helped finance local, grassroots COVID-19 relief efforts.[26]

We have seen in these times of crisis that people want to organize and help, but traditional tools and cumbersome requirements can create friction or even stand in the way of these altruistic efforts.

Crypto Assets in Remittances and International Payments

The best-known use case is crypto assets. Crypto assets have been used in a number of arenas, but show particular promise for international payments and remittances because these transactions have historically been high-cost and heavily intermediated.

---

[20] https://www.coindesk.com/business/2022/03/09/ukraine-has-received-close-to-100-million-in-crypto-donations/
[21] https://donate.thedigital.gov.ua/
[22] https://cointelegraph.com/news/ukraine-dao-raises-over-6m-via-nft-sale-to-aid-ukrainian-citizens
[23] https://www.protocol.com/newsletters/protocol-fintech/crypto-ukraine-senate-hearing
[24] https://cryptorelief.in/
[25] https://www.forbes.com/sites/ninabambysheva/2021/05/12/ethereums-co-founder-vitalik-buterin-donates-over-1-billion-to-india-covid-relief-fund-and-other-charities/?sh=4a804cb36548
[26] *Id.*

Remittances – estimated to reach $630 billion in 2022 – represent a significant opportunity. According to the World Bank's Remittance Prices Worldwide database, the global average cost of sending $200 was 6.4 percent in the first quarter of 2021, which is more than double the Sustainable Development Goal target of 3 percent by 2030.[27] Estimates show that cross-border payments underpinned by blockchains could save approximately $4 billion a year.[28]

Crypto operators have stepped in to provide these services at a lower cost. For example, in Sub-Saharan Africa, banks are the most expensive agents for sending money, charging 10.2 percent in fees on average. This is closely followed by 7.7 percent from money transfer operators, while post offices charge 5.5 percent. Meanwhile, crypto service providers such as BitPesa, LocalBitcoins, and Paxos can process remittance payments with 1 to 3 percent in fees on average, representing significant cost savings for those who need them most.[29]

MoneyGram, one of the world's largest cross-border transfer services, is partnering with Stellar, a decentralized digital currency protocol, to allow users to send USDC (a stablecoin) to recipients. Recipients can cash out in local currencies via the MoneyGram network.[30] Similarly, Coinbase has a cash-out service across 37,000 convenience stores, supermarkets, and department stores in Mexico. Customers have the choice of cashing out or investing their balance into cryptocurrencies.[31] This is an example of tailoring services to the needs of the customer. In Mexico, 86 percent of all transactions are in cash.[32]

Cryptocurrencies are also increasingly used in countries where access to financial institutions is slow and cumbersome, or where such access has been otherwise significantly depleted because of war, disaster, or terrorism.[33] I have personally worked in this area – including building a product designed to facilitate international donations – and can attest to the complexity involved.[34]

Non-Fungible Tokens (NFTs)

NFTs are yet another use case opening up new opportunities for individuals, especially in arts and culture.

A classic challenge for entertainers, artists, and other content creators is reaching an audience and generating sufficient income. Digital media crystallized this challenge. The Internet radically

[27] https://www.worldbank.org/en/news/press-release/2021/11/17/remittance-flows-register-robust-7-3-percent-growth-in-2021
[28] https://www.mckinsey.com/industries/financial-services/our-insights/blockchain-and-retail-banking-making-the-connection
[29] https://forkast.news/cryptocurrencies-remittance-africa-blockchain-bitcoin-money-transfers-fees/
[30] https://ir.moneygram.com/news-releases/news-release-details/moneygram-announces-innovative-partnership-stellar-development
[31] https://www.coindesk.com/business/2022/02/15/coinbase-enables-mexican-users-to-easily-cash-out-of-crypto-sent-to-them/
[32] https://blog.coinbase.com/theres-now-a-cheaper-easier-way-for-your-friends-and-family-in-mexico-to-cash-out-the-crypto-you-2fb095df8324
[33] https://www.coindesk.com/podcasts/coindesks-money-reimagined/a-best-of-2021-holiday-special-haitis-transition-into-modern-finance/
[34] https://www.wcoinetwork.org/wcoin-blog/sheila-warren-wagmi-women-of-the-week-fy9kp-sj835-57dyy-32hc9-dwnxm-mkf8m-sm72j

reduces the costs of copying and distributing digitally based work in comparison to its physical counterparts, making it harder for creators to monetize their work. Blockchain applications can help address this challenge. Specifically, NFTs can help creators manage digital rights to the content they create.

Such NFTs represent unique or quantity-limited digital items – like a work of art or piece of music – linked to blockchain records. Each individual NFT has a unique identifier. Entries on the blockchain record information about ownership of, and associated with, the NFT. Subsequent entries can record transactions, such as transfer or sale. Smart contracts can also be programmed to pay creators royalties from the work's secondary market transactions.[35] Artists and their families can sell their digital art and receive royalties for the lifetime of the NFT. This is very different to traditional art where an artist sells for one-time payment.

NFTs expand opportunities for creators and their audiences to connect directly. Traditional artists like poets and fine artists can reach a broader audience by representing poems or pictures in NFTs than they can by relying solely on books, auctions, and dealers for distribution.[36] For example, the poet Ana Maria Caballero makes NFTs from spoken-word performances of her award-winning poetry.[37] Blockchain technology allows her to reach her audience without the need for a third-party seller, which is limited for poetry.[38] Similarly, musicians can sell NFTs incorporating their songs that embed royalty rights in the smart contracts.[39] This allows audiences to support their favorite musicians and feel more connected to the music.[40] DJ Steve Aoki noted that he made more money from one NFT drop than in 10 years of music advances.[41]

We have also seen how NFTs have opened up opportunities for those who may not have had opportunities within traditional arts and entertainment. A 2019 analysis of 18 major art museums found that 85 percent of artists were white and 87 percent were male.[42] As of 2018, art by African American artists made up just 1.2 percent of the global auction market.[43] Additionally, artists are exploring new mediums and venues for displaying their art, as the world is becoming increasingly digital. However, this can raise several challenges, especially for digitally-native artists, including monetization models, intellectual property rights, and attribution.

By contrast, NFTs do not have the same gatekeepers. As such, we have seen cultural movements enabled by this novel technology. For example, there have been emerging

[35] https://support.opensea.io/hc/en-us/articles/1500009575482-How-do-creator-earnings-work-on-OpenSea-
[36] https://www.entrepreneur.com/article/422999.
[37] *Id.*
[38] *Id.*
[39] https://time.com/6124814/music-industry-nft/.
[40] *Id.*
[41] https://decrypt.co/92938/steve-aokimore-money-nfts-decade-music
[42] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6426178/
[43] https://www.sothebys.com/en/articles/for-african-american-artists-the-market-remains-woefully-unbalanced

collectives of artists of color, LGBTQ+ artists, and neurodivergent artists.[44] Moreover, several artists have said that NFTs have changed their lives, especially those that create in a digitally-native manner.[45] Entire communities – as discussed later in this comment – have burgeoned around NFT projects, bringing together individuals from around the world.

Blockchain technology can also improve the operation of the secondary market for media to the benefit of the creators. For physical media, it may be difficult for a creator to track the resale or transfer of their work, or encourage the exchange of it among fans. Tokenizing their work in the form of NFTs may create a more robust market and may facilitate the creation of communities around the work, all to the benefit of artists and their audiences.[46]

Finally, the programmability of NFTs opens new possibilities. For example, in August 2021, NFT platform Art Blocks raised more than $23.5 million for charity through its platform.[47] A documentary project raised nearly $2 million in two days via the sale of NFTs.[48] Other industries have recognized the potential as well, with explorations and applications across restaurant groups[49], real estate[50], live events[51], and even domain names[52]. This has given rise to the rapid growth and adoption of NFTs in the luxury[53], sports[54], and gaming[55] industries.

Decentralized Autonomous Organizations (DAOs)

Decentralized autonomous organizations (DAOs) are an emerging form of membership organization that relies on these concepts. Generally, membership interests in a DAO are represented by tokens, ownership of which can be tracked on blockchains. DAOs then place decision-making in the hands of members who directly exercise those rights by voting with their tokens. DAOs may also deploy smart contracts to govern their operations and execute the decisions made by their members.[56]

---

[44] https://www.forbes.com/sites/rebekahbastian/2021/10/24/the-diversity-equity-and-inclusion-potential-of-nfts/?sh=2eff26303179
[45] https://fortune.com/2021/08/06/nft-art-pplpleasr-fortune-cover-ethereum-defihow-crypto-changed-my-life/; https://www.coindesk.com/tv/nft-all-stars/now-ive-found-my-people-how-nfts-changed-fewocious-life/; https://techcrunch.com/2021/03/11/beeples-69-million-nft-sale-marks-a-potentially-transformative-moment-for-the-art-world/
[46] https://www.coindesk.com/podcasts/coindesks-money-reimagined/funding-culture-and-empowering-artists-with-nfts-feat-lethabo-huma-and-cuy-sheffield/
[47] https://cryptobriefing.com/art-blocks-nfts-raise-23-5m-for-charity-august/
[48] https://www.coindesk.com/markets/2021/07/19/ethereum-documentary-featuring-vitalik-buterin-raises-1036-eth/
[49] https://foodfightersuniverse.com/
[50] https://www.entrepreneur.com/science-technology/how-nfts-could-change-real-estate/382816
[51] https://www.coindesk.com/layer2/sportsweek/2022/07/29/why-we-need-nft-ticketing-for-sports-events/; https://www.coindesk.com/business/2021/10/28/nft-ticketing-gets-boost-with-mobile-app-from-yellowheart/; https://www.coindesk.com/business/2022/08/31/ticketmaster-partners-with-blockchain-firm-dapper-labs-to-issue-nfts-for-live-events/
[52] https://ens.domains/
[53] https://www.bloomberg.com/news/articles/2022-08-03/luxury-brands-gucci-t\iffany-co-dive-into-nfts-despite-slump?sref=dCyCdmbQ;
[54] https://www.coindesk.com/learn/sports-nfts-how-to-get-in-the-game/
[55] https://messari.io/report/the-digital-gaming-frontier
[56] https://coopahtroopa.mirror.xyz/_EDyn4cs9tDoOxNGZLfKL7JjLo5rGkkEfRa_a-6VEWw; https://www.governing.com/community/can-we-turn-shareholders-into-public-decision-makers

At its core, a DAO is an organizational structure with blockchain technology and tokens underpinning the operations. As such, there have been a diverse set of applications of the DAO model and explosive growth in this area. It is estimated that the number of participants in DAOs grew in 2021 from 13,000 to 1.7 million people worldwide.[57]

I will highlight a few examples:

Gitcoin is a DAO that is focused on funding open source software. A public good, open source software has been historically under-valued and difficult to create a business model for.[58] Using a DAO model for decision-making about priorities and fundraising, Gitcoin has raised approximately $64.7 million in funding for open source software to date.[59] Its community includes 312,000 monthly active developers, and there have been almost 3,200 grants funded through its platform.[60]

Komorebi DAO is another model for providing capital within the industry. This DAO was created specifically to fund female and non-binary founders, who are historically under-represented as founders receiving venture capital funding (women received just 2 percent[61] of venture capital funding in 2021). As Komorebi states: “An overarching ethos of crypto is to serve and equalize access to financial and non-financial applications and opportunities across all segments of the global population. We believe this begins with backing founders that represent the diverse group of people we are building for.” With the intent of leveling the playing field, the DAO invested almost $500,000 into seven women and nonbinary-led projects over the course of one year.[62]

Yet another type of DAO is one that makes decisions on the future of a given project or protocol. We have seen these DAOs throughout the decentralized finance space. Examples include Aave,[63] Compound,[64] and Uniswap.[65] Many of these DAOs manage billions of dollars in their treasury, using this capital to both make product improvements and invest in public goods for the ecosystem.[66] This is a part of “progressive decentralization,” wherein projects teams hand over the reins to a decentralized community over time.[67]

DAOs have also become a tool for organizing around arts and culture – often going hand in hand with my previous example, NFTs. For example, Crypto Coven is a project started by five

[57] https://www.weforum.org/agenda/2022/06/are-dao-the-business-structures-of-the-future/
[58] https://digitalpublicgoods.net/blog/why-open-source/
[59] https://gitcoin.co/
[60] *Id*
[61] https://www.bloomberg.com/news/articles/2022-01-11/women-founders-raised-just-2-of-venture-capital-money-last-year?sref=dCyCdmbQ
[62] https://medium.com/komorebi-collective/reflecting-on-a-year-of-komorebi-dao-8addfd6117cf
[63] https://governance.aave.com/
[64] https://compound.finance/governance
[65] https://gov.uniswap.org/
[66] https://coopahtroopa.mirror.xyz/_EDyn4cs9tDoOxNGZLfKL7JjLo5rGkkEfRa_a-6VEWw
[67] https://a16z.com/2020/01/09/progressive-decentralization-crypto-product-management/

women that generated more than $20 million in sales.[68] The collection of 9,999 witches is owned by more than 5,000 addresses.[69] Owning an NFT is only one aspect of the project – a community has been built that offers education, in-person meetings, and building stories and games through multimedia. From the start, there was also a focus on diversity and inclusion.[70] For instance, in November 2021, the project partnered with leaders in the space to give away NFTs, with a focus on those who were curious about learning and did not yet own an NFT.[71] Another example is PleasrDAO. Originally convened to support a specific artist (pplpleasr), the DAO has since evolved and is "experimenting with novel concepts in digital and community art ownership." These ideas include fractionalizing art pieces, allowing for partial ownership, and applying innovations within DeFi to distribute value back to the community.[72]

Digital identity and Privacy

Another area that holds significant promise is reimagining identity systems – especially in a privacy-preserving manner. Current models are structured so that the individual is neither privy to sole ownership of their own identities, nor the proprietary data associated with each individual. As discussed, for many, the promise of Web3 lies in the ability to own and manage your personal information and data. Critically, the difference between decentralized identities and the status quo is that decentralized identification is neither "account based", nor solely provided by a centralized intermediary.

One example is the World Food Programme's Building Blocks initiative. Currently the world's largest implementation of blockchain technology for humanitarian assistance, it aims to facilitate the provision of identity to refugees (as of 2018, 80 percent of the roughly 65 million refugees in the world did not have identification).[73] The program is active in Jordan and Lebanon and supports over 1 million people per month. It is estimated that Building Blocks provided $325 million in cash assistance, processed 15 million transactions, and saved $2.5 million in bank fees.[74] Another example is a company called Aid:Tech. It has been working to establish digital identity infrastructure for aid. Over the company's lifetime, they have disbursed $300 million in funds across 500,000 users.[75]

Other projects have focused on providing the technical underpinnings for identity services. Spruce ID is building a toolkit for decentralized identification, as well as a product that allows individuals to keep a "personal data vault" that allows individuals to store digital credentials,

[68] https://www.businessinsider.com/crypto-coven-nft-witches-popular-with-women-in-web3-vc-2022-2?r=US&IR=T
[69] https://opensea.io/collection/cryptocoven
[70] https://www.fwb.help/wip/crypto-coven-oral-history-web3
[71] https://twitter.com/crypto_coven/status/1464786199495725057?s=20&t=01rOR7baXbEYw064tnZ6ZQ
[72] https://pleasr.org/#
[73] https://www.cnbc.com/2018/05/10/blockchain-refugees-identity-wfp.html
[74] https://innovation.wfp.org/project/building-blocks
[75] https://www.aid.technology/about

private files, and media to blockchain accounts.[76] Espresso Systems is building privacy-preserving technology to allow parties to verify user credentials without seeing all the details.[77] The technology is designed to be used across a number of use cases, including decentralized finance, credit scoring, and payments[78]. Ceramic Network is a decentralized network for composable data that can be used to store any kind of signed information. The network is particularly well-suited as a universal routing layer for storing decentralized identifiers (DIDs) and their associated metadata, data schemas, policies for usage of web services, access control permissions, and other documents that collectively enable boundless interoperability between an ecosystem of connected wallets, applications, databases, and services.[79]

Digital identification tokens, zero knowledge proofs, and sophisticated forms of encryption present can also support improved approaches to customer identification and verification, including the ability for customers to gain more control over their digital identities and, for example, to be able to satisfy successive financial institutions that their identity already has been verified without having to provide sensitive personal information to another financial institution.

Novel mechanisms can be used to create and maintain digital identity records, including (but not limited to) the adoption of digital identity verification techniques that can use a combination of decentralized blockchain based technologies and secure “off-chain” data repositories. Specifically, there are tools under development that can allow digital identity information to be stored securely, and that use digital markers or tokens to enable the persons whose identity information is requested to confirm for a financial institution at onboarding that their identity has been verified, without providing the sensitive PII itself. This provides a mechanism for customers to control the dissemination of information about his or her identity, thus better protecting privacy, while also enabling access to financial services.[80]

We discuss this concept in greater detail in our February 2022 Response to FinCEN’s Request for Information on the Modernization of U.S. AML/CFT Regulatory Regime.[81]

III. Crypto represents an opportunity for historically excluded populations, both in the United States and abroad.

A. Domestic Opportunities

[76] https://www.spruceid.com/
[77] https://www.espressosys.com/
[78] https://www.espressosys.com/blog/configurable-asset-privacy-case-studies-payments
[79] https://blog.ceramic.network/introduction-to-the-ceramic-protocol/
[80] https://www.capco.com/-/media/CapcoMedia/Capco-2/PDFs/Decentralized_Identity_Disrupting_KYC.ashx; https://www.forbes.com/sites/forbestechcouncil/2021/12/10/how-decentralized-identity-is-reshaping-privacy-for digital-identities/?sh=247c3e6e3226
[81] https://cryptoforinnovation.org/wp-content/uploads/2022/08/Comment-Letter-FinCEN-Feb-2022.pdf

Crypto represents an unprecedented opportunity for historically excluded populations. We know that almost 20 percent of Americans have neither access to a bank account nor adequate access to financial services through other means.[82] The rates are higher among adults with lower income, adults with less education, and Black and Hispanic adults. As discussed, these individuals are served by alternative financial services like payday, pawn, or car title lending.[83]

The report on the Economic Well-Being of U.S. Households in 2021 by the US Federal Reserve found that, though financial well-being rose in the US, there are parts of the US economy that the financial system underserves.[84] Some one in five Americans said they are "just" getting by or find it "difficult" to get by financially.[85] Even more surprising, 6 percent of adults (nearly 20 million Americans) do not have a bank account. This increases as the numbers break down further: Black (13 percent) and Hispanic (11 percent) adults are more likely not to have a bank account.

The most recent FDIC Survey of Household Use of Banking and Financial Services found the most-cited reasons for not having a bank account were: (1) not having enough money to meet minimum balance requirements and (2) a lack of trust in banks.[86] This paints a fairly clear picture of who is getting left behind: poor households and those who historically have reason to distrust formal institutions.

The data shows that these individuals are turning to crypto. Those with no bank account, no credit card, and no retirement savings were more likely to select "crypto for transactions" than "no crypto" and "crypto for investment."[87] So, their crypto use was not focused on speculation – it was focused on filling a gap in financial services. This is in line with findings from the Atlanta Federal Reserve, which reported that "today, instead of focusing on helping these people become banked to increase financial inclusion, a more effective approach could be giving cash users access to digital payment vehicles that don't depend on traditional bank accounts."[88]

For many, it is impossible to have a discussion about money without talking about power and structural forces. A description of the Black Blockchain Summit notes: "online and in person, on the campus of Howard University in Washington, D.C., an estimated 1,500 mostly Black people have gathered to talk about crypto – decentralized digital money backed not by governments but by blockchain technology, a secure means of recording transactions – as a way to make money while disrupting centuries-long patterns of oppression."[89] Leaders from Black and

[82] https://www.federalreserve.gov/publications/2022-economic-well-being-of-us-households-in-2021-banking-and-credit.htm
[83] https://www.fdic.gov/analysis/quarterly-banking-profile/fdic-quarterly/2009-vol3-1/fdic140-quarterlyvol3no1-afs-final.pdf
[84] https://www.federalreserve.gov/publications/2022-economic-well-being-of-us-households-in-2021-executive-summary.htm
[85] https://www.federalreserve.gov/publications/files/2021-report-economic-well-being-us-households-202205.pdf
[86] https://www.fdic.gov/analysis/household-survey/index.html
[87] https://www.federalreserve.gov/publications/2022-economic-well-being-of-us-households-in-2021-banking-and-credit.htm
[88] https://www.atlantafed.org/-/media/documents/promoting-safer-payments-innovation/publications/2020/09/30/shifting-the-focus-digital-payments-and-the-path-to-financial-inclusion/Shifting-the-Focus-Digital-Payments-and-the-Path-to-Financial-Inclusion.pdf
[89] https://time.com/6106706/bitcoin-black-investors/

Indigenous communities have highlighted ownership and transparency as a key to building generational wealth for these communities.[90] Others have traced the ways in which historical and structural forces may be driving interest in crypto amongst minorities and social justice communities.[91]

Banks and financial institutions have had decades to serve these populations effectively and they have not. Crypto represents a unique opportunity to build systems from the ground up, using models of inclusive design that are responsive to community needs. Everyone deserves options that work for them. More can be done to ensure equal access for all and this is something that crypto was designed to do. It should be thought of as a tool in the policymaker's toolbox. Importantly, more data is needed here. Crypto is in its early days and while some efforts are underway, additional work is needed to understand these complex dynamics and how crypto can further contribute to financial inclusion.[92]

As many have noted, technologists have made claims of democratization and promoting equity in the past, but at the end of the day, whether a technology lives up to its promise depends on decisions made in the early stages.

To this end, I am heartened by what I have seen in the crypto community. First, we have seen organic movements focused on education and a recognition that historically excluded populations need to be a part of shaping crypto. For example, Black Bitcoin Billionaires grew out of a room on the technology platform, Clubhouse, growing from 2,000 to 130,000 club members in one year.[93] The community's development attracted institutional support from major industry players, like CashApp.[94] Second, we are seeing deliberate attempts from the industry to measure itself and understand how to build more inclusive communities. This includes, for instance, crafting “hyper-local” hackathons and researching how to create better structures for diversity and inclusion in the industry.[95] In fact, there are entire academic communities dedicated to evaluating digital self-governance within the industry.[96] These issues are complicated and require intentional focus – crypto is asking the hard questions.

Crypto has been used as a tool for enabling “local” currencies that re-invest in communities. For example, the BerkShares project in Massachusetts has kept more than $10 million in local circulation since the program’s inception in 2006.[97] As one project team member notes, this “represents money that didn’t leak out of the designated economic area.” A recent shift to

[90] https://www.youtube.com/watch?v=aHAwFcYeCgM
[91] https://www.coindesk.com/layer2/2022/02/16/why-bitcoin-is-a-tool-for-social-justice/
[92] https://medium.com/cradl/crypto-or-not-successful-financial-inclusion-projects-share-these-two-factors-36c2df818d52
[93] https://time.com/6106706/bitcoin-black-investors/
[94] https://www.blackbitcoinbillionaire.com/
[95] https://project-cradl.notion.site/Crypto-Research-and-Design-Lab-50a7127f34ed4c88ad95c7cedf7fbe36
[96] https://metagov.org/, https://commonsstack.org/
[97] https://www.wbur.org/news/2022/07/07/berkshares-local-currency-crypto-digital

crypto-enabled, digital models is designed to bring even more people into the system and ensure that value is retained at the community level, rather than accruing to intermediaries.[98] A similar model is being developed in Oakland, California, with the intention of "creating a cheaper payments network for Oakland businesses, allowing more of each transaction to go towards merchants and community initiatives."[99] This is accompanied by local crypto education efforts and community-directed funding.[100]

B. Opportunities Abroad

In many places in the world, especially where people are living under authoritarian regimes or suffer from hyperinflation, crypto can provide a lifeline to store value out of the reach of corrupt or poorly run governments. It has also been a tool in enabling advocates of democracy – particularly in areas where free speech and dissidence are not protected.

There are numerous examples of dissidents using crypto as a tool in speaking out "against powerful and entrenched politicians who largely control trust within their borders."[101] Bitcoin was a critical tool in Nigeria's #EndSARS campaign against police brutality, after the Feminist Coalition's bank account was shut down.[102] Previously, individuals used it as a mechanism for circumventing police corruption.[103] A dynamic of censorship also led the Hong Kong Free Press to rely on Bitcoin donations.[104] Similarly, in Russia, a crackdown on independent media has prompted news organizations to collect and use crypto to keep the lights on – especially as many have had to cease operations around the country.[105] Following a controversial 2020 election in Belarus, protesters faced mass arrests, Internet shutdowns and other backlash. A non-profit in Belarus provided Bitcoin grants to individuals who were affected by repression and financial monitoring.[106] Put simply: having options like crypto matters for democracy and freedom.[107]

Indeed, countries that have had significant crackdowns or bans on crypto have historically not prioritized democratic principles.

Further examples of where crypto has been able to support local populations can also be found in Latin America. In 2020, digital assets provided one of the few means by which the US

---

[98] https://www.politico.com/news/magazine/2022/08/04/crypto-goes-farm-to-table-00048309
[99] https://www.oak.community/
[100] *Id*
[101] https://www.forbes.com/sites/rogerhuang/2020/10/19/dissidents-are-turning-to-cryptocurrency-as-protests-mount-around-the-world/?sh=3291ffff584c
[102] https://www.coindesk.com/tech/2020/10/16/nigerian-banks-shut-them-out-so-these-activists-are-using-bitcoin-to-battle-police-brutality/
[103] https://www.coindesk.com/tech/2020/08/26/unconfiscatable-using-bitcoin-to-resist-police-extortion-in-nigeria/
[104] https://www.forbes.com/sites/rogerhuang/2020/10/19/dissidents-are-turning-to-cryptocurrency-as-protests-mount-around-the-world/?sh=3291ffff584c
[105] https://www.bloomberg.com/news/articles/2022-05-10/putin-s-crackdown-pushes-independent-russian-media-into-crypto?sref=dCyCdmbQ
[106] https://www.coindesk.com/policy/2020/09/09/belarus-nonprofit-helps-protestors-with-bitcoin-grants/
[107] https://time.com/5486673/bitcoin-venezuela-authoritarian/

government was able to deliver assistance to individuals with acute needs in Venezuela.[108] For many, it represents something very fundamental: choice in a time of instability and uncertainty.[109] Venezuelan residents have noted the criticality of crypto assets in the face of hyperinflation.[110]

This has been the case in other regions as well. For example, civilians in Afghanistan, where financial services have become unreliable, have been using crypto in part to hedge against Taliban seizure of assets.[111] Sanzar Kakar is an Afghan American who created an app that helps Afghans transfer crypto. Kakar says the country's "crypto revolution" is a result of the US sanctions against the Taliban and Haqqani group, who are now in power. In its first three months, the app registered more than 2.1 million transactions and had 380,000 active users.[112]

This type of adoption curve is not uncommon in frontier economies. Brazil's largest digital bank reached 1 million users in just one month.[113] One in five individuals in Vietnam have used crypto.[114] A total of 56 percent of adults in Nigeria and 54 percent of adults in Turkey trade crypto at least once a month.[115] A Mastercard survey found that one-half of Latin Americans have used crypto, with more than one-third saying they have made an everyday purchase with a stablecoin.[116] This is compared to a worldwide average of 11 percent saying they have made a purchase with a digital asset. Asia accounts for one-half of all crypto users.[117] In 2021, worldwide adoption grew 880 percent, with emerging markets largely driving this growth.

IV. The United States urgently needs to take a forward-looking approach to policymaking.

A proactive approach to policymaking is critical for international competitiveness, national security, and consumer protection.

A. International Competitiveness

Given the global nature of crypto, it is critical that US lawmakers engage in proactive policymaking to maintain a competitive position in the international market. The countries that

[108] https://www.coindesk.com/markets/2020/11/20/us-government-enlists-usdc-for-global-foreign-policy-objective-in-venezuela-circle-ceo/
[109] https://medium.com/open-money-initiative/money-on-the-edge-discovering-openings-in-a-closed-system-dad55d0bd7bd
[110] https://www.nytimes.com/2019/02/23/opinion/sunday/venezuela-bitcoin-inflation-cryptocurrencies.html
[111] https://fortune.com/2022/04/24/afghan-crypto-buyers-keep-money-out-of-taliban-reach-stablecoin-herat/; https://www.aljazeera.com/news/2022/3/21/crypto-provides-fix-for-some-in-crisis-hit-afghanistan
[112] https://www.bbc.co.uk/news/world-asia-60715707
[113] https://www.coindesk.com/business/2022/07/26/brazils-largest-digital-bank-nubank-reaches-1m-crypto-users-after-just-a-month/
[114] https://www.barrons.com/articles/why-crypto-is-taking-root-in-emerging-markets-51653323319
[115] https://qz.com/africa/2187447/more-than-half-of-nigerias-adults-are-monthly-active-crypto-traders/
[116] https://mastercardcontentexchange.com/news/latin-america/en/newsroom/press-releases/pr-en/2022/june/latin-america-s-crypto-conquest-is-driven-by-consumers-needs/
[117] https://www.ft.com/content/1ea829ed-5dde-4f6e-be11-99392bdc0788

lead on policy can pave the way for innovation and consumer protection, while jurisdictions that try to shut it down will face tremendous opposition and stifle economic growth and innovation.

Companies will establish themselves in jurisdictions that are hospitable to them – where they can have certainty that they can continue to provide products for consumers. They are interested in bringing to market demand-driven products in a safe, secure, and compliant manner. This is why countries are moving quickly to create clear rules of the road.

Simply put, other countries are not waiting for the US to act. The European Union recently came to a landmark political agreement on their Markets in Crypto Assets (MiCA) package.[118] The United Kingdom set out its plan "to make the UK a global cryptoasset technology hub."[119] Singapore has announced its intention to hold public consultations on crypto regulatory proposals in October.[120] Australia is ramping up its regulatory efforts, beginning with a token mapping exercise and public consultation.[121] And, the text of South Korea's Digital Asset Basic Act is anticipated by the first half of 2023.[122] This asset class is continuing to grow as more people understand it and come to rely on it.

On the technical side, 90 percent of central banks around the world are exploring central bank digital currencies, or CBDCs.[123] Some countries have made considerable progress. For example, Cambodia deployed its digital currency, Bakong, in October 2020. Since then, it has reached approximately 7.9 million people.[124] According to the Atlantic Council, "Nineteen of the Group of Twenty (G20) countries are exploring a CBDC, with sixteen already in the development or pilot stage. This includes South Korea, Japan, India, and Russia, each of which has made significant progress over the past six months…Of the G20, only the United States, United Kingdom, and Mexico are still in the research stage."[125]

Notably, China is farthest along in these explorations. China has a six-year head start, and the People's Bank of China (PBOC) has filed more than 120 patents for the Digital Yuan.[126] It is clear that China will seek to leverage its Digital Yuan as a tool to achieve its foreign policy goals in emerging markets and beyond.

---

[118] https://www.consilium.europa.eu/en/press/press-releases/2022/06/30/digital-finance-agreement-reached-on-european-crypto-assets-regulation-mica/
[119] https://www.gov.uk/government/news/government-sets-out-plan-to-make-uk-a-global-cryptoasset-technology-hub
[120] https://www.bloomberg.com/news/articles/2022-08-29/singapore-mulls-crypto-consumer-suitability-leverage-rules?sref=dCyCdmbQ
[121] https://www.bloomberg.com/news/articles/2022-08-22/australia-to-map-crypto-tokens-as-part-of-regulatory-ramp-up
[122] https://forkast.news/south-korea-crypto-law-what-we-know-so-far/
[123] https://www.bis.org/publ/bppdf/bispap125.pdf
[124] https://asia.nikkei.com/Business/Finance/Cambodia-s-digital-currency-reaches-nearly-half-the-population
[125] https://www.atlanticcouncil.org/blogs/new-atlanticist/central-banks-are-embracing-digital-currencies-will-the-us-lead-or-follow/
[126] https://www.wired.co.uk/article/digital-yuan-china-bitcoin-libra

Today, four of the five largest banks in the world are from China[127], and Chinese bank presence in other countries has increased significantly.[128] The rise of the smartphone and low credit card penetration has led to rapid outgrowth of mobile payments in China, creating the largest mobile payments market in the world. In an April 2019 speech, PBOC Governor Yi Gang discussed progress in financial support made in these and other areas. At the time, Chinese financial institutions had provided more than $440 billion for the Belt and Road projects, a key component of their goal to spread Chinese principles in macroeconomics, monetary and fiscal policy, financial regulation, governance and more[129]. According to Goldman Sachs research, by 2029 the Digital Yuan could have as many as one billion users, see as much as $240 billion in issuance and have an annual payment volume of $3 trillion.[130]

B. National Security and Law Enforcement

The myth that crypto is used for criminal activity has been debunked. Data shows crypto is not being used for wide-scale illicit activity due to insufficient liquidity and blockchain's inherent traceability.[131] Officials from across the US government have concluded that crypto is unlikely to be used for large-scale evasion of sanctions.[132] Compliant exchanges are already focused on identifying and addressing potential illicit activity – and blockchain should be considered an under-utilized tool for detection and seizures.[133] We have seen this in significant actions against illicit actors in the past few years.[134]

And, as these actions ramp up, we anticipate that criminal actors will learn that crypto is not a good tool for illicit activity. As former CIA Acting Director Michael Morell noted, "[Growing use of blockchain forensics] will essentially be the counterterrorism equivalent of Usama bin Ladin never again, for the rest of his life, using a phone after learning that the US government could listen to his calls."[135] Dialogue and partnership with industry players is key to detecting emerging threats early and often.

C. Consumer Protection

Finally, proactive policymaking is key to consumer protection. There are real humans behind these transactions and stories. They deserve to make the most of the opportunity that crypto

[127] https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/the-world-s-100-largest-banks-2022-69651785
[128] https://www.bis.org/publ/work892.pdf
[129] https://news.cgtn.com/news/3d3d414f32516a4d34457a6333566d54/index.html
[130] https://www.coindesk.com/policy/2020/11/19/goldman-sachs-expects-digital-yuan-to-reach-1b-users-within-10-years/
[131] https://blog.chainalysis.com/reports/2022-crypto-crime-report-introduction/
[132] https://www.politico.com/news/2022/02/25/russia-crypto-sanctions-00011886
[133] https://cryptoforinnovation.org/wp-content/uploads/2022/07/An-Analysis-of-Bitcoins-Use-in-Illicit-Finance-By-Michael-Morell.pdf
[134] https://www.cnbc.com/2020/11/05/1-billion-worth-of-bitcoin-linked-to-the-silk-road-seized-by-the-us.html;https://www.thomsonreuters.com/en-us/posts/investigation-fraud-and-risk/colonial-pipeline-ransom-funds/;
https://www.cnbc.com/2022/02/08/feds-seize-3point6-billion-stolen-from-bitfinex-hack.html;https://blog.chainalysis.com/reports/axie-infinity-ronin-bridge-dprk-hack-seizure/
[135] https://cryptoforinnovation.org/wp-content/uploads/2022/07/An-Analysis-of-Bitcoins-Use-in-Illicit-Finance-By-Michael-Morell.pdf

presents, while being protected from undue risks. Education and grassroots outreach efforts – across consumers, policymakers, and industry – are key. There are many in the crypto industry that value consumer protection above all and eagerly want to partner with policymakers and regulators alike.

Importantly, financial inclusion is a complicated topic; no technology will be a silver bullet for solving it. Research from the World Economic Forum found a number of factors that could contribute to financial exclusion.[136] For example, globally these may include socio-cultural and demographic barriers might include distrust of the traditional financial system or governments, challenges around digital or financial literacy, physical safety concerns, or others like religious and gender-based barriers or cultural views of money. Infrastructure barriers may include weak or unreliable electricity supply, limited internet connectivity, limited mobile phone access, lack of identity documentation, or lack of physical proximity to services. Financial barriers could be high prices and fees for financial services, lack of digital financial history, or minimum account balance requirements. We've seen many of these reflected in the data cited within this testimony.

To move the needle on this issue, we need thoughtful work on outreach and education. This includes: (1) Community engagement models that involve "building with, not for." Members of the communities know people's stories, their needs, and the barriers they are facing. Often, the missing piece is the resourcing and on-the-ground partnership. (2) Conducting more research and gathering more data. We know the broad trends, as discussed – but we need practical information on what things like drivers of distrust and gaps and education look like in practice. (3) Understandable disclosures. At the end of the day, consumer protection is about ensuring that average consumers can make informed decisions within a set of choices that work for them. Information should be presented in a manner that doesn't require a law degree or technical background to understand.

One example of these ideas in action is the Crypto Research and Design Lab (CRADL), which I co-founded. The goal of CRADL is "to put people at the center of crypto." The lab combines three functions – design, crypto, and social impact – that often operate in silos.[137] Current initiatives include research projects focused on Crypto in Black Communities, The Woes (and Wins) of Web3 Onboarding, and Building Inclusive Web3 Communities.[138] CRADL is also co-hosting the Web3athon a hyperlocal, people-first hackathon that is focused on community-centered issue areas including Generational Wealth Building, Financial Health, Sustainable Communities and Culture, Disaster Relief and Response, and Environmental Well-Being.

[136] https://www3.weforum.org/docs/WEF_Value_Proposition_of_Stablecoins_for_Financial_Inclusion_2021.pdf
[137] https://medium.com/cradl/introducing-cradl-the-crypto-research-and-design-lab-95ca6429819b
[138] https://project-cradl.notion.site/Crypto-Research-and-Design-Lab-50a7127f34ed4c88ad95c7cedf7fbe36

Getting to the heart of people's needs – and how we ensure that new systems are intentionally built to serve them – is the type of work that is critical as we write the rules for a new, digital economy.

V. S. 4760 the *Digital Commodities Consumer Protection Act*

Given the wide range of use cases, how quickly the space is evolving, and the need for deliberate design choices at this early stage, policymaking for crypto requires a great deal of nuance.

The establishment of an open and transparent regulatory framework is crucial. *The Digital Commodities Consumer Protection Act* is a pivotal step in achieving the clarity and oversight that are greatly needed, and we applaud this committee for its bipartisan work on this legislation. This will pave the way for innovation in the US, opening opportunities for new entrants regardless of their size.

As I hope I have demonstrated in my testimony, crypto represents a once-in-a-generation opportunity to build a system from the ground up. We are already seeing how historically excluded populations view the industry as potentially transformative. However, it takes deliberate design choices at the earliest stages to ensure that consumers are not left behind or exploited.

In this legislation, we were pleased to see the inclusion of a provision which directs the Commission to produce a Report on Historically Underserved Customers Participating in Digital Commodity Markets. Education and outreach to these communities that have in many cases been left out of the financial system will be crucial, and the findings of this report will serve as a critical step in ensuring that the promise of crypto is realized.

Importantly, this bill establishes consumer protection standards that are badly needed by the industry. Specifically, we support the creation of a meaningful and practical disclosure regime that includes information regarding material risks and conflicts of interest. Fair communication and advertising standards will also give investors and consumers transparency into financial tools and products and the entities which may be facilitating them.

We commend the efforts to provide clarity on definitions. However, the bill leaves unclear the precise definition of “digital commodity.” Classifying Bitcoin and Ether directly in the definition as digital commodities could be problematic down the road for digital assets that are not expressly enumerated. More specifically, the bill leaves it to the agencies and the Courts to determine whether a digital asset, other than Bitcoin and Ether, is a security or not. To date, this approach has not worked well, with significant implications for consumers, and is why the industry has made numerous calls for proactive regulation, rather than regulation by enforcement.

Although outside of the scope of this legislation and jurisdiction of this committee, it will be critical that the SEC act as a regulatory partner to the CFTC, and that the question, “what is a security?” is definitively answered through the appropriate legislative and regulatory processes. We are hopeful that a productive partnership will result in appropriate outcomes. As Chairman Gary Gensler’s recently commented, “To the extent the Commodity Futures Trading Commission (CFTC) needs greater authorities with which to oversee and regulate crypto non-security tokens and related intermediaries, I look forward to working with Congress to achieve that goal consistent with maintaining the regulation of crypto security tokens and related intermediaries at the SEC.”[139]

As a general comment, policymakers should consider the need to balance congressional directives with agency rulemaking.

Moreover, the bill limits brokers, dealers, and trading facilities to transacting only in “transactions” or “digital commodities” that are not “readily susceptible to manipulation”, but it does not attempt to define what “readily susceptible to manipulation” means, or the factors one would consider when making such a determination. The way that the CFTC has traditionally interpreted “readily susceptible to manipulation” for commodities may not apply to digital assets, which increases the need for clarity on this point.

We also note that further specification around jurisdictional authority may be needed, given the global nature of crypto.

We want to note that decentralized finance, or DeFi, is fundamentally different from the centralized spot market models we see today. This raises new questions about risk and policymaking, which have been outlined elsewhere. Additional clarity on the relationship between the Act’s provisions and decentralized protocols is needed in light of the recognition that compliance with these provisions is unworkable.

[139] https://www.sec.gov/news/speech/gensler-sec-speaks-090822

Prior to potentially imposing registration requirements on software programs, which would produce the unintended consequence of stifling the development of the technology in the US, an expeditious study in consultation with industry, consumer protection groups, and other interested parties is necessary.

VI. Conclusion

Thank you again for the opportunity to discuss these important topics and your support for the regulatory certainty that will be established by this legislation. I look forward to answering your questions.