

CRYPTO CRASH: WHY FINANCIAL SYSTEM SAFEGUARDS ARE NEEDED FOR DIGITAL ASSETS

HEARING

BEFORE THE

COMMITTEE ON

BANKING, HOUSING, AND URBAN AFFAIRS

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EXAMINING THE CONCEPTS AND PRINCIPLES OF CONVENTIONAL FI-
NANCIAL SERVICES REGULATION THAT CAN BE APPLIED TO DIGITAL
ASSETS AND RELATED MARKETS

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CRYPTO CRASH: WHY FINANCIAL SYSTEM SAFEGUARDS ARE NEEDED FOR DIGITAL ASSETS

TUESDAY, FEBRUARY 14, 2023

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The Committee met at 10:34 a.m., via Webex and in room 538, Dirksen Senate Office Building, Hon. Sherrod Brown, Chair of the Committee, presiding.

OPENING STATEMENT OF CHAIR SHERROD BROWN

Chair BROWN. The Committee on Banking, Housing, and Urban Affairs will come to order.

I apologize to the witnesses and to the observers today, both in person and the Committee room and those watching remote, for the delay. Senator Scott and I were at a briefing we will not talk about any more than that, on what has happened with China and what has happened with the balloons that the military and others have protected us from, if you will. So we needed to stay and at least hear the generals make their remarks to us.

What a difference a year makes. Go back to last year's Super Bowl. The cryptocurrency industry spent a whopping \$54 million on eight ads promising Americans untold riches and the chance to make history. Of course, they did not tell us about the high fees, the risk of loss, the outright theft that plagued the crypto industry. But if you watched the Super Bowl 2 nights ago, you did not see a single ad for crypto.

The cryptocurrency industry has imploded. In 2022, the crypto market lost \$1.46 trillion. That is 1.46 million, I am sorry, thousand billion in value. Hackers and fraudsters, often tied to the regimes in Pyongyang and Moscow, have stolen over \$3 billion. Crypto firms have slashed over 1,600 jobs. And as crypto vanishes, crypto values crashed last year, platforms began collapsing, creating more losses across the rest of the crypto ecosystem. The crypto firms that are left have had to halt customer withdrawals, freezing people out from their own money.

While crypto contagion did not infect the broader financial system, thank God, we saw glimpses of the damage it could have done if crypto migrated into the banking system. The handful of banks with close ties to the crypto industry have needed liquidity lifelines after they suffered large withdrawals.

This crypto nightmare is not over yet. We are still learning the full extent of the fallout from the FTX collapse. In December, this Committee heard about the excessive risk-taking and misconduct at FTX. The customers who lost money are only now understanding the reality of the products they were sold.

As these crypto firms filed for bankruptcy, regulators and policy-makers have also learned how out of control some of those businesses were. They were overleveraged. They were undercapitalized. They had no internal risk controls. They were careless with customers' money. In the case of FTX, they used it to line their own pockets. Now the money of millions of Americans is trapped, and they might never get it back.

Last year, I warned that the splashy Super Bowl ads left out key details. A year ago, I said, as Chair of this Committee, big crypto companies are looking to make big profits, are desperate to reach as many Americans as they can, hence, the \$54 million in ads in the Super Bowl. They brought in celebrities and gimmicks to make crypto sound exciting and daring and profitable, immensely profitable.

These ads left a few things out. They did not mention the fraud. They did not mention the scams. They did not mention the outright theft. The ads did not point out that you can lose big in crypto's huge price swings. They did not tell you about the high fees pocketed by the crypto companies, and they sure did not explain that crypto markets lack basic investor protections and oversight.

The results were as predictable as they are tragic. Contrary to crypto evangelists' claims of democratizing finance, it is not the early adopters or the big money investors left holding the bag. When it comes to crypto, turns out fortune does not favor the brave; it favors wealthy insiders.

It is not just about a few bad actors that did not do things quite the right way. These crypto catastrophes have exposed what many of us already knew; digital assets, cryptocurrencies, stablecoins, investment tokens are speculative products run by reckless companies—we know that is true—that put Americans' hard-earned money at risk, not surprising from an industry that was created to skirt the rules.

Whether it is Facebook Libra or the explosion of crypto, I have always been concerned about shiny new products that really just offer another way to profit off the backs of working Americans and, at the same time, threaten the real economy. It is time now to consider how to protect consumers from unregulated digital assets and, ultimately, whom we want our financial system to serve.

Last Congress, this Committee examined the risks of crypto to our economy, explored the mechanics behind stablecoin companies, looked at how regulators in Congress can protect consumers. We learned how crypto can be used to commit crimes like drug running and human trafficking, which threaten our national security and help fund terrorists and rogue regimes. We looked at how fraud and speculation in the crypto market hurt investors and savers.

Recent crypto meltdowns have made clear we need a comprehensive framework to regulate crypto products to protect consumers and our financial system.

Today, we will examine how time-tested financial safeguards can help protect against the harms and the risks of crypto products. We will start by taking a closer look at these basic principles of regulation:

Clear disclosures and transparency essential so retail customers and investors can understand how a token or crypto platform works.

Prohibitions on conflicts of interest and self-dealing by insiders is fundamental. Our markets only work when they work for everyone.

Protecting consumer funds by separating them from company assets. Investor dollars cannot be a slush fund for the executives' benefit.

Internal governance and risk management to make sure if a platform takes customer funds it acts prudently.

Strong consumer and investor rights and protections that are foundation of trust in any financial system and central to a functioning market.

Anti-money laundering and fraud prevention to make sure that malign actors and evil Nation States cannot fund themselves and evade law enforcement.

Oversight and supervision to hold companies accountable because access to our financial markets is a privilege, not a right that can be abused.

These are basic, commonsense principles that have developed over centuries of financial system regulation—the wildcat money of the 1800s, the repeated banking panics of the Gilded Age, the 1929 stock market crash, the savings and loan crisis in our lifetime, the dot-com bubble, the Great Financial Crisis.

These crises are the story of speculative bubbles fueled by investor euphoria and the promise that “this time it is different” even though it really never is. The lessons learned are the product of hard-earned experience—experience born of real people losing real money and of real dreams shattered.

Crypto is not special. We can start with these commonsense principles as we consider a regulatory framework for digital assets that puts consumers first and, above all, keeps our financial system safe. I trust this Committee, as the Ranking Member often says, can find common ground and work together to protect investors from crypto risks.

Ranking Member Scott.

OPENING STATEMENT OF SENATOR TIM SCOTT

Senator SCOTT. Thank you, Mr. Chairman, and before I dig into my opening comments, I want to address the elephant in the room. If Chairman Gensler is going to take action, enforcement action, Congress needs to hear from him very soon. The Chairman had lots of time to do the rounds on the morning talk shows. If he has time for that, he should be here testifying with us this morning, and I hope that we see him here very soon. Thank you, Chairman Brown.

The free market economy was formed by financial innovation. It is the engine that continues to drive our economy today, but every engine needs fuel. And, in order to advance as a country, we must

continue to grow and innovate, but we must do so in a safe and sound manner.

Innovation can increase access to traditional financial services and may foster new, emergent technologies that promote financial independence, access to credit, and capital formation. We all know and understand how technology can improve our daily lives, from using our iPhones or our phones to open bank accounts to opening a digital marketplace. If we foreclose financial innovation, we limit future generations from growth and opportunity.

That said, financial innovation must be done so in a safe and sound manner, which, unfortunately, has not been the case with a number of actors in the digital asset space. For example, for some time, FTX was considered the darling of the crypto industry. Unfortunately, instead of protecting customers' interest and using customer funds in the manner intended, Sam Bankman-Fried, FTX's owner, stole millions of dollars of customers' funds and used them to finance risky bets and to pay for luxury penthouses in the Bahamas.

When I consider this massive failure, I wonder whether our regulators, when they supposedly already had the authority, were they using those authorities?

In recent statements, the regulators, the SEC specifically, have noted that it is the responsibility of crypto firms to comply with existing regulations, but it is also the responsibility of regulators to enforce existing regulations and to conduct appropriate, effective supervision.

The American people deserve to know why no action was taken prior to FTX's collapse and how millions of dollars of Americans' hard-earned money just vanished into nothing. And it was not just FTX. If the SEC had provided even the slightest bit of guidance, I wonder if we would have been able to protect investors from the collapse of Terra and Luna in May, Celsius in June, Voyager in July, and BlockFi in November.

This is particularly alarming when we see the reports that 44 percent of Americans who own and trade digital assets are new investors or people of color, which means when there is a \$2 trillion drop in the market cap our most vulnerable citizens bear the significant brunt.

We must hold companies that harm consumers accountable, but we must empower consumers through financial education so that they can more accurately understand the risk posed by different assets classes. Whether it starts in the classroom or in the boardroom, financial literacy provides an avenue for individuals to make better decisions and climb the economic ladder. Nonetheless, regulators have put their misplaced focus on progressive social issues.

So we have to ask ourselves, where do we go from here?

To date, the SEC has failed to take any meaningful, preemptive action to ensure this type of catastrophic failure does not happen again. If they have the tools they need, were they just asleep at the wheel? If they do not, why aren't they here to tell us what they need? We would be happy to have Chairman Gensler testify sooner, much sooner, than later.

Moving forward, we must take a thoughtful, bipartisan, and balanced approach that protects consumers and promotes innovation

and opportunity. I look forward to hearing our witnesses' perspectives on how we can continue to drive innovation and opportunity while ensuring consumers are protected.

Thank you, Chairman.

Chair BROWN. Thank you, Senator Scott.

I will introduce today's three witnesses. We will hear from Lee Reiners, Policy Director at the Duke Financial Economics Center and a lecturing fellow at Duke University School of Law. Welcome, Mr. Reiners.

Professor Linda Jeng is the Chief Global Regulatory Officer and General Counsel of the Crypto Council for Innovation. She is also the Visiting Scholar on Financial Technology and Adjunct Professor of Law at Georgetown University Law Center's Institute for International Economic Law and a senior lecturing fellow also at Duke Law School.

Professor Yesha Yadav is the Milton Underwood Chair Professor of Law and Associate Dean at Vanderbilt Law School. Professor Yadav, welcome you.

Mr. Reiners, if you would begin.

**STATEMENT OF LEE REINERS, POLICY DIRECTOR, DUKE
FINANCIAL ECONOMICS CENTER**

Mr. REINERS. Chairman Brown, Ranking Member Scott, and Members of the Committee. Thank you for inviting me to testify at today's hearing.

My name is Lee Reiners, and I am the Policy Director at the Duke Financial Economics Center and a lecturing fellow at Duke University School of Law. At Duke, I teach courses in cryptocurrency law and financial regulation, and prior to entering academia, I spent 5 years examining systemically important financial institutions at the Federal Reserve Bank of New York.

Satoshi Nakamoto introduced the first cryptocurrency, Bitcoin, to the world in a 9-page white paper posted on Halloween 2008, and the first Bitcoin transaction occurred in January 2009. Fourteen years, thousands of cryptocurrencies, and trillions of investor losses later, crypto scarcely resembles the "purely peer-to-peer version of electronic cash" first envisioned by Satoshi.

By technology standards, crypto is not new. For comparison, the iPhone was introduced in 2007. Anyone who held a smartphone in their hand for the first time immediately recognized its transformative potential. More recently, OpenAI made the artificial intelligence chatbot, ChatGPT, available to the public last November. Two months later, ChatGPT had 100 million monthly active users, making it the fastest growing consumer application in history.

After 14 years and countless claims that crypto represents the future of money, finance, or something else, we have yet to see crypto's killer use case. In fact, only 16 percent of U.S. adults have invested in, traded, or used crypto. The data is clear; most people invested in crypto simply because they thought they could sell it to someone at a higher price in the future. Sadly, these people were wrong.

Fourteen years have provided ample evidence of the dire harm cryptocurrency inflicts throughout our society. Beyond the billions in investor losses due to frauds, hacks, and scams, crypto under-

mines our national security by facilitating terrorists' financing and sanctions evasion. It undermines our economic security by fueling a surge in ransomware attacks that have crippled American businesses, health care systems, and municipal governments. And, it jeopardizes our climate goals by needlessly consuming massive amounts of energy that contribute to carbon emissions and electronic waste.

I ask, what benefits do we have to show for these costs?

Even as we stand in the ashes of the FTX implosion, the crypto industry is spinning new narratives to deflect and obfuscate the damage that they have wrought. One such line goes that Sam Bankman-Fried was just a bad apple and that the problem lies not with crypto's underlying technology but with centralized crypto intermediaries, but FTX was not an isolated incident—Terra (LUNA), Celsius, Voyager, BlockFi, Axie Infinity, Genesis, Mango Markets. How many more must fail before we conclude that the entire barrel is rotten?

Another self-serving line spun by crypto boosters is that policy-makers must embrace innovation or else the crypto industry will migrate to other jurisdictions with a more favorable regulatory climate. Well, this implies that innovation is an unmitigated good. The truth is that innovation is value-neutral. It could be used for good or bad. Instagram for kids is technically innovative, but does anyone think it is a good idea?

Looking at crypto, it is clear that the costs outweigh the benefits. So why would we want to embrace it?

The millions of Americans who invested in crypto only to see their hard-earned money evaporate do not care whether crypto is classified as a commodity or a security. They do not care whether the industry is regulated by the SEC, CFTC, or some other agency. They only care about having the same basic safeguards they have come to know and expect from the traditional financial system. Unfortunately, we have let them down.

The time has come for action—action that only Congress can provide. While I agree with SEC Chairman Gary Gensler that most cryptocurrencies are securities subject to SEC registration and disclosure requirements, some cryptocurrencies, like Bitcoin, are commodities. While the CFTC regulates commodity derivatives, they do not regulate commodity spot markets. The practical effect of this structure is that cryptocurrency exchanges in the U.S. are presently not regulated at the Federal level.

In my written testimony, I provide a detailed roadmap for how Congress can close this gap. I urge Congress to carve out cryptocurrency from the definition of commodity in the Commodity Exchange Act and recognize cryptocurrencies as securities under a special definition to the securities laws. This would give the SEC exclusive authority to regulate all aspects of the crypto industry. The SEC simply has more expertise, more resources, and more appetite for enforcement in the crypto realm than the CFTC does. Most importantly, unlike the CFTC, the SEC has a statutory mandate to protect investors.

Whatever Congress decides to do, the status quo is simply untenable. I look forward to discussing the way forward with you. Thank you.

Chair BROWN. Thank you, Professor Reiners.
Professor Jeng, welcome.

STATEMENT OF LINDA JENG, VISITING SCHOLAR ON FINANCIAL TECHNOLOGY, GEORGETOWN INSTITUTE OF INTERNATIONAL ECONOMIC LAW, AND ADJUNCT PROFESSOR OF LAW

Ms. JENG. Chairman Brown, Ranking Member Scott, and Members of the Committee, it is a pleasure to be here with you today. Thank you for the opportunity to testify.

The Banking Committee was where I cut my teeth on financial policy, working on the response to the global financial crisis. I have been impressed by, and am thankful for, the bipartisanship this Committee has long embraced. Today's hearing is yet another example of its leadership.

With inflationary pressures not seen since the 1970s, market volatility, and changes to the Fed's longstanding monetary policies, I have been asked to discuss how best to strategically think about the regulatory future of our digital economy. As a former regulator myself, I am particularly concerned about this area of our shared digital future and how we can all ensure the best outcomes for American consumers while promoting innovative.

In this light, I am testifying in my personal capacity as an academic and researcher. I am a visiting scholar on financial technology and adjunct professor at the Institute of International Economic Law at Georgetown and a senior lecturing fellow at Duke Law. In addition, I am the Chief Global Regulatory Officer of the Crypto Council for Innovation, a global industry alliance of companies operating in the digital assets ecosystem.

Technological innovation enhances people's lives in meaningful ways. As someone who has spent years working on financial regulation in a number of roles, I know that in the financial sector policies should focus on a number of key areas: empowering consumers, ensuring open markets, increasing efficiency, and lowering costs for consumers. In short, technological innovation should be harnessed to improve access, efficiency, and equity for digital consumers.

To facilitate the growth of a resilient and sustainable digital future, policymakers should be intentional in their choice of building blocks. In my experience, these blocks must address a range of issues, including consumer and investor protection, digital money, digital identity, decentralized finance, private commercial law, bankruptcy, accounting, tax, technology standards, energy, illicit finance, and national security.

The development of a flourishing digital ecosystem ultimately relies upon innovators as well as laws, regulations, and policies that guide policymakers, investors, and businesses to facilitate long-term value. Currently, companies operating in the digital asset space in the U.S. are subject to a patchwork of State and Federal regulatory requirements.

For example, crypto exchanges typically must secure a State money transmission license or obtain a license through a tailored regime such as the New York Department of Financial Services BitLicense, and importantly, at the Federal level, companies are re-

quired to be registered as money service businesses with the U.S. Treasury's FinCEN and comply with AML/CFT rules. But the absence of a transparent and consistent Federal regulatory framework, coupled with successful State regulatory regimes, causes uncertainty for businesses and innovators while often failing to protect consumers and investors.

In the past year, we have seen legitimate projects fail and outright fraud committed against customers transacting in digital assets. Both have caused significant harm. These losses underscore the urgent need to establish formal Federal regulatory oversight and demonstrate the inadequacy in regulating solely by enforcement.

To date, and for the purposes of this Committee's jurisdiction, the SEC has not initiated any formal rulemaking process to update securities laws that are decades-old to account for the unique attributes of digital assets that are determined to be securities. Given this unusual departure from the normal and well-established process of public rulemaking, Congress urgently needs to pass thoughtful, comprehensive legislation that establishes a Federal regulatory framework for digital assets addressing both securities and non-securities. In this complex and nuanced space, the details matter.

Failure to enact rules, even through rulemaking or legislation, that protect investors and allow digital assets to develop in the U.S. would risk offshoring innovation and putting American business, consumers, and the economy at a competitive disadvantage with our foreign peers. It could also jeopardize an important national security lever of the U.S. Government, the preeminence of our financial system.

Thank you again for the opportunity to testify today. I look forward to answering your questions.

Chair BROWN. Thank you, Professor Jeng.

Professor Yadav, welcome.

STATEMENT OF YESHA YADAV, VANDERBILT UNIVERSITY LAW SCHOOL

Ms. YADAV. Chairman Brown, Ranking Member Scott, distinguished Members of this Committee, thank you so very much for the opportunity to be here today. It is an extraordinary honor and a privilege for me. I hope that my testimony today can be of some help to this Committee as you progress your review into thinking about the causes of this crypto and the steps that we need to take to shore up this financial system as well as, most importantly, to protect those who use it.

Now we have been asked today to consider why financial system safeguards are needed for the cryptocurrency market, and I think the evidence is becoming clear for all of us to see. The digital assets market today is big. It is becoming popular. It is sophisticated, and it is becoming increasingly financialized. And the cost of being late to regulation is becoming obvious to all of us.

Now as we have seen in the case of FTX, for example, a case that I imagine we will talk about extensively during this hearing, the bankruptcy court in Delaware is having to deal with the consequences. We are talking about approximately 9 million estimated creditors, 134 entities, everyday customers, both retail as well as

institutional, that are now clamoring to get their money outside of the bankruptcy system.

At the same time, these legal processes are extremely expensive. They are long, and the outcomes are extremely unclear. But what is becoming straightforward here is that these customers are likely to become unsecured creditors of the estate and very likely to be last in line to be paid out when the recoveries do come.

Now, Senators, this entire episode obviously casts enormous doubt, reduces trust and confidence, of course, in the cryptocurrency exchanges as well as the cryptocurrency industry.

But, Senators, it also casts a lot of doubt on the trust and confidence of the regulatory system. It is unfortunate that expert technical determinations about very important matters, such as how assets in cryptocurrency—for cryptocurrency assets should be custodied, how those custody arrangements should work, are now having to be taken—are now getting to be taken not by our extremely expert, our extremely talented regulatory agencies but, instead, by the bankruptcy court. Now the bankruptcy court is, of course, extremely talented and extremely expert, but it is an expert in distributing scarce assets across hurt and distressed creditors.

Now, Senators, what I would like to propose to you today is to create a solution that can help to get a regulatory framework up and running quickly, one that is useful for, and able to, integrate quickly into the larger, comprehensive, Federal oversight system that we have today.

What I am proposing is the creation of a self-regulatory regime where cryptocurrency exchanges are tasked with oversight of the market as a whole. This would bring cryptocurrency exchanges in line with traditional commodities and securities exchanges where self-regulation by exchanges has been the norm, essentially, for centuries. What this proposal would do would essentially task cryptocurrency exchanges with writing rules, with monitoring the market, and with exercising discipline.

But, really, the goal of this proposal, Senators, is threefold:

Firstly, it seeks to bring cryptocurrency exchanges within a framework for Federal oversight. Our agencies would be tasked with vetting and carefully overseeing these exchanges to make sure that they are doing their job. They would have to make sure that these exchanges have the organizational capacity that they need to do their job.

Second of all, it would seek to make cryptocurrency exchanges accountable. What that would mean is that if they fall in their ability to do oversight then they would have to pay. They would have to pay financial penalties. In addition, of course, they would suffer loss of reputational damages.

Now third of all, it would make sure that cryptocurrency exchanges are in fact paying to look after their market. This means using their resources, using their expertise, using their knowledge, using their proximity to the technology to make their marketplace, as well as themselves, much more honest, much more stable, and much more driven toward protecting customers.

Now, Senators, to be very, very clear with you, this is not in any way a substitute for public regulation. Rather, it is designed to be a complement. This is a solution that is supposed to integrate

seamlessly into a larger Federal oversight framework, and it is one that we have seen working in the traditional market for a very long time indeed.

Senators, this is also not a proposal that is without its faults. There are certainly enormous faults to be had in this market. Now certainly, in the traditional marketplace, we have seen exchange oversight by exchanges suffer from various conflicts of interest.

So this is a really a proposal, Senators, which is designed to get a market up and running quickly. It seeks to make agencies—it seeks to make the exchanges responsible. It seeks to make the exchanges accountable. And, it seeks to force these exchanges, which are anchor pieces, central parts of this entire ecosystem—responsible much more formally for bringing safety, stability, and consumer protection to the heart of the cryptocurrency market.

Senators, the adage goes that we should not let the crisis go to waste, and I would urge you to not let that happen here so that we are not left wondering how we could prevent another FTX from happening. Thank you so very much, and I look forward to your questions.

Chair BROWN. Thank you, Professor Yadav.

Professor Reiners, start with you. Some in the crypto industry have complained about recent SEC enforcement actions against crypto firms for offering unregistered investment products. Some of these companies entice consumers to put their crypto to work to earn double-digit returns. Shouldn't a financial product that takes in billions of dollars in retail consumer money operate with basic consumer protections?

Mr. REINERS. Yes, it should, Senator, and I would point out that the crypto industry is very fond of criticizing SEC for regulation by enforcement, but the truth is that it is just a catchphrase that the industry uses to deflect from the fact that they have willingly chosen to operate outside the regulatory perimeter.

And the SEC has been quite clear, going back to the chairmanship of Jay Clayton, most cryptocurrencies are securities that need to be registered with the Commission. And the SEC has filed over 125 enforcement actions, and they have not lost a single case related to cryptocurrency, so the judges think it is quite clear as well. The only people who seem to be confused about this is the crypto industry.

Chair BROWN. Thank you.

Professor Yadav, your testimony discussed how stock exchanges are regulated, how to extend similar safeguards to crypto exchanges. What are the established safeguards that can benefit consumers, that can increase market transparency and prohibit conflicts?

Ms. YADAV. So, Senator, thank you so much for that question. Stock exchanges have been providing self-regulation of this market for a long time, and I think it is important to consider the counterfactual here, which is that these extremely powerful, extremely central, extremely important parts of the institution, what would happen if they were not required to do so.

And what we have here is essentially a marketplace in which we are using the private self-interest of these exchanges to provide a public good. Now in the context of the exchanges themselves, what

they do provide is having extremely sort of—is having expertise within the marketplace to surveil trading from a very proximate standpoint. They are responsible for enforcing, under Section 6 of the Securities and Exchange Act, standards of preventing fraud, manipulation, and to create a fair and equitable marketplace. Now certainly this oversight is not perfect, Senator, but at the same time it is better than what we would have if we did not have it.

And so in this context—you know, there have been various steps taken in the context of preventing these conflicts of interest, so for example, entity separations within these exchanges. FINRA is another organization that is there to prevent potential conflicts from occurring. And so overall this is a system that provides a complement to public oversight rather than necessarily being any kind of substitute for it.

Chair BROWN. Thank you.

Mr. Reiners, again, the collapse of FTX has focused attention on basic protections like safeguarding customer money so companies cannot use it for their own personal benefit. Explain briefly the urgency to us, the urgency to develop better standards for the custody of consumer assets.

Mr. REINERS. Yes, Senator. So unfortunately, millions of Americans have found out that if they have used a crypto exchange and that exchange has failed they are now unsecured creditors in that bankruptcy estate, so they do not have control or access to those assets. Of course, that is very different than the situation we have with banks, which are FDIC-insured, or with traditional broker-dealers, which are subject to SIPC insurance.

So if there was going to be one change that I would recommend Congress focus on, it would be requiring these crypto platforms to segregate customer assets from firm assets so that if these firms do get into trouble customers will still have access to their funds.

Chair BROWN. Thank you.

Last question I would ask all three of you to answer. There are many ways to protect consumers in the crypto market. One thing is clear, that customers deserve to understand better the investment they are making. My question for the panel: Without debating the ways cryptocurrencies are different from stocks or bonds, is it reasonable to start the conversation with the investment disclosures that we are familiar with?

So, Professor Yadav, start with her—with you. Let us go down the line. Each of you briefly explain how we can use existing disclosure principles for crypto.

Ms. YADAV. Senator, I am so glad you asked that question. This is an essential part of the process, which is to have disclosures reveal insight about what exactly are the governances of the issuers that are providing this technology, in addition about the blockchains as well as, obviously, the underlying technologies that are animating these offerings.

Now what we have here today is a disclosure system that needs to work. As Ranking Member Scott discussed earlier, this is a technology that has been popularized and is being used by increasingly younger people, folks in minority communities, and so it is extremely important not just to focus on disclosure but also literacy, making sure that these disclosures work.

I have a terrific coauthor that has done work in making sure that disclosures are readable, making sure that disclosures are usable, you know, encouraging people in different ways to engage with the actual information they are seeing. Otherwise, just having a thick bundle of information does no good whatsoever if it is not something that is able to communicate these risks and opportunities effectively.

Chair BROWN. Thank you.

Professor Jeng.

Ms. JENG. This is a very important question. One of the very interesting issues about this is that it is transparent in code. Right? But as a former regulator who worked with blockchain engineers, and I do not code, I need the engineers to actually explain to me how the product was actually designed. So white papers that clearly explain how it is designed, what the risks are, who holds the private keys, the governance, the voting rights, and then more importantly, where are the funds held, these are the important issues that need to be included in the disclosures.

Chair BROWN. Thank you.

Mr. Reiners.

Mr. REINERS. Senator, we have had a basic bargain in our capital markets since the 1930s, and that is that companies that want to raise money from the public have to disclose the risk involved in that and then investors are free to choose what risks they want to take. And so I see no reason why that principle should not apply to crypto although I will agree with Professor Yadav's point that maybe the specifics of what gets disclosed can be debated.

And I think the SEC does have the authority, and I think Congress should give them the authority, to draft customized disclosure regimes for certain decentralized crypto products, and the EU is moving in that direction. But disclosure is necessary.

Chair BROWN. Thank you. I guess the \$54 million of Super Bowl ads a year ago and zero ads this year sort of underscore that.

Ranking Member Scott.

Senator SCOTT. Thank you, Mr. Chairman. Just to finish Professor Yadav's point on disclosures, having sold mutual funds in a past life, I will say that having a prospectus that the average person can understand would be really helpful. The truth of the matter is disclosure sounds great until you try to read a prospectus and you cannot figure out what in the world it says. So I think plain English would be very helpful for the vast majority of our folks who are first-time investors to understand what it is that they are investing in. I would say, without any question, this is an area where that is really important because of the complexity of the actual underlying asset itself.

Right now, the United States has the strongest and most enviable capital markets in the world. The reason for this is a very simple reason; the sun never sets on American innovation. Over decades, we have fostered a financial environment that has decreased poverty, increased home ownership, and made the American Dream a reality for more and more of our citizens.

Our goal should not be any different when it comes to digital assets. Our aim should be to provide rules of the road that are clear, consistent, and most importantly, foster an environment that re-

wards opportunity while ensuring consumers are informed and protected against fraud and deception. As we speak here, several countries across the globe are creating their own framework to address the rise of cryptocurrency.

Unfortunately, our regulators have muddied the waters. We have been told everything from we need legislation to, more recently, that regulators have the tools they need to supervise this industry. That is quite a flip-flop.

Once again, it is really important that we have Chair Gensler here before September. It is far too far in the future for us to wait that long before we hear from Chairman Gensler.

The regulators have permitted activity in this space without providing clear rules of the area, which has unfortunately led to the multiple failures that bring us here today. Let us be clear. Had the SEC provided anything besides hostility to the crypto industry we may have been able to save investors from losing billions of dollars on FTX, Celsius, BlockFi, and the list goes on.

So my question, Professor Jeng, what should Congress keep in mind when it considers developing an approach to the crypto industry? How do we strike a balance between appropriate and thoughtful regulation and the tool of innovation that it could be?

Ms. JENG. Thank you, Senator, for that very important question. We are at a pivotal moment in history where the decisions that you all make as policymakers will affect how our economy grows in the future, and currently, we are becoming a data-driven, digital economy. What does that mean? That means that our activities are increasingly based upon data and on blockchain technologies. So the kind of guardrails that you put in place now will affect generations to come.

Many of the issues that you need to think about will include certainly consumer protection but also consumer rights and consumer empowerment. Currently, there are countries around the world who are also looking at how to take advantage of crypto technologies, China being a good example, but in that situation it is the Government that wants to actually control the personal data. Here is an opportunity for you all to create the framework for consumer empowerment, for consumer data rights, that serves as a foundation for a digital economy.

Senator SCOTT. As I noted in my opening statement, innovation can be a positive driver in expanding access to traditional financial services and can foster new, additional technologies that promote financial independence, access to credit, and capital formation. It is astounding what financial innovation can do for people when they are given the ability to make their own choices and allowed the flexibility to innovate.

While we have talked about cryptocurrency a lot, innovation in the technology space is not limited to crypto. Fintech is another classic example of things that are moving in a positive direction.

Question for the whole panel: Can you speak to the benefits you see for everyday Americans in the digital asset space and the need to ensure that regulation does not stifle innovation? Professor.

Ms. YADAV. Great. Thank you so much, Senator Scott, for that question. Innovation here is something that is moving extremely fast in terms of trying to improve the efficiency, for example, of the

payment system. Now one thing that is very clear in the U.S. is that despite us having a state-of-the-art financial system, our payment system is lagging behind, and what we have seen, for example, in the context of fintech is the ability to try and make payments much more usable, for example, using smartphone technology, for example, trying to have contactless payments.

The world that we inhabited 10 years ago in terms of payments is not the world that we inhabit today, and yet, there are still some problems. For example, you know, these are things that you have heard in this Committee before. It takes time, days in fact, for payments to settle. Checks take days in order to move. In addition, obviously, there are enormous costs involved with this.

Now this obviously leaves out folks that do not necessarily have a bank account and do not have access to the full panoply of financial services. So the question is: How do we make innovation work for people so that we are able to bring everyone into the fold in a much more inclusive and cheap and efficient way?

Now certainly some of the technologies that are being proposed, even in digital assets, are trying to do that, and so certainly that is something, a potential use case, that could be worth exploring provided that it is, you know, substantively and properly regulated.

Senator SCOTT. Thank you.

Professor Jeng.

Chair BROWN. Thank you, Senator Scott.

Senator SCOTT. Let me hear from the professor real quick.

Chair BROWN. Oh, I am sorry. That is OK.

Ms. JENG. Thank you for the opportunity. So one of the very important issues to take into account is consumer rights and property rights. We need a clear set of rules.

And what do I mean by that? My husband is from Ireland. When I am in Ireland, I have to drive on the left side of the road. If I am not told that, I would get into a car crash. Similarly here, we—as a professor looking at the system, there is an urgent need for a regulatory framework that clearly states what are the consumer rights and also what are the responsibilities of crypto participants.

Senator SCOTT. Thank you. I am out of time.

Chair BROWN. Thank you, Ranking Member Scott.

Senator Menendez from New Jersey is recognized.

Senator MENENDEZ. Thank you, Mr. Chairman. Last fall, the Financial Stability Oversight Council released its 2022 report on Digital Asset Financial Stability Risks and Regulations, and one of FSOC's recommendations was that Congress pass legislation providing rulemaking authority to financial regulators over the spot market for nonsecurity digital assets.

Mr. Reiners, why is it important that Congress address this gap, and how would you propose that we do it?

Mr. REINERS. So, Senator Menendez, for the past 10 years or so, the big debate when it comes to crypto regulation is, you know, are these things commodities or securities, and of course, the Howey Test is principally what is used to determine whether or not a given token is an investment contract and, therefore, a security. Now I happen to agree with Chair Gensler that most cryptocurrencies are securities, that they meet the Howey Test, but

there are some cryptocurrencies—and I will just use Bitcoin as an example—that are decentralized enough that they are commodities.

And the CFTC regulates commodity spot markets, but they do not—or, they do not regulate commodity spot markets. They only regulate commodity derivatives markets although they do have fraud and manipulation enforcement authority in commodity spot markets.

So that is the gap that needs to be addressed, and so what I recommend—and I have this detailed in my written testimony—is that Congress carve out cryptocurrency from the definition of commodity in the Commodity Exchange Act and include cryptocurrency as a new category of security under our securities laws so that it is clear to everyone, to the market and everyone else, that the SEC has exclusive rulemaking authority and jurisdiction over cryptocurrency.

Senator MENENDEZ. Professor Jeng and Professor Yadav, any views on this?

Ms. YADAV. Thank you so much, Senator Menendez. I think one of the main things that we have to figure out how to do, at least in my proposal, is to make the private industry accountable and to make the private industry responsible. So as set out in my written testimony, some of the major—arguably, the most important institutions in this economy are the exchanges, and we have to find a way to make them play their part in making sure that this market becomes a safer and much consumer-protected market.

Now in this context, what I propose is to create this framework for exchanges to become self-regulatory organizations very clearly under a framework of oversight that could be administered by agencies jointly. I think this is a gap here—in other words, that we are allowing exchanges to become very big, we are allowing them to become sophisticated, we are allowing them to have governance structures that are extremely centralized and subject to conflicts of interest, and we need to bring that under control because exchanges are providing on-ramps into the cryptocurrency market for really the vast swath of the population.

Senator MENENDEZ. Mm-hmm.

Ms. JENG. There are many different types of digital assets, some of which are like Bitcoin, native cryptocurrencies; others are like fiat-backed stablecoins which will act as digital money.

And so for example, if I give you a green paper dollar bill, you know when you take it from me that nobody has an interest or title to that dollar bill. That is why it acts so well as a medium of exchange. To ensure that we will have a digital economy that can run on digital money, we need to make sure that fiat-backed stablecoins and other types of digital money—that could include CBDC as well—are also going to be free of interest or title.

And hence, why putting it under the SEC framework was problematic? Because again, you know, I cannot pay you with a security.

Senator MENENDEZ. Mm-hmm. Well, we are trying to figure this out. The key element I will be looking for in digital asset legislation is a clear prioritization of transparency and investor protection, which is also providing for stability—while also providing for stability and safe innovation. These are values that make our current

financial system strong and effective and should equally apply, I believe, to the digital assets.

Let me just ask you, Professor Jeng and Yadav, for decades, the United States has been a leader in the global financial system, which has had an immeasurable asset to American consumers and, in my role as the Chairman of the Foreign Relations Committee, our foreign policy goals as well. We should look to continue that leadership as we work to develop digital assets regulations.

Can each of you talk about some of the global trends we are seeing on crypto regulation? Is the U.S. ahead or behind the curve?

Ms. YADAV. Senator Menendez, unfortunately, the U.S. is extremely behind the curve at this point. One thing that we have done, as you mentioned, extraordinarily well over the last 10 years is have leadership in standard setting. We have been incredibly powerful exporters of our financial markets regulation abroad, and this is so important because it means that other countries have adopted key principles that we use in our markets to make our markets work and make our markets safe. One example here would be the leverage ratio, for example, that we use in our banking system that has now become an export that is being used more broadly abroad.

In the case of digital asset regulation, unfortunately, however, we really do not have anything to export at present. Unfortunately, other countries have taken a lead, and in particular, the EU here has set out a very comprehensive framework in the form of the market and the marketing crypto assets regulation. Now this likely to come in force in April, perhaps later this—you know, April or later this year, and this is a very comprehensive framework that has set the stage for the U.S. essentially to become a potential second there in terms of coming up with a plan for, and an agenda for, digital assets regulation.

So here, it does not feel like we are leading. It feels like we are potentially following others where they have taken a lead and have set the standards and are using their framework to say what rules are good and what rules are bad.

Ms. JENG. To add to Professor Yesha's remarks, it is not just that other countries are adopting regulations; other countries are pursuing very thoughtful, national, digital strategies. And you look at the EU, which has in place not just MiCA but GDPR and other regulations, like the Digital Markets Act. It is all part of a comprehensive strategy that they are pursuing.

The U.K. is in the process of consulting its proposal on regulating crypto assets. Australia has been pursuing a long-term national data strategy and has just come out with its proposal on taxonomies of crypto assets. Hong Kong is about to come out with a consultation. Singapore just finished its consultation in December. As you can see, the list just goes on and on, and not to mention China, which has been pursuing a multiyear crypto strategy.

Mr. REINERS. Senator Menendez—

Chair BROWN. Senator Menendez—oh, I am sorry. You wanted Mr. Reiners, too. OK.

Mr. REINERS. So I do not think the U.S. is falling behind. I think the important thing is that we get regulation right, not that we necessarily be the first.

And many other jurisdictions that Professor Jeng was mentioned, you know, they are embracing crypto because essentially they are gambling that it can help juice their economy. But look at the situation in the Bahamas, where they embraced crypto. They rolled out the red carpet for Sam Bankman-Fried, you know, and obviously it did not turn out so well.

So as I said in my opening testimony, you know, crypto is doing more harm than good to our society. As you mentioned, it is undermining U.S. national security by facilitating sanctions of Asian terrorist financing. The dollar and New York status for dollar clearing is an instrument of foreign policy, and crypto undermines all of that. So we should not be embracing something that is undermining our sovereignty.

And so I think the important thing is getting financial regulation right in this space with what I call a dual mandate—one, protecting investors, and two, preserving financial stability.

And that is an upside to the most recent crypto winter—is that it has not spilled into the traditional financial system, and it is largely due to actions of the SEC and the Federal banking agencies who have had clear rules in place for the better part of a year that basically say, if you are a regulated bank and want to engage in crypto activity, you need to get permission from us first. And that really prevented a lot of banks from engaging more heavily in crypto activity, and this story would be very different if we had banks engaging in crypto activity.

Chair BROWN. Thank you.

Senator Vance of Ohio is recognized.

Senator VANCE. Thank you, Mr. Chairman, and thanks to the witnesses here.

I am going to pose this first question to all three of you but maybe give you some background where I am coming from. So I am probably one of the few Members of the Committee that actually owns cryptocurrency. I have been fascinated for it, or by it, for a long time. But I also, you know, recognize that there are downsides to it, that there are risks that come along with it.

My basic bias here is that we do not really know what it is yet, meaning not just cryptocurrency but a lot of the other underlying related Web3 technologies and that our regulatory approach should basically be to protect consumers while ensuring that we do not destroy the dynamic upside of this.

And here is what I mean by the dynamic upside. Mister—is it Reiners? What you just said is fascinating to me in that, you know, I can tell, you know, you are sort of skeptical of the role that crypto is playing in society right now, and look, after what happened with Sam Bankman-Fried, there obviously—there is a lot of cause for skepticism.

What I wonder is how people would have described the internet in the 1970s and the 1980s, before it was commercially available, before it was a major part of the way that we did commerce, and that if we had taken an overbearing approach then we might have destroyed a lot of the upsides that have come over the last three decades.

So I want to put this question to each of you, maybe just going from left to right: How do you think about that, about regulating

crypto not just in a way that protects consumers and also protects the upsides of the technology right now, in February of 2023, but ensures that the innovation that is going to happen on this platform, which is really how I think of it, actually happens in a way that is relatively free, relatively fair, and preserves, as Senator Menendez said, the fact that this could become a tool in America's foreign policy and economic arsenal?

Mr. REINERS. Yeah, thank you for that question, Senator. So I respond by saying that crypto is not new. The first Bitcoin transaction was in 2009, so we have a 14-year track record to look back and assess this. It did not take the internet 14 years to prove its worth.

And so when you look at cryptocurrencies, I would just ask, what is the fundamental value? Why are they worth anything? Normal financial assets are someone else's liability. Right? There is an issuer. Otherwise, where would the returns come from?

There is no reason to think that cryptocurrency is going to generate returns indefinitely into the future. It is clear that people are just buying it because they think they can sell it to someone else at a higher price in the future. There is no fundamentals.

Now that does not mean necessarily that blockchain does not have value, and I think there is a way to regulate the risk associated with crypto and to the consumer protections point that you raise, while still allowing, you know, traditional financial services to experiment with blockchain as they are. And I think our existing financial regulatory framework is more than capable of keeping up with the traditional financial system using blockchain.

But, unbacked crypto assets? There is no "there" there, and we have plenty of history to prove it.

Senator VANCE. Professor Jeng.

Ms. JENG. Thank you, Senator. I like very much your analogy to the internet. I was just speaking with a colleague of mine at Wharton who had begun his legal career at the FCC, and he told me, at that time—and I am dating his age very clearly, but he said one of the big fights at the FCC was whether to license internet charters. I do not even know what that means, but the question was: Should internet providers have to register with the FCC? Should page providers, site providers, et cetera? And if they had decided yes, I think the internet would be very different today, and we may not even have blockchain technologies.

So why am I bringing this up? It is extremely important that we have open interoperable standards, and what I—that is the spirit of blockchain technology. The idea is that these technologies produce stacks that are composable, almost like Legos. And so with the iPhone you can then build apps on top, GPS locators, and then be able to use Uber on top of that and then maybe your finances.

Why we need to think in terms of pushing for open interoperable standards is to prevent monopolies of the future. So digital identity is going to be the cornerstone of the digital economy, and right now there are some companies—and I am not going to name them right now, but they are digitizing our driver's licenses in closed-wallet solutions. And that means these companies—and you can probably guess who they are—are going to have an advantage over who are using their wallets whenever they are trying to transact and are

required to share their personal data, including their driver's license.

And so down the road, you end up with digital transactions that are viewable only by these companies, and other companies are not allowed to actually build on top of the digital identities. So we have to actually set the guardrails in the right balance to allow for innovation but not have companies or bad players take advantage of that openness.

Senator VANCE. Great. Ms. Yadav.

Ms. YADAV. Thank you so much, Senator, for that question. We have had innovation for as long as we can remember in this economy, so for example, from the ATM to all the financial engineering that we saw precrisis. We have had a ton of innovation that is, you know, constantly and consistently a part of the American financial system. The way in which we have tackled it is by having a dialogue amongst regulators to approach this in a smart way that includes, obviously, contributions from the industry.

Now certainly, as Professor Reiners mentioned, Bitcoin has been there for 14 years, but what we have seen in the crypto economy, for example, is a real uptick in activity, particularly in the last 3 years. So for example, DeFi transactions have increased almost 900 percent in 2021. We have seen extraordinary transaction volumes in crypto exchanges, almost 689 percent gains from 2020 to 2021. So we have seen more people coming into this economy to sort of try out new products and so forth.

Now that has obviously created risks, and it means that we need to understand them. It means that we need to use the tried and tested rules, the tools that we had to understand and regulate innovation, to think about innovation, and to encourage innovation through, for example, tools like disclosure as was discussed earlier in addition to making sure that the entities that are engaging in innovation are doing so safely, for example, keeping minimum capital buffers, for example, making sure that those people are providing products and taking money from other people are doing so in a way that has proper internal controls. These are things that we have used before, we have tried before, that have encouraged innovation before.

I think the need for this now is urgent given the expansion and sophistication of the crypto framework, and I think we can continue to balance the need for market integrity and consumer protection, as well as making sure that we can do innovation but provided we can get regulators on board, as well that industry contributes to that dialogue in a systematic way.

Senator VANCE. Great. Thank you.

Ms. YADAV. Thank you.

Chair BROWN. Thank you, Senator Vance.

Senator Van Hollen of Maryland is recognized.

Senator VAN HOLLEN. Thank you, Mr. Chairman, and thank all of you for your testimony here today.

Mr. Reiners, in your testimony, you argue that bank regulators should learn from previous incidents where crypto failures impacted the banks that they worked with, and I agree.

Earlier, back in December in this Committee, we heard from Professor Hilary Allen, and she made a case for a Glass-Steagall 2.0 model separating banking entirely from crypto asset activities.

In your testimony, you indicate that that is probably beyond the agencies' power or authority to do even if they wanted to do it, and you urge that we look at other alternatives to develop a comprehensive framework that clarifies—and I am quoting from your testimony here now—"comprehensive framework that clarifies the type of crypto asset activities banks can engage in and the prudential requirements, capital, and liquidity required to engage in such activity." Could you expand on that and provide a little more detail as to what you are thinking?

Mr. REINERS. Yeah, thank you, Senator. I am a friend and admirer of Professor Allen's work, and I certainly agree with the sentiment that we should do everything we can to restrict crypto from entering the banking system. But as long as crypto is legal, you know, then these firms are entitled to banking services. So I think the challenge is: Where do you draw the line? What specific crypto activity can be done in a safe and sound manner?

And so I think the banking agencies have started off on the right foot in having guidance in place that says, if you are a regulated bank—so this is the FDIC, OCC, and Fed all have guidance in place that says, if you are a regulated bank and you want to engage in crypto activity, you have to let us know first.

But again I think more is needed, and so what I recommend is that banking agencies do a horizontal exercise where they understand all the different ways that banks are exposed to crypto and then release that information to the public so that not only bank customers but bank investors as well are aware of the risks because, you know, the guidance has not been perfect and we have seen a few banks that unbeknownst to regulators were more exposed to crypto than previously realized.

And I would just point to Silvergate as a perfect example. Over 90 percent of their deposits were from crypto-related firms, and in the fourth quarter of last year they saw over \$8 billion in deposits leave. That was over 60 percent of their deposit base, and it looks likely that they would have failed if they did not get emergency liquidity from the Federal Home Loan Bank of San Francisco, which, of course, is not the reason that we have Federal Home Loan Banks. They exist to support home ownership, not to bail out banks that gamble on crypto.

So you know, again I think the challenge is: Where do you draw the line? The Basel Committee finalized their guidance in 2000—in December. You know, the U.S. has a history, of course, of gold plating, as they say, Basel Standards, and I think that is certainly warranted in this case as well because if crypto had been more integrated with the banking system the fallout of FTX would have been much, much worse.

Senator VAN HOLLEN. Right. No, I think that is a really important point. I guess, just to ask you to expand a little bit more on this, do you think our banking regulators are taking all the steps that they are authorized to do under current law to try to prevent crypto from sort of making its way into the banking system in a way that puts consumers at risk? Is there any additional measures

that they should be taking? And, if they have exhausted their authorities, do you support legislation along the lines that Professor Allen suggested?

Mr. REINERS. So banking agencies have a broad legal authority to prohibit banks from engaging in any activity that cannot be conducted in a safe and sound manner. So I do think that they can be—they can do more and be more prescriptive around what specific crypto-related activities can and cannot be done in a safe and sound manner.

For instance, there is absolutely no reason why banks should hold cryptocurrency as a principal on their balance sheet. Now the joint statement that the banking agencies released at the beginning of January alludes to the fact that they would look—that the agencies would look very askance at banks that wanted to do that, but I think certainly clear guidance that just says, you cannot do this, is warranted.

Senator VAN HOLLEN. Got it. Thank you.

Thank you, Mr. Chairman.

Chair BROWN. Thank you, Senator Van Hollen.

Senator Britt is recognized, from Alabama. Welcome.

Senator BRITT. Thank you, Mr. Chairman. So countless Americans confidentially participate in our financial system and markets every day. They are informed of the risks associated with the decisions they make, and they choose what they want to pursue, for example, whether it is stocks or bonds, or whether we are talking about mutual funds or traditional savings accounts.

However, what we have seen now is that our current laws and regulations do not speak to the recent innovations within our financial sector, and in fact Congress has a responsibility to act to establish rules of the road to ensure robust transparency and protection for consumers and investors. However, we have seen this past year alone show the consequences of what happens when Congress fails to do that.

My question is for Ms. Jeng. Just like the rest of the financial sector, we must ensure that appropriate, commonsense guardrails are in place so consumers have transparency in the digital asset space. I have heard you talk about these commonsense guardrails. You have mentioned protecting consumers, their rights, and empowering them. Can you tell me from your perspective what Congress needs to keep in mind while developing these types of guardrails?

Ms. JENG. Thank you, Senator, for this opportunity to expound upon what I think are key foundational building blocks that Congress needs to consider. Consumer and investor protection, that is crucial, and having clear legal rights in the property that they purchase when part of the problem with the bankruptcies is that the bankruptcy court had really nothing to work with in terms of legal rights. And so here is an opportunity for Congress to make very clear that when consumers purchase digital assets that they have a property right in that digital asset, and then that will be respected in a bankruptcy proceeding.

The other really important concern to keep in mind is that this kind of technology is about democratizing financial services, and that means when I, for example, moved back to the U.S. from Eu-

rope I had to pay \$4,000 to my European bank to move my own savings back to the U.S. and then I also had no profit from the spread the bank made when it converted from Swiss francs to U.S. dollars.

This is the type of opportunity that blockchain technology can help with. I look forward to that day when I will be able to transfer money cross-border to myself and actually also make part of that profit in the spread, and that kind of equitable interest in financial services is what makes Web3 different from, say, Web2.

And so we have to think about how can we empower consumers, give them consumer data rights, while also protecting them through disclosures and legal protections in bankruptcy.

Senator BRITT. Staying on that same line of thought of empowering consumers, I was struck in your testimony here about who the actual purchasers of digital assets are. You have here 55 percent do not have a college degree; 44 percent of crypto traders are not White; 41 percent of traders are women. And knowing that, do you believe that if we put in proper guidelines and guardrails that there is an opportunity for more people across this Nation to achieve the American Dream through the use of digital assets?

Ms. JENG. Currently, in the U.S., 4 percent are unbanked, 14 percent are underbanked. I think that is a huge amount for a country as rich and advanced as ours. They feel that they are excluded from the traditional financial system. Here is an opportunity where we can lower the costs and improve access to financial services.

Senator BRITT. And as we work to do that, there is a lot of talk about overregulation, stifling the market, essentially taking jobs and innovation and offshoring them to places like China, to our adversaries. Do you share that line of thinking, that if commonsense guardrails move to overregulation that we may do just that?

Ms. JENG. Regulatory uncertainty causes market uncertainty, and when the market is uncertain they will go to where there is regulatory clarity. So if there are other countries with clear frameworks, that is where they are going to head or they will go into the shadow banking sector where our regulators would have very little insight and oversight.

And so regardless, either way, we will end up bifurcating our U.S. financial system in ways that will have unintended consequences. A bifurcated system would in fact be part traditional banking and then one part that is in the shadows, if that is where crypto is going. I do not think that would help with our leadership in digital innovation. If anything, this will actually just drive our innovation to other countries that very much want to be the leadership in this space, and they are actually quite jealous of our ability right now of being the leader in coming up with the most innovative products and services in crypto.

Senator BRITT. Absolutely. Thank you.

Chair BROWN. Thank you, Senator Britt.

Senator Smith from Minnesota is recognized online.

Senator SMITH. Thank you, Chair Brown, and thanks to our panelists for being with us today.

My first question is for Mr. Reiners. So some people, I think, mistake crypto for sort of this niche, enthusiasm-driven market, and while that might have once been the case, it is important to

realize that it is now—last year, \$2 trillion in market value was lost. And I think that demonstrates how mainstream this has been, and I think it is also a good reason to be wary about the risks that this growth poses to consumers and to our economy.

And this is why Senator Warner and I questioned Fidelity's decision to offer Bitcoin in 401(k) plans and we recently have been pressing regulators about banks' exposure to crypto risks.

I start from the place that people are free, pretty much free, to invest their money or to bet wherever they want to, and that includes crypto, but I am really concerned about the potential for these highly volatile assets and risky assets to get into our financial system and what impact that might have if there is a collapse, for future crypto collapses.

So, Mr. Reiners, in your written testimony, you said that "The failure of crypto to fully integrate into mainstream finance is due to a combination of luck and prudent action by a handful of regulatory agencies." Could you talk a bit more about that? Just how lucky were we, and what should we be doing as policymakers to avoid relying on luck as we look at future crises?

Mr. REINERS. Yeah, thank you for that question, Senator, and before I address it, I want to quickly touch on the financial inclusion element that has been talked about in this hearing. There is no evidence whatsoever to suggest that crypto promotes financial inclusion, and in fact there is overwhelming evidence that suggests the exact opposite is happening. Most people who have invested in cryptocurrency have lost money. Of those people, a plurality are minorities and low-income Americans. OK? So this is an example of predatory inclusion.

We saw the same thing with subprime loans leading up to the 2008 financial crisis, where low-income and minority communities are being specifically targeted with very, very risky products, and unfortunately, they have lost in many cases everything.

Now to your point, Senator Smith, about limiting the connections between crypto and the traditional financial system, you know, we did luck out to a certain extent.

I would point back to the fall report from the Financial Stability Oversight Council and where they said, listen, the crypto market can be systemically risky given two things. One is size. Obviously, the bigger the market the bigger risk it poses to the rest of the economy. And then two is the connections between that sector and the traditional financial system. And crypto has been—the industry has been trying very, very hard to integrate into mainstream finance so that the two are essentially indistinguishable, which I find ironic given that the whole premise of cryptocurrency was to bypass banks and the traditional financial system.

Now they are desperately trying to get access and make themselves seem as if they are legitimate, and they use the same terminology that we are accustomed to with traditional financial institutions. Right? So, broker, exchange, bank. But they are not. These things have meaning, and they are using these words intentionally because they want you to think that they are regulated and just as safe as these traditional institutions. OK?

And in some cases, for instance, Voyager, they were lying about the fact that they were FDIC-insured, and then they had a cease and desist order sent to them by the Fed and FDIC.

So I would just, you know, run through the list. You mentioned Fidelity attempting to put Bitcoin into 401(k)s. You know, would we think it is OK if they just let Powerball end up in our 401(k)s? Again, crypto is just gambling.

So thankfully, the Department of Labor has sent out a letter saying that it would be a violation of fiduciary duty for plan administrators to offer—that they think it would be a violation of an administrator’s fiduciary duty, and that again restricted, I am sure, a lot of employers from allowing their employees to invest in crypto.

Look at FTX. They had an active proposal in front of the CFTC that would allow them to offer retail traders 24/7 access to crypto derivatives on margin, directly, without the need of going through a broker or futures commission merchant. Again, if the CFTC had granted that proposal, as it appeared likely that they would have, the FTX situation would have been very, very different.

Again, multiple attempts to list an ETF that tracks Bitcoin, in fact, Grayscale has sued the SEC for not granting them that permission. Again, just think of how many investors would have lost money, more money, if there had been a Bitcoin spot ETF on the market.

So we kind of lucked out here a little bit, Senator, because we had agencies, at least some agencies, that were willing to do the right thing even though in many cases it was not popular.

And I think going forward we need to have a clear regulatory framework, as I address in my written testimony, to make sure that crypto does not integrate into the traditional financial system because they are continuing to try and they will not stop.

Senator SMITH. Well, you just laid out, I think, so many of the concerns that I have with this whole field. And as you say, there is sort of this imprimatur of reasonableness and trustworthiness because of the terms that are used and because of the ways—you know, as you say, the very typical financial terms that people are sort of familiar with.

Yet, you take this thing that is supposedly—we have been calling it a digital asset, but it is not clear to me whether many of these so-called assets are not just a bet because this will just like go back to this for 1 minute. I mean, if there is no underlying value, then you are really just betting on whether it is going to go up or go down, whether you are going to win or you are going to lose. And that, I think, is my great concern.

And I appreciate your comments on how it does seem to me that in this field there are people that are being—you know, a lot of people that are losing money and are being taken advantage of when they should be—know that in this category that there are some basic consumer protections that are going to protect them.

Thank you, Mr. Chair.

Chair BROWN. Thank you, Senator Smith.

Senator Tillis from North Carolina is recognized.

Senator TILLIS. Thank you, Mr. Chairman. Welcome to all of you for being here.

If we take a look at this Congress, you have to kind of sort of out what the art of the possible is. Every Congress is a little bit different. We have a divided Government here. And while I hope we can look at some big things, I am really wanting to get down into some singles and doubles.

Professor, I heard you talk about an idealized framework from your perspective. That is a big lift and not likely to occur. What I am also worried about is with the lack of information that we could overreach.

And, Professor Jeng, you mentioned GDPR. I followed that fairly closely. It was a good, broad regulatory construct that has met with some challenges. They have to go back and refine it. So I think we need to get it right.

So I tend to be more on the lean, singles and doubles approach to addressing some of the problems in building over time. I thought that Senator Vance's analogy on the internet was a good one.

Now we have a hearing downstairs right now talking about protecting our children on the internet. We have got a lot of work to do in that space, but I think overreaching could have set us back by a decade or generation of innovation.

So one of the things that we have looked at that I do not think would be particularly controversial but what I would put in the single or double category is a proof of reserves requirement. If we saw that in the FTX world, we could have avoided some of that.

So, number one, what is your thought, if we can be quick? I want to at least get two questions in, but—you know. What are your thoughts on things like proof of reserves and other things that Congress can act on?

I do not find a lot of comfort in knowing that Mr. Gensler thinks he has full authority to implement a regulatory regimen because I think he has been going a little bit too fast and a little bit too expansive on rulemaking, which is why I hope that Congress will act so that we get this right. So give me some ideas on singles and doubles.

Mr. REINERS. Yeah, so I appreciate the question, Senator. You know, frankly, proof of reserves are not worth the paper that they are written on, and I would just point to the so-called proof of reserves that Binance had for Mazars until Mazars pulled it off of their website and stopped doing any work for crypto.

Senator TILLIS. Is proof of reserves not a worthwhile pursuit or is—

Mr. REINERS. So audits are a worthwhile—so I think—no. So I think audits are a worthwhile pursuit, and I think that is a single certainly that this Congress should look at. There is no reason that crypto intermediaries, exchanges, should not have full audits, but proof of reserves are not full audits.

Senator TILLIS. We were talking about an independent third party reporting to the Treasury, so I think that may address the point you were making about worth the paper that they are written on.

Mr. REINERS. Yeah. Now I would say one other sort of single is requiring these crypto platforms to segregate firm assets from customer assets.

Senator TILLIS. Yep. Professor Jeng.

Ms. JENG. Proof of reserves can be defined a number of ways. At its simplest, it is like balancing your checkbook. And you could do that either through gap accounting disclosures or on-chain confirmations or supervisory exams, and so whatever method is chosen, it is just about verifying what is on-chain as well as what is off-chain.

Senator TILLIS. Yeah. And by the way, maybe we need to get your opinion, but on the proof of reserves bill that we are working on in our office, we are trying to deal with comingling of customer funds. I think the things that you are getting at, so really making it have teeth.

But I will go to you, Ms. Yadav.

Ms. YADAV. Thank you so much, Senator. Proof of reserves is something that is ones and twos here, to make sure that the methodology is clear, to make sure that the methodology is robust. What that means is that the liabilities are being fully disclosed. One of the problems right now is that it is not clear whether the liabilities that are being disclosed are in fact comprehensive, and so the ability to have third-party audits, as you suggest, that are robust and that are done systematically.

In addition, also, we need to make sure that we have the internal controls that go into and underlie the proof of reserves. For example, it is not enough simply just to disclose. It is important that the actual exchange has internal controls that can make sure that these assets are properly segregated, that the valuation of these assets is done as mark-to-market on a very regular basis, and that the proof of reserve disclosures are done regularly. Giving us a snapshot once every 3 months is not going to be enough. These are things that are changing every day.

In addition, also, it is not just proof of reserves. It is proof of solvency. Now one of the things that is emerging in these different exchanges is that many of the balance sheets are made up of these, you know, coins that essentially they are minting themselves and the valuation there is not clear. In the case of FTX, for example, the FTT token has fallen precipitously in value. The exchanges' own tokens in the case of Binance and others are constantly volatile.

And so making sure that we have not just the disclosure of the reserves but also making sure that the assets that are being held are liquid and tradable. One of the issues with these assets that is happening here, you know, is that the market for trading them is extremely thin, and so the ability for folks to cash out is, you know, is limited by the fact that the actual exit is much, much, much less liquid than a proof of reserve by itself might suggest. So that is another thing that would be important to take into consideration.

Senator TILLIS. Thank you all.

Chair BROWN. Thank you, Senator Tillis.

Senator Warren of Massachusetts is recognized.

Senator WARREN. Thank you, Mr. Chairman. So big time financial criminals love crypto. Just last year, just in 1 year, crypto was the payment method of choice for international drug traffickers who raked in over a billion dollars through crypto, North Korean hackers who stole \$1.7 billion and funneled that money into their

nuclear program, and ransomware attackers who took in almost \$500 million. The crypto market took in \$20 billion last year in illicit transactions, and that is only the part we know about. You know, that is a lot of fentanyl and heroin, a lot of help for Iran and Russia, and a lot of money leaking out to terrorists, and that is precisely what anti-money laundering rules are designed to stop.

Now, Mr. Reiners, you have studied financial technologies, including crypto, for many years now, and before that you worked as a regulator. Why do drug lords and human traffickers and countries like North Korea and Iran use crypto instead of banks and credit unions or even Western Union?

Mr. REINERS. Thank you, Senator. So crypto's pseudonymity makes it ideally suited for bad actors, and when you couple that with the fact that crypto transactions are not subject to the same AML and countering the financing of terrorism—

Senator WARREN. AML, meaning anti-money laundering.

Mr. REINERS. Anti-money laundering and countering the financing of terrorism statutes that traditional financial transactions are subject to. Again, that just, you know, makes it ideally suited for people that want to do bad things.

Senator WARREN. So in other words, crypto helps those drug traffickers and rogue States launder money nearly instantaneously. Is that right?

Mr. REINERS. That is correct.

Senator WARREN. All right. And if they could not use crypto, would ransomware gangs even exist?

Mr. REINERS. No.

Senator WARREN. And why is that?

Mr. REINERS. Because ransomware is the exclusive payment method of choice for ransomware hackers.

Senator WARREN. You mean crypto?

Mr. REINERS. Sorry. Crypto is the exclusive payment method of choice for ransomware hackers.

Senator WARREN. A hundred percent. Wow. So we have money laundering rules that cover banks and credit unions and stock brokers and gold dealers and even Western Union, but the current rules do not cover big parts of the crypto industry, and crypto likes it that way. In fact, the crypto industry claims that applying anti-money laundering laws to the whole crypto industry is "not only unnecessary, but it is all but impossible."

By the way, this is not a new claim. In 1970, Congress decided it was time for financial institutions to do their part to prevent money laundering, so it passed the Bank Secrecy Act or BSA. The banking industry objected, claiming that complying would be "a tremendous expense as well as a pain the neck." The banks resisted. They brought legal challenges. They complained that it would be impossible to comply. And then after the law went into effect, they made it work.

Now the crypto industry explains that they are amazingly innovative and creative, but they just could not possibly figure out a way to comply with the same anti-money laundering rules that everybody else follows.

So, Mr. Reiners, do you buy the industry's argument that crypto is simply too special to follow anti-money laundering rules and that it would be too hard for them to even try?

Mr. REINERS. I do not, Senator.

Senator WARREN. All right. Some in the crypto industry say that anti-money laundering rules can work so long as they exempt so-called decentralized entities—the crypto exchanges, lenders, and other financial intermediaries that run on code. In other words, they want a giant loophole for DeFi written into the law so they can launder money whenever a drug lord or a terrorist pays them to do so.

Now that is exactly what Colorado-based crypto exchange ShapeShift did when it deliberately restructured itself as a DeFi platform, and here is what it told its customers: They said, we are making this shift “to remove itself from regulated activity.” Translation: Launder your money here.

Mr. Reiners, should Congress be in the business of creating loopholes for money laundering?

Mr. REINERS. They should not.

Senator WARREN. All right. Look, the rules should be simple. Same kind of transaction, same kind of risk means the same kind of rules. And that is why Senator Roger Marshall and I are reintroducing our anti-money laundering bill, to clamp down on crypto crime and to give regulators the tools they need to stop the flow of crypto to drug traffickers and places like North Korea and Iran.

Chair BROWN. Thank you, Senator Warren.

Senator Hagerty of Tennessee is recognized.

Senator HAGERTY. Thank you, Mr. Chairman, and I want to thank our witnesses for being here today, including Professor Yadav, who is from my home State of Tennessee and also from my alma mater of Vanderbilt. Welcome to all of you.

I think it is imperative that we continue to discuss digital assets because America's national and economic security are greatly enhanced by the preeminence of our financial system, and in order to maintain this immense competitive advantage, we have got to stay abreast of innovation. This involves embracing technological advancements, as unusual as they may seem, in order to preserve our economic strength and our strength as an ally and an enforcer on the global stage. Blockchain technology represents one of these areas of rapid innovation, and rather than incentivize their movement offshore, we should work to foster a safe and certain environment for them to flourish here in the United States.

So, Professor Jeng, I would like to start with you. In your testimony, you highlighted the importance of payment tokens, like stablecoins, to the digital asset ecosystem. And I agree with this characterization as not only will these tokens help usher in faster and cheaper payments for Americans, but if allowed to develop they will also advance the role of the U.S. dollar abroad.

However, as you also mentioned, trust in the assets backing such tokens is crucial. Unless users are confident in what is backing these tokens, their adoption will be severely constrained. That is why I introduced a straightforward and light-touch bill last year to set the standards for assets backing stablecoins and to require their issuers to publish audited reports of their reserves.

So, Professor Jeng, do you believe, like many of those who are hostile to the technology, that only a Central Bank Digital Currency issued by the Fed can serve the function of a payment token?

Ms. JENG. Thank you, Senator, for this important question because there are certainly different types of ways to transfer value. CBDCs definitely could be one of them.

Senator HAGERTY. But not exclusively then.

Ms. JENG. But not exclusively. What is—

Senator HAGERTY. I agree. I want to keep moving because I have a lot to cover today. What kind of legal clarity would be necessary to help encourage the adoption of stablecoins other than the one that we just spoke about issued by the Fed?

Ms. JENG. I think it is very important that we have a clear regulatory framework that utilizes public feedback. What we have been missing has been rulemakings through the public process, and we need public input. Regulators need to better understand the technology and also gather the best ideas out there on how to oversee the industry.

Senator HAGERTY. Yes. No, you made this clear when you cited the fact that there have only been two sort of minor rulemaking activities by each of the SEC and the CFTC while there have been 30 of these retroactive litigation cases at the SEC and 18 at the CFTC. That is not the way to run things—in a hindward-looking, piecemeal basis.

Let us turn on now to something that is concerning me very much. In the past few weeks, there has been a coordinated chorus of regulators talking about severing crypto from our financial system. To me, this really feels reminiscent of Operation Choke Point, an exercise under the Obama administration that I strongly, strongly disagreed with. In Operation Choke Point, politically disfavored entities, although legal, were cutoff from banking services in order to achieve partisan gains.

At the same time, I have heard from some of my colleagues, particularly on the other side of the aisle, that they are fine with not regulating crypto, just let it go overseas, and not legitimize it.

But to that, I say, what happens to the hundreds of thousands of users from Tennessee that are already transacting in crypto? Are we simply not going to create safeguards to protect these consumers? And, where do U.S.-based crypto innovators go?

To that end, Congress needs to write legislation to properly regulate this industry so we can protect consumers and remain at the cutting edge of a rapidly evolving space. It is becoming increasingly apparent that the SEC is not going to do its job. So it is on us, now more than ever, to make sure that we have proper safeguards in place and to make certain that another FTX-like event never happens again.

So, Professor Jeng, what effect would a wholesale debanking of the crypto industry have on the industry's activity here in the United States and globally?

Chair BROWN. Professor Jeng, please be brief in your answers. We have one more witness, and Senator Scott and I are late to vote. So that is our fault, not yours, but be brief with your answer if you could. Thank you.

Ms. JENG. The crypto industry is an industry that needs access to banking services. If it does not have access to banking, it will either go offshore or into shadow banking, again bifurcating the U.S. financial system, to which our own U.S. regulators would not be able to see and monitor and regulate those parts of that system where they have fled to, and then if it were to be offshored to other countries, those countries would end up having leadership in digital innovation.

Senator HAGERTY. Just like Binance, and Binance will laugh all the way to the bank. Thank you.

Chair BROWN. Thank you, Senator Hagerty. I apologize for doing that.

Senators who wish to—thank the witnesses.

Senators who wish to submit questions, those questions are due 1 week from today, Tuesday the 21st. Witnesses will have 45 days to respond to any questions.

Thank you again. The hearing is adjourned.

[Whereupon, at 12:05 p.m., the hearing was adjourned.]

[Prepared statements, responses to written questions, and additional material supplied for the record follow:]

PREPARED STATEMENT OF CHAIR SHERROD BROWN

What a difference a year makes.

Go back to last year's Super Bowl. The cryptocurrency industry spent a whopping \$54 million on eight ads, promising Americans untold riches and the chance to make history. Of course, they didn't tell us about the high fees, risk of loss, and outright theft that plagued the crypto industry.

But if you watched the Super Bowl 2 nights ago, you didn't see a single ad for crypto.

The cryptocurrency industry has imploded. In 2022, the crypto market lost \$1.46 trillion in value. Hackers and fraudsters—often tied to the regimes in Pyongyang and Moscow—have stolen over \$3 billion. Crypto firms have slashed over 1,600 jobs.

And as crypto values crashed last year, platforms began collapsing, creating more losses across the rest of the crypto ecosystem. The crypto firms that are left have had to halt customer withdrawals, freezing people out from their own money.

While crypto contagion didn't infect the broader financial system, we saw glimpses of the damage it could have done if crypto migrated into the banking system. And the handful of banks with close ties to the crypto industry have needed liquidity lifelines after they suffered large withdrawals.

This nightmare isn't over yet—we are still learning the full extent of the fallout from the FTX collapse. In December, this Committee heard about the excessive risk taking and misconduct at FTX. The customers who lost money are only now understanding the reality of the products they were sold.

As these crypto firms filed for bankruptcy, regulators, and policymakers have also learned how out-of-control some of those businesses were.

They were over-leveraged and undercapitalized. They had no internal risk controls. They were careless with customers' money. In the case of FTX, they used it to line their own pockets. Now the money of millions of Americans is trapped and they might never get it back.

Last year I warned that the splashy Super Bowl ads left out key details. A year ago, I said:

- Big crypto companies are looking to make big profits and are desperate to reach as many Americans as they can. They brought in celebrities and gimmicks to make crypto sound exciting and daring . . . and profitable.
- But the ads left a few things out.
- They didn't mention the fraud, scams, and outright theft.
- The ads didn't point out that you can lose big in crypto's huge price swings. They didn't tell you about the high fees pocketed by the crypto companies.
- And they sure didn't explain that crypto markets lack basic investor protections and oversight.

The results were as predictable as they are tragic. And contrary to crypto evangelists' claims of democratizing finance, it's not the early adopters or big money investors who are left holding the bag. When it comes to crypto, it turns out fortune doesn't favor the brave—it favors wealthy insiders.

This isn't just about a few bad actors that didn't do things the right way.

These crypto catastrophes have exposed what many of us already knew: digital assets—cryptocurrencies, stablecoins, and investment tokens—are speculative products run by reckless companies that put Americans' hard-earned money at risk. Not surprising from an industry that was created to skirt the rules.

Whether it's Facebook Libra or the explosion of crypto, I've always been concerned about shiny new products that really just offer another way to profit off the backs of working Americans while threatening the real economy.

It's time now to consider how to protect consumers from unregulated digital assets, and ultimately, who we want our financial system to serve.

Last Congress, this Committee examined the risks of cryptocurrencies to our economy, explored the mechanics behind stablecoin companies, and looked at how regulators and Congress can protect consumers.

We learned how crypto can be used to commit crimes like drug running and human trafficking, which threaten our national security and help fund terrorists and rogue regimes. We looked at how fraud and speculation in the crypto market hurt investors and savers.

Recent crypto meltdowns have made clear that we need a comprehensive framework to regulate crypto products to protect consumers and our financial system.

Today, we'll examine how time-tested financial safeguards can help protect against the harms and risks of crypto products.

And we'll start by taking a closer look at these basic principles of regulation:

- Clear disclosures and transparency that are essential so retail customers and investors can understand how a token or crypto platform works.
- Prohibitions on conflicts of interest and self-dealing by insiders is fundamental. Our markets only work when they work for everyone.
- Protecting customer funds by separating them from company assets. Investor dollars cannot be a slush fund for the executives' benefit.
- Internal governance and risk management to make sure that if a platform takes customer funds it acts prudently.
- Strong consumer and investor rights and protections that are foundation of trust in any financial system and central to a functioning market.
- Anti-money laundering and fraud prevention to make sure malign actors and evil Nation States can't fund themselves and evade law enforcement.
- Oversight and supervision to hold companies accountable, because access to our financial markets is a privilege not a right that can be abused.

These are basic, commonsense principles that have developed over centuries of financial system regulation—the wildcat money of the 1800s, the repeated banking panics of the Gilded Age, the 1929 stock market crash, the savings and loan crisis, the dot-com bubble, the Great Financial Crisis.

These crises are the story of speculative bubbles—fueled by investor euphoria and the promise that “this time is different”—even though it never is. The lessons learned here are the product of hard-earned experience—experience that is born of real people losing real money and of dreams shattered.

Crypto isn't special. We can start with these commonsense principles as we consider a regulatory framework for digital assets that puts consumers first and keeps our financial system safe.

I trust this Committee can find common ground and work together to protect investors from crypto risks.

PREPARED STATEMENT OF SENATOR TIM SCOTT

Before I dig into my opening comments, I want to address the elephant in the room. If Chairman Gensler is going to take enforcement action, Congress needs to hear from him very soon. The Chairman had lots of time to do the rounds on the morning talk shows. If he has time for that, he should be here testifying with us this morning. I hope that we see him here very soon.

The free market economy was formed by financial innovation. It's the engine that continues to drive our economy today. But every engine needs fuel, and in order to advance as a country, we must continue to grow and innovate in a safe and sound manner.

Innovation can increase access to traditional financial services and may foster new, emergent technologies that promote financial independence, access to credit, and capital formation. We all know and understand how technology can improve our daily lives, from using our phones to open a bank account to opening a digital marketplace. If we foreclose financial innovation, we limit future generations from growth and opportunity.

That said, financial innovation must be done so in a safe and sound manner, which, unfortunately, has not been the case with a number of actors in the digital asset space. Unfortunately, instead of protecting customers' interests and using customer funds in the manner intended, Sam Bankman-Fried, FTX's owner, stole millions of customer funds and used them to finance risky bets and to pay for luxury penthouses in the Bahamas.

When I consider this massive failure, I wonder, where were our regulators when they supposedly already had these authorities?

In recent statements, the regulators, the SEC specifically, have noted that it is the responsibility of crypto firms to comply with existing regulations, but it is also the responsibility of regulators to enforce existing regulations and to conduct appropriate, effective supervision.

The American people deserve to know why no action was taken prior to FTX's collapse and how millions of dollars of Americans' hard-earned money just vanished into nothing. And it was not just FTX. If the SEC had provided even the slightest bit of guidance, I wonder if we could have protected more investors from the collapses of Terra and Luna in May, Celsius in June, Voyager in July, and BlockFi in November.

This is particularly alarming when we see reports that 44 percent of Americans who own and trade digital assets are new investors or people of color. Which means

when there is a \$2 trillion drop in market cap, our most vulnerable citizens bear the significant brunt.

We must hold companies that harm consumers accountable, but we must empower consumers through financial education so that they can more accurately understand the risk posed by different asset classes. Whether it starts in the classroom or in the boardroom, financial literacy provides an avenue for individuals to make better decisions and climb the economic ladder.

Nonetheless, regulators have put their misplaced focus on progressive social issues. So, we have to ask ourselves, where do we go from here?

To date, the SEC has failed to take any meaningful, preemptive action to ensure this type of catastrophic failure does not happen again. If they have the tools they need, were they just asleep at the wheel? If they don't, why aren't they here to tell us? We'd be happy to have Chairman Gensler testify sooner than later.

Moving forward, we must take a thoughtful bipartisan and balanced approach that protects consumers and promotes innovation and opportunity.

I look forward to hearing our witnesses' perspectives on how we can continue to drive innovation and opportunity while ensuring consumers are protected.

Thank you, Mr. Chairman.

PREPARED STATEMENT OF LEE REINERS
POLICY DIRECTOR, DUKE FINANCIAL ECONOMICS CENTER
FEBRUARY 14, 2023

Hearing on
Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets
 Before the U.S. Senate Committee on Banking, Housing, and Urban Affairs

Tuesday, February 14, 2023

Prepared Statement

Lee Reiners
 Policy Director
 Duke Financial Economics Center, Duke University

Chairman Brown, Ranking Member Scott, and Members of the Committee:

Thank you for inviting me to testify at today's hearing. My name is Lee Reiners, and I am the Policy Director at the Duke Financial Economics Center and a lecturing fellow at Duke University School of Law.¹ I teach courses in cryptocurrency law and policy, cybersecurity policy, climate change and financial markets, and financial regulation, and my research focuses on how new financial technologies and climate change fit within existing regulatory frameworks. Prior to entering academia, I spent five years examining systemically important financial institutions at the Federal Reserve Bank of New York.

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¹ The views expressed in my testimony are mine alone and do not represent the views of the Duke Financial Economics Center, the Duke University School of Law, or Duke University.

I. Executive Summary

Last March, President Biden signed an executive order on Ensuring Responsible Development of Digital Assets.² The order called on nearly every agency of the federal government to examine cryptocurrency from the perspective of its statutory mandate and issue a series of reports and recommendations. One year and over half a dozen reports later, the United States is still no closer to a comprehensive and coherent regulatory framework for crypto.

The collapse of FTX last fall, and the subsequent shockwaves it sent throughout the crypto sector, revealed that the status quo is simply untenable. The millions of Americans who invested in crypto only to see their hard-earned money evaporate do not care whether crypto is classified as a commodity or a security, and they do not care whether the industry is regulated by the Securities and Exchange Commission (SEC), Commodity Futures Trading Commission (CFTC), or some other agency. They only care about having the same basic safeguards they have come to know and expect from the traditional financial system. Unfortunately, we have let these people down.

While I agree with SEC Chairman Gary Gensler that most cryptocurrencies are securities subject to registration and disclosure requirements, some cryptocurrencies, like Bitcoin, are commodities. While the CFTC regulates commodity derivatives, they do not regulate commodity spot markets. The practical effect of that structure is that cryptocurrency exchanges in the U.S. are presently not regulated at the federal level. That is a gap that Congress must close as soon as possible.

In what follows, I detail several options for regulating the crypto sector in a way that protects investors and maintains financial stability. But first, in Section II, I make the case for why a comprehensive regulatory regime is needed by describing crypto's negative impacts on financial inclusion, national security, economic security, and our environment. In Section III, I note that despite the crypto industry's persistent efforts to integrate into mainstream finance, the fallout of FTX's failure was isolated within the crypto sector due in part to the actions of the SEC and federal banking agencies. Section IV provides an overview of several options for regulating cryptocurrency that do not involve Congress imposing traditional financial regulatory safeguards on the crypto sector. These options include (1) banning cryptocurrency, (2) regulating cryptocurrency as gambling, and (3) using existing regulatory authorities to regulate crypto without additional legislation. While each of these options has merit, I believe the best, and most feasible, path forward is for Congress to carve out cryptocurrency from the definition of a commodity in the Commodity Exchange Act and recognize cryptocurrencies as securities under a special definition to the securities laws.

Section V provides a detailed roadmap for how Congress can give the SEC exclusive authority to regulate all aspects of the crypto industry and provide greater certainty to market participants. The SEC simply has more expertise, more resources, and more appetite for enforcement in the crypto realm than the CFTC does. Most importantly, unlike the CFTC, the

² "Executive Order 14067 of March 9, 2022, Ensuring Responsible Development of Digital Assets," *Code of Federal Regulations*, title 3 (2022): 14143-14152, <https://www.govinfo.gov/content/pkg/FR-2022-03-14/pdf/2022-05471.pdf>

SEC has a statutory mandate to protect investors. As I note below, bringing cryptocurrency within the definition of a security in federal law does not necessarily mean that the requirements currently applicable to securities issuers and intermediaries will apply to crypto firms on a one-for-one basis. For example, current requirements for issuer disclosure may not be well-suited to elicit the most useful information for crypto purchasers. Therefore, Congress can grant the SEC authority to develop tailored requirements for crypto issuers and intermediaries should the SEC feel such requirements are warranted.

If Congress does not wish to give the SEC exclusive authority over crypto, then lawmakers should consider passing legislation that requires crypto intermediaries to implement basic customer safeguards, such as segregating customer assets from firm assets. Section V also provides additional information on how Congress can impose such discrete requirements on crypto intermediaries before concluding with an examination of why treating crypto exchanges as self-regulatory organizations is a mistake.

I conclude my testimony in Section VI by offering my perspective on the best path forward on stablecoin regulation, where I do see the potential for a bipartisan solution. I recommend Congress grants the SEC the authority to regulate stablecoins like money market mutual funds, with strict requirements that stablecoin reserves be held in cash and Treasury securities and that these reserves be subject to periodic audits and disclosure.

II. Cryptocurrency's Long and Tortuous History

Satoshi Nakamoto introduced the first cryptocurrency, Bitcoin, to the world in a nine-page white paper posted to an online cryptography mailing list on Halloween 2008, and the first Bitcoin transaction was posted in January 2009.³ Fourteen years, thousands of cryptocurrencies, and trillions of investor losses later, crypto scarcely resembles the “purely peer-to-peer version of electronic cash” first envisioned by Satoshi.

By technology standards, crypto is not new. For comparison, the iPhone was introduced in 2007. Anyone who held a smartphone in their hand for the first time immediately recognized its transformative potential; now, 85% of Americans own a smartphone.⁴ More recently, OpenAI made the artificial intelligence chatbot ChatGPT available to the public in November 2022; two months later, ChatGPT had 100 million monthly active users, “making it the fastest-growing consumer application in history,” according to one study.⁵

After fourteen years and innumerable claims that crypto represents the future of money, finance, or something else, we have yet to see crypto’s killer use case. In fact, only 16% of U.S. adults have invested in, traded, or used cryptocurrency.⁶ For those that have, the two most commonly cited reasons are (1) it is a different way to invest (78%), and (2) it is a good way to make money (75%). In other words, most people invest in cryptocurrency for no other reason than they think they can sell it to someone else at a higher price in the future.

However, fourteen years have provided ample evidence of the dire harm cryptocurrency inflicts throughout our society, which I will now detail.

a. Investor Losses

After peaking at \$69,000 in November 2021, Bitcoin has proceeded to decline by roughly 70%. Over the same time, the market cap of all cryptocurrencies went from \$3 trillion to \$1 trillion, a staggering loss of wealth in a short period of time. According to a study released last November by the Bank for International Settlements, around three-quarters of people who invested in Bitcoin between 2015 and 2022 lost money.⁷ Similarly, Pew reports that 46% of those who invested in cryptocurrency admit their investments have done worse than expected, while only 15% say they have done better than expected.⁸ Both surveys were conducted before

³ Satoshi Nakamoto, “Bitcoin: A Peer-to-Peer Electronic Cash System,” accessed January 30, 2023, <https://bitcoin.org/bitcoin.pdf>.

⁴ Pew Research Center, “Mobile Fact Sheet,” November 16, 2022, <https://www.pewresearch.org/internet/factsheet/mobile/>.

⁵ Krystal Hu, “ChatGPT Sets Record for Fastest-Growing User Base - Analyst Note,” *Reuters*, February 2, 2023, <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/>.

⁶ Michelle Faverio and Navid Massarat, “46% of Americans Who Have Invested in Cryptocurrency Say It’s Done Worse than Expected,” Pew Research Center, November 21, 2022, <https://www.pewresearch.org/fact-tank/2022/08/23/46-of-americans-who-have-invested-in-cryptocurrency-say-its-done-worse-than-expected/>.

⁷ Raphael Auer, Giulio Cornelli, Sebastian Doerr, Jon Frost and Leonardo Gambacorta, *Crypto Trading and Bitcoin Prices: Evidence from a New Database of Retail Adoption* (Basel, BIS: 2022), accessed January 30, 2023, <https://www.bis.org/publ/work1049.pdf>.

⁸ Faverio and Massarat, “46% of Americans.”

the collapse of FTX, so the number of crypto investors who have suffered losses is surely higher now.

The same Pew study cited above found that “Asian, Black and Hispanic adults are more likely than White adults to say they have ever invested in, traded or used a cryptocurrency.”⁹ A 2022 survey from Charles Schwab found that one-quarter of Black Americans own cryptocurrency, compared to 15% for White Americans.¹⁰ Particularly troubling was Schwab’s finding that “Black investors are more than twice as likely to say cryptocurrency was their first investment” (11% of Black investors compared to 4% of White investors.) In December 2022, JPMorgan Chase released a report that analyzed data from 600,000 checking account customers who had bought crypto and found “[m]ost individuals who transferred money to crypto accounts did so when crypto-asset prices were significantly higher than recent levels, and those with lower incomes likely made purchases at elevated prices relative to higher earners.”¹¹ Unfortunately, crypto losses have centered disproportionately on groups that have historically been excluded from the traditional financial system and the wealth-building opportunities it provides.

Such data flies in the face of the repeated claims by the crypto industry that crypto promotes financial inclusion by providing easy access to financial services and an opportunity to build wealth. The Treasury Department looked into those claims and concluded in a report released last September that “the potential financial inclusion benefits of crypto-assets largely have yet to materialize.”¹² Similarly, in a thoroughly researched article for the Brookings Institution, Tonantzin Carmona assessed the industry’s claims that crypto promotes financial inclusion and found that “crypto’s current capabilities do not match the needs of the groups it purports to serve” and that crypto “carries a host of risks and drawbacks that undermine its benefits.”¹³

Beyond the investing losses associated with cryptocurrency’s extreme volatility, millions of ordinary investors have fallen victim to countless frauds, scams, and hacks in the crypto sector. Blockchain analytics company Chainalysis recently reported that “2022 was the biggest year ever for crypto hacking, with \$3.8 billion stolen from cryptocurrency businesses.”¹⁴ Crypto hacks and scams have led to a surge in consumer complaints. According to a September 2022 report from the Department of Justice, the Consumer Financial Protection Bureau (CFPB) published 2,404 cryptocurrency-related consumer complaints in its Consumer Complaint Database in 2021, and more than 1,000 cryptocurrency-related complaints during 2022 year-to-

⁹ Ibid.

¹⁰ Schwab Moneywise, “Ariel-Schwab Black Investor Survey (2022),” accessed February 8, 2023, <https://www.schwabmoneywise.com/tools-resources/ariel-schwab-survey-2022>.

¹¹ Chris Wheat and George Eckerd, *The Dynamics and Demographics of U.S. Household Crypto-Asset Use* (New York: JPMorgan Chase Institute, 2022), <https://www.jpmorganchase.com/institute/research/financial-markets/dynamics-demographics-us-household-crypto-asset-cryptocurrency-use>.

¹² U.S. Department of the Treasury, *Crypto-Assets: Implications for Consumers, Investors, and Businesses*, (Washington, DC: GPO, 2022), https://home.treasury.gov/system/files/136/CryptoAsset_EOS.pdf.

¹³ Tonantzin Carmona, *Debunking the Narratives about Cryptocurrency and Financial Inclusion*, (Washington, D.C.: Brookings, 2022) <https://www.brookings.edu/research/debunking-the-narratives-about-cryptocurrency-and-financial-inclusion/>.

¹⁴ Chainalysis, “2022 Biggest Year Ever For Crypto Hacking with \$3.8 Billion Stolen, Primarily from DeFi Protocols and by North Korea-Linked Attackers,” *Chainalysis*, February 1, 2023, <https://blog.chainalysis.com/reports/2022-biggest-year-ever-for-crypto-hacking/>.

date.¹⁵ The report also noted that “[t]he CFPB has also received hundreds of servicemember complaints involving cryptocurrency assets or exchanges in the last 12 months, approximately one-third of which concerned frauds or scams.”¹⁶ In June 2022, the Federal Trade Commission issued a report finding that “since the start of 2021 more than 46,000 people have reported losing over \$1 billion in crypto to scams – that’s about one out of every four dollars reported lost, more than *any* other payment method.”¹⁷ The median individual loss was a staggering \$2,600.

In their September report, the Treasury Department bluntly summarized cryptocurrency’s risks to consumers:

*“Consumers and investors are exposed to improper conduct in the crypto-asset ecosystem for a variety of reasons, including a lack of transparency as well as the fact that crypto-assets have relatively novel and rapidly developing applications. This leads to frequent instances of operational failures, market manipulation, frauds, thefts, and scams.”*¹⁸

b. National Security Risks

Cryptocurrency is increasingly being used by organized crime syndicates and nation-states to undermine U.S. national security. We know that Iran, Russia, and North Korea are using cryptocurrency to bypass U.S. economic and financial sanctions.¹⁹ The United Nations and U.S. intelligence officials have noted that North Korea’s cyber operations are used to fund the country’s illicit ballistic missile and nuclear programs.²⁰ North Korea’s brazenness was revealed to the public last year when the venture capital-backed “Web 3” video game, Axie Infinity, was hacked by the Lazarus Group and \$620 million in the cryptocurrency Ether was stolen.²¹ Last month, the FBI announced that the Lazarus Group was also behind the \$100 million hack of

¹⁵ The United States Department 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>.

¹⁶ *Ibid.*

¹⁷ Emma Fletcher, “Reports Show Scammers Cashing in on Crypto Craze,” Federal Trade Commission, August 11, 2022, <https://www.ftc.gov/news-events/data-visualizations/data-spotlight/2022/06/reports-show-scammers-cashing-crypto-craze>.

¹⁸ U.S. Treasury, *Crypto-Assets*.

¹⁹ Emily Flitter and David Yaffe-Bellany, “Russia Could Use Cryptocurrency to Mitigate U.S. Sanctions,” *The New York Times*, February 24, 2022, <https://www.nytimes.com/2022/02/23/business/russia-sanctions-cryptocurrency.html>; Kyle Barr, “Iran Plans to Use Crypto to Pay for Imports to Help Get Around Sanctions,” *Gizmodo*, August 9, 2022, <https://gizmodo.com/iran-crypto-imports-sanctions-1849389297>; Mike Orcutt, “This Is How North Korea Uses Cutting-Edge Crypto Money Laundering to Steal Millions,” *MIT Technology Review*, April 2, 2020, <https://www.technologyreview.com/2020/03/05/916688/north-korean-hackers-cryptocurrency-money-laundering/>.

²⁰ Christian Davies and Scott Chipolina, “How North Korea Became a Mastermind of Crypto Cybercrime,” *Arx Technica*, November 14, 2022, <https://arstechnica.com/information-technology/2022/11/how-north-korea-became-a-mastermind-of-crypto-cyber-crime/>.

²¹ Aaron Schaffer, “North Korean Hackers Linked to \$620 Million Axie Infinity Crypto Heist,” *The Washington Post*, April 14, 2022, <https://www.washingtonpost.com/technology/2022/04/14/us-links-axie-crypto-heist-north-korea/>.

Harmony Protocol.²² Chainalysis estimates that North Korea-linked hackers stole roughly \$1.7 billion worth of cryptocurrency in 2022 (by way of comparison, North Korea's total exports totaled \$142 million in 2020).²³ Just last week, Reuters reported on a confidential United Nations report that found North Korea stole more cryptocurrency assets in 2022 than any other year.²⁴ Anne Neuberger, US deputy national security adviser for cyber security, said in July 2022 that North Korea "uses cyber to gain, we estimate, up to a third of their funds for their missile program."²⁵

Terrorist organizations have also been soliciting cryptocurrency donations for several years.²⁶ In December 2022, blockchain analytics firm TRM Labs reported that an ISIS affiliate in Afghanistan recently began "accepting cryptocurrency donations amid ramped-up propaganda and recruitment efforts." That is in keeping with a trend, noted by the Treasury Department last November, of ISIS increasingly using virtual assets service providers to finance their subordinates in central and south Asia.²⁷ Last month, TRM Labs also reported that KillNet, a pro-Russian cybercriminal group, uses crypto to raise funds for Russia's illegal invasion of Ukraine and targets critical infrastructure in countries opposed to the invasion.²⁸ The U.S. Cybersecurity and Infrastructure Security Agency (CISA) noted last April that KillNet is just one of many Russia-aligned cyber groups conducting malicious activities against the U.S. and our allies.²⁹ Finally, in January 2022, the Government Accountability Office (GAO) issued a report finding that "[v]irtual currency is increasingly used illicitly to facilitate human and drug trafficking."³⁰

c. Economic Security

Cryptocurrency has fueled a surge in ransomware that has victimized American businesses, healthcare systems, and state and local governments. In May 2022, the majority staff on the

²² Sander Lutz, "FBI Confirms North Korea Behind \$100 Million Harmony Hack," *Decrypt*, January 24, 2023, <https://decrypt.co/119861/fbi-north-korea-lazarus-horizon-harmony-bridge-hack>.

²³ Chainalysis, "Biggest Year Ever."

²⁴ Michelle Nichols, "Exclusive: Record-Breaking 2022 for North Korea Crypto Theft, UN Report Says," *Reuters*, February 7, 2023, <https://www.reuters.com/technology/record-breaking-2022-north-korea-crypto-theft-un-report-2023-02-06/>.

²⁵ Davies and Chipolina, "North Korea."

²⁶ For example, see The United States Department of Justice, "Global Disruption of Three Terror Finance Cyber-Enabled Campaigns," August 13, 2020, <https://www.justice.gov/opa/pr/global-disruption-three-terror-finance-cyber-enabled-campaigns>.

²⁷ See TRM, "New Evidence Confirms ISIS Affiliate in Afghanistan Accepting Cryptocurrency Donations," *TRM Insights*, accessed February 10, 2023, <https://www.trmlabs.com/post/new-evidence-confirms-isis-affiliate-in-afghanistan-accepting-cryptocurrency-donations> and U.S. Department of the Treasury, *Fact Sheet: Countering ISIS Financing*, November 18, 2022, <https://home.treasury.gov/system/files/136/Fact-Sheet-on-Countering-ISIS-Financing.pdf>.

²⁸ TRM, "Spotlight on KillNet: The Cybercriminal Group Raising Funds for Russia's War in Ukraine," *TRM Insights*, accessed February 10, 2023, <https://www.trmlabs.com/post/spotlight-on-killnet-the-cybercriminal-group-raising-funds-for-russias-war-in-ukraine>.

²⁹ Cybersecurity and Infrastructure Security Agency, "Russian State-Sponsored and Criminal Cyber Threats to Critical Infrastructure," accessed February 10, 2023, <https://www.cisa.gov/uscert/ncas/alerts/aa22-110a>.

³⁰ U.S. Government Accountability Office, "Virtual Currencies: Additional Information Could Improve Federal Agency Efforts to Counter Human and Drug Trafficking [Reissued with Revisions Feb. 7, 2022]," January 10, 2022, <https://www.gao.gov/products/gao-22-105462>.

Homeland Security & Governmental Affairs Committee released a startling report on ransomware.³¹ The report notes that, in 2021, “ransomware attacks impacted at least 2,323 local governments, schools, and healthcare providers in the United States” and that the FBI “received 3,729 ransomware complaints with adjusted losses of more than \$49.2 million.” The report acknowledges that these numbers underestimate the true scale of the problem because many ransomware victims do not report to authorities. As evidence, they cite data from Chainalysis that found “malign actors received at least \$692 million in cryptocurrency extorted as part of ransomware attacks” in 2020. The report notes that “cryptocurrency, typically Bitcoin, has become a near-universal form of ransom payment in ransomware attacks, in part, because cryptocurrency enables criminals to extort huge sums of money from victims across diverse sectors with incredible speed.”

The Treasury Department’s Financial Crimes Enforcement Network (FinCEN) releases periodic “Financial Trend Analysis” of ransomware-related Bank Secrecy Act (BSA) filings. The most recent analysis, from November 2022, covers ransomware trends in BSA filings from July–December 2021 and notes that “FinCEN received 1,489 ransomware-related filings worth nearly \$1.2 billion in 2021.”³² The total number of ransomware filings, and the dollar value of these filings, in 2021 exceeded the previous ten years combined. In their previous Financial Trend Analysis, covering data from the first six months of 2021, FinCEN identified Bitcoin as the most common ransomware-related payment method, with the use of Monero — a cryptocurrency that provides even more privacy than Bitcoin — on track to increase in the years to come.³³

d. Environmental Damage

The proof-of-work consensus mechanism used to maintain the Bitcoin blockchain is extremely energy intensive — by design — and contributes to carbon emissions, electronic waste, noise pollution, and supply chain disruptions.³⁴ A report released last September by the White House Office of Science and Technology Policy (OSTP) estimated that, as of August 2022, electricity usage for crypto-assets ranged between 120 and 240 billion kilowatt-hours per year, which is comparable to all the electricity consumed by Argentina or Australia and the annual electricity usage of all conventional data centers in the world.³⁵ The OSTP estimated that the U.S. is home to

³¹ United States Senate Committee on Homeland Security & Governmental Affairs, “Use of Cryptocurrency in Ransomware Attacks, Available Data, and National Security Concerns,” accessed February 8, 2023, <https://www.hsgac.senate.gov/wp-content/uploads/imo/media/doc/HSGAC%20Majority%20Cryptocurrency%20Ransomware%20Report.pdf>.

³² U.S. Treasury Financial Crimes Enforcement Network, “Financial Trend Analysis: Ransomware Trends in Bank Secrecy Act Data Between July 2021 and December 2021,” accessed February 8, 2023, https://www.fincen.gov/sites/default/files/2022-11/Financial%20Trend%20Analysis_Ransomware%20FTA%202_508%20FINAL.pdf.

³³ U.S. Treasury Financial Crimes Enforcement Network, “Financial Trend Analysis: Ransomware Trends in Bank Secrecy Act Data Between January 2021 and June 2021,” accessed February 8, 2023, https://www.fincen.gov/sites/default/files/2021-10/Financial%20Trend%20Analysis_Ransomware%20508%20FINAL.pdf.

³⁴ Proof-of-work’s goal is to make it prohibitively expensive to overwhelm the network with hashing power, thereby preventing bad actors from taking over the blockchain. The block reward provides an incentive for honest miners to incur the computational expense.

³⁵ The White House, “Climate and Energy Implications of Crypto-Assets in the United States,” accessed February 6, 2023, <https://www.whitehouse.gov/wp-content/uploads/2022/09/09-2022-Crypto-Assets-and-Climate-Report.pdf>.

roughly one-third of global crypto use and that this consumes about 0.9% to 1.7% of total U.S. electricity usage, which contributed to 25 to 50 metric tons of carbon dioxide emitted per year or 0.4% to 0.8% of U.S. greenhouse gas emissions.

Because Bitcoin mining — the process that verifies and adds new transactions to the blockchain — relies on highly specialized computers that quickly become obsolete, mining produces 35,000 tons of electronic waste per year, “equivalent to the annual electronic waste generation of the Netherlands.”³⁶ Cryptocurrency’s energy consumption has certainly come down in the wake of Ethereum’s switch to the far more energy-efficient proof-of-stake consensus mechanism last September, but it remains needlessly high.³⁷ The University of Cambridge’s Bitcoin Electricity Consumption Index indicates that Bitcoin consumes more electricity per year (106.4 TWh) than the Philippines and slightly less than the Netherlands.³⁸ Due to its libertarian roots and lack of any coordinating body, there is little chance that the Bitcoin blockchain would ever migrate to a less energy-intensive consensus mechanism absent a government mandate.

Crypto mining has also exacerbated the global shortage of semiconductor chips.³⁹ Crypto miners use application-specific integrated circuit (ASIC) hardware to improve speed and efficiency. Given the short lifespan of ASIC computers at constant use, miners can run through valuable chips quickly. A positive association has been found between the MSCI worldwide semiconductor index return and crash periods of the cryptocurrency market, meaning the two industries are closely tied.⁴⁰

Local businesses and residents can also be negatively impacted when a crypto mining facility opens nearby. For example, in Plattsburgh, NY, crypto mining resulted in residential electric bills that were reportedly up to \$300 higher than usual during the winter of 2018, causing the city to introduce the nation’s first 18-month moratorium on new mining operations.⁴¹

III. The Crypto Crash Could Have Been Much Worse

a. Financial Stability Implications

While millions of Americans have suffered crypto-related financial losses over the past year, we should be thankful that problems in the crypto sector have not spilled into the traditional financial system and threatened financial stability. That outcome was not preordained, and it

³⁶ *Ibid.*, 26.

³⁷ The Ethereum Foundation has claimed that the transition reduced Ethereum’s energy consumption by 99.95%. See Q. Ai, “Proof-Of-Stake: Will The Ethereum Merge Really Lead To A Rally?” *Forbes*, September 27, 2022, <https://www.forbes.com/sites/qai/2022/09/27/proof-of-stake-will-the-ethereum-merge-really-lead-to-a-rally/?sh=566f65d0223d>.

³⁸ University of Cambridge, “Cambridge Bitcoin Electricity Consumption Index (CBECI),” accessed February 1, 2023, <https://ccaf.io/cbeci/index/comparisons>.

³⁹ Diana Li, “Crypto Mining Is Exacerbating Chip Shortage and Energy Consumption, Skeptics Say,” *Six Feet Forward*, January 4, 2022, <https://wp.nyu.edu/coveringcovid/2022/01/04/crypto-mining-is-exacerbating-chip-shortage-and-energy-consumption-skeptics-say/>.

⁴⁰ Tripti Rathi, “Effect of Cryptocurrency Mining on Semiconductor Industry,” *SSRN*, January 11, 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4005868.

⁴¹ Congressional Research Service, “Bitcoin, Blockchain, and the Government Sector,” August 9, 2019, <https://crsreports.congress.gov/product/pdf/R/R45863>.

represents a little-celebrated policy success. Last October, the Financial Stability Oversight Council warned:

“Crypto-asset activities could pose risks to the stability of the U.S. financial system if their interconnections with the traditional financial system or their overall scale were to grow without adherence to or being paired with appropriate regulation, including enforcement of the existing regulatory structure.”⁴²

At its peak in November 2021, the crypto market (\$3 trillion) was significantly larger than the value of subprime mortgages in the U.S. in March 2007 (\$1.3 trillion), and we have never had “appropriate regulation.”⁴³ Therefore, the lack of systemic implications is due primarily to the limited interconnections between the crypto ecosystem and the traditional financial system. But what is true today may not be true tomorrow, and over the past six years, the crypto industry has waged an aggressive campaign to integrate crypto into mainstream finance in such a way that the two would be indistinguishable. These efforts, some successful, others not, include:

- The launch of cash-settled Bitcoin futures contracts in December 2017.⁴⁴ There are now multiple U.S.-listed cryptocurrency derivatives contracts that anyone can access.
- Repeated unsuccessful attempts to list a spot Bitcoin ETF. In June 2022, Grayscale Investments sued the SEC after its latest attempt to convert the Grayscale Bitcoin Trust (GBTC) into a spot Bitcoin ETF was denied.⁴⁵
- The listing of an ETF that tracks the price of Bitcoin futures in 2021.⁴⁶
- The unsuccessful attempts of state-chartered “crypto banks” to obtain a Federal Reserve Master Account and access to the Federal Reserve’s payment system. In June 2022, Wyoming-chartered crypto bank Custodia sued the Federal Reserve Board of Governors and Federal Reserve Bank of Kansas City for delaying a decision on its master account application.⁴⁷

⁴² Financial Stability Oversight Council, *Report on Digital Asset Financial Stability Risks and Regulation 2022* (Washington, D.C.: Financial Stability Oversight Council, 2022) <https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf>

⁴³ Associated Press, “Will Subprime Mess Ripple through Economy?” *NBC News*, March 13, 2007, <https://www.nbcnews.com/id/wnba17584725>. The Financial Crisis Inquiry Commission also provided information about subprime mortgage originations in the years leading up to 2008, showing that “[i]n 2006, \$600 billion of subprime loans were originated,” with slightly more being originated in 2005 and somewhat fewer in 2004. Financial Crisis Enquiry Commission, “The Financial Crisis Enquiry Report,” (Washington, D.C.: GPO, 2011), <https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>

⁴⁴ Reuters Staff, “Cboe, CME to Launch Bitcoin Futures Contracts,” *Reuters*, December 7, 2017, <https://www.reuters.com/article/us-bitcoin-futures-contracts/cboe-cme-to-launch-bitcoin-futures-contracts-idUSKBN1E10KC>.

⁴⁵ Ryan Browne, “Grayscale Sues SEC after Rejection of Bid to Turn the Largest Bitcoin Fund into an ETF,” *CNBC*, June 30, 2022, <https://www.cnbc.com/2022/06/30/grayscale-sues-sec-after-rejected-bid-to-turn-bitcoin-fund-into-etf.html>.

⁴⁶ Tanaya Macheel, “First Bitcoin Futures ETF Rises More than 4% in Trading Debut on the NYSE,” *CNBC*, October 19, 2021, <https://www.cnbc.com/2021/10/19/first-bitcoin-futures-etf-rises-2percent-in-trading-debut.html>.

⁴⁷ James Rubin, “Crypto Bank Custodia Sues Federal Reserve,” *CoinDesk*, June 8, 2022, <https://www.coindesk.com/policy/2022/06/07/crypto-bank-custodia-sues-federal-reserve/>. Note that last month the Federal Reserve Board rejected Custodia’s membership application, and the Kansas City Fed rejected Custodia’s master account application. See Anna Hrushka, “Custodia Bank Denied Fed membership, Master Account,”

- BNY Mellon, the world's largest asset custodian, going live last October with its Digital Asset Custody platform in the U.S., allowing select institutional clients to hold and transfer Bitcoin and Ether.⁴⁸
- Fidelity Investments, the country's largest provider of 401(k) plans by total assets, starting to allow companies (from fall 2022) to offer employees the option to invest up to 20% of their 401(k)s in Bitcoin.⁴⁹
- A 2022 application by FTX to the CFTC that would have permitted FTX to self-clear non-intermediated crypto derivatives traded on margin by retail investors.⁵⁰

The failure of crypto to fully integrate into mainstream finance is due to a combination of luck and prudent action by a handful of regulatory agencies. Below, I single out the actions of the SEC and the federal banking agencies. However, the Department of Labor also deserves recognition for releasing guidance last year expressing "serious concerns about the prudence of a fiduciary's decision to expose a 401(k) plan's participants to direct investments in cryptocurrencies, or other products whose value is tied to cryptocurrencies."⁵¹ The Department's actions likely prevented more employers from including Bitcoin as an investment option in their employees' 401(k) plans.

b. The SEC's Consistent Approach to Crypto

Despite the crypto industry's self-serving cries for "regulatory clarity," the SEC's stance on cryptocurrency has been clear and consistent dating from the chairmanship of Jay Clayton. Both Clayton and his successor, Gary Gensler, have said most cryptocurrencies are securities that need to be registered with the Commission.⁵² As John Reed Stark, the former head of the SEC's Office of Internet Enforcement, noted, critics of the SEC's stance toward cryptocurrency overlook an important aspect of U.S. securities law — "securities regulation is not meant to be precise but is instead intentionally drafted to be broad and all-encompassing."⁵³ This is why the definitions of "security" in Section 2(a)(1) of the Securities Act of 1933 (Securities Act), 15 U.S.C. 77b(a)(1) and Section 3(a)(10) of the Securities Exchange Act of 1934 (Exchange Act), 15 U.S.C. 78c(a)(10) include not only conventional securities, such as "stock[s]" and "bond[s]," but also the more general term "investment contract." In the seminal case *SEC v. Howey*, the Supreme Court found that the term "investment contract:"

Banking Dive, January 30, 2023, <https://www.bankingdive.com/news/crypto-custodia-denied-fed-membership-master-account-caitlin-long-kansas-city/641529/>.

⁴⁸ BNY Mellon, "BNY Mellon Launches New Digital Asset Custody Platform," October 11, 2022, <https://www.bnymellon.com/us/en/about-us/newsroom/press-release/bny-mellon-launches-new-digital-asset-custody-platform-130305.html>.

⁴⁹ Greg Iacurci, "Fidelity, ForUsAll Now Offering 401(k) Investors Access to Cryptocurrency," *CNBC*, November 4, 2022, <https://www.cnbc.com/2022/11/04/fidelity-forusall-offering-401k-investors-access-to-cryptocurrency.html>.

⁵⁰ Commodity Futures Trading Commission, "CFTC Seeks Public Comment on FTX Request for Amended DCO Registration Order," March 10, 2022, <https://www.cftc.gov/PressRoom/PressReleases/8499-22>.

⁵¹ U.S. Department of Labor, "Compliance Assistance Release No. 2022-11: 401(k) Plan Investment in 'Cryptocurrencies,'" <https://www.dol.gov/agencies/ebsa/employers-and-advisers/plan-administration-and-compliance/compliance-assistance-releases/2022-01>.

⁵² Gary Gensler, "Kennedy and Crypto," (speech, Washington, D.C., September 8, 2022), <https://www.sec.gov/news/speech/gensler-sec-speaks-090822>.

⁵³ John Stark, "Big Crypto's Bogus Demands for 'Regulatory Clarity,'" *The FinReg Blog*, November 28, 2022, <https://sites.duke.edu/thefinregblog/2022/11/28/big-cryptos-bogus-demands-for-regulatory-clarity-2/>.

“[E]mbodies a flexible, rather than a static, principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.”⁵⁴

Along these lines, in *Reves v. Ernst & Young*, in which the Supreme Court was asked to decide whether demand notes offered by a business are securities, the Court stated that:

“The fundamental purpose undergirding the Securities Acts is ‘to eliminate serious abuses in a largely unregulated securities market.’ United Housing Foundation, Inc. v. Forman, 421 U.S. 837, 421 U.S. 849 (1975). In defining the scope of the market that it wished to regulate, Congress painted with a broad brush. It recognized the virtually limitless scope of human ingenuity, especially in the creation of ‘countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.’ SEC v. W.J. Howey Co., 328 U.S. 293, 328 U.S. 299 (1946), and determined that the best way to achieve its goal of protecting investors was ‘to define the term “security” in sufficiently broad and general terms so as to include within that definition the many types of instruments that in our commercial world fall within the ordinary concept of a security.’ . . . Congress therefore did not attempt precisely to cabin the scope of the Securities Acts . . . Rather, it enacted a definition of ‘security’ sufficiently broad to encompass virtually any instrument that might be sold as an investment” (emphasis added).⁵⁵

Federal courts have repeatedly confirmed the SEC’s jurisdiction in numerous crypto-related enforcement actions. In fact, as of January 18, 2023, the SEC has brought 127 crypto-related enforcement actions without losing a single case.⁵⁶ In most of these cases, the SEC has applied the Howey Test to argue that the cryptocurrency in question is an investment contract, and therefore a security subject to SEC registration and disclosure requirements. The U.S. Supreme Court’s *Howey* case and subsequent case law have found that an “investment contract” exists when there is the investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others.

The SEC has used “multiple distribution channels to share its message and concerns regarding crypto, digital trading platforms, initial coin offerings, and other digital asset products and services over the past decade.”⁵⁷ The SEC first made investors aware of the dangers of investing in cryptocurrency in 2013 when the Office of Investor Education and Advocacy issued an Investor Alert on “Ponzi Schemes Using Virtual Currencies.”⁵⁸ A year later, the same office

⁵⁴ *SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946).

⁵⁵ *Reves et al. v. Ernst & Young*, 494 U.S. 56 (1990).

⁵⁶ Cornerstone Research, “SEC Tightens Cryptocurrency Enforcement,” January 18, 2023, <https://www.cornerstone.com/insights/press-releases/sec-tightens-cryptocurrency-enforcement/>; John Reed Stark, “Why ‘SEC Regulation by Enforcement’ is a Bogus Big Crypto Catchphrase,” LinkedIn, January 23, 2023, <https://www.linkedin.com/pulse/why-sec-regulation-enforcement-bogus-big-crypto-john-reed-stark/?published-t>.

⁵⁷ Stark, “Big Crypto’s Bogus Demands.”

⁵⁸ U.S. Securities and Exchange Commission, “Ponzi Schemes Using Virtual Currencies,” accessed January 9, 2023, https://www.sec.gov/investor/alerts/ia_virtualcurrencies.pdf.

issued an Investor Alert on “Bitcoin and Other Virtual Currency-Related Investments.”⁵⁹ In 2017, the Commission released a Section 21(a) Report of Investigation that looked at the facts and circumstances of The DAO, which offered and sold approximately 1.15 billion DAO tokens in exchange for a total of approximately 12 million ether (“ETH”) over a one-month period in 2016.⁶⁰ The SEC applied the Howey Test to the DAO tokens and concluded they were securities under the Securities Act of 1933 (“Securities Act”) and the Securities Exchange Act of 1934 (“Exchange Act”). While The DAO and DAO tokens were no longer operational at the time due to a high-profile hack that had resulted in the theft of most of the tokens, the Commission chose to release the report so as “to advise those who would use a Decentralized Autonomous Organization (“DAO Entity”), or other distributed ledger or blockchain-enabled means for capital raising, to take appropriate steps to ensure compliance with the U.S. federal securities laws.”⁶¹ In 2019, the SEC released a “Framework for ‘Investment Contract’ Analysis of Digital Assets,” which provided additional details on when a digital asset has the characteristics of an investment contract and “whether offers and sales of a digital asset are securities transactions.”⁶²

The SEC has also publicized its position on cryptocurrency in countless enforcement actions,⁶³ multiple speeches,⁶⁴ congressional testimony,⁶⁵ and several official SEC statements⁶⁶ and proclamations.⁶⁷ Chairman Gensler, has spoken frequently about the perils and illegality of crypto lending platforms and decentralized finance,⁶⁸ warning that their failure to register with the SEC may violate U.S. securities laws.⁶⁹ In one interview, Gensler said:

“The law is clear, it’s not about waving a wand. Congress spoke about this in 1934 . . . When a [digital] platform has securities on it, it is an exchange, and it’s a question of

⁵⁹ U.S. Securities and Exchange Commission, “Investor Alert: Bitcoin and Other Virtual Currency-Related Investments,” May 17, 2013, <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-39>.

⁶⁰ U.S. Securities and Exchange Commission, “Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO,” July 25, 2017, <https://www.sec.gov/litigation/investreport/34-81207.pdf>.

⁶¹ *Ibid.*

⁶² U.S. Securities and Exchange Commission, “Framework for ‘Investment Contract’ Analysis of Digital Assets,” April 3, 2019, <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>.

⁶³ U.S. Securities and Exchange Commission, “Crypto Assets and Cyber Enforcement Actions,” November 4, 2022, <https://www.sec.gov/spotlight/cybersecurity-enforcement-actions>.

⁶⁴ Gary Gensler, “Remarks Before the Aspen Security Forum,” (speech, Washington D.C., August 3, 2021), <https://www.sec.gov/news/speech/gensler-aspen-security-forum-2021-08-03>.

⁶⁵ Gary Gensler, “Testimony Before the Subcommittee on Financial Services and General Government, U.S. House Appropriations Committee,” (speech, Washington, D.C., May 26, 2021), <https://www.sec.gov/news/testimony/gensler-2021-05-26>.

⁶⁶ Jay Clayton, “Statement on Cryptocurrencies and Initial Coin Offerings,” U.S. Securities and Exchange Commission, December 11, 2017, <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>.

⁶⁷ U.S. Securities and Exchange Commission, “Statement on Potentially Unlawful Online Platforms for Trading Digital Assets,” March 7, 2018, <https://www.sec.gov/news/public-statement/enforcement-tm-statement-potentially-unlawful-online-platforms-trading>.

⁶⁸ Michael McSweeney, “Gensler Sets SEC Sights on DeFi, Crypto Lending and More in Expansive Speech on Regulation,” *The Block*, February 10, 2023, <https://www.theblock.co/post/113416/gensler-speech-crypto-defi-lending-sec>.

⁶⁹ Ben Werschul, “Crypto Platforms that Don’t Register with the SEC do Business ‘Outside the Law’: Gensler,” *Yahoo News*, March 4, 2022, <https://finance.yahoo.com/news/crypto-platforms-dont-register-with-sec-outside-the-law-gensler-164215740.html>.

*whether they're registered or they're operating outside of the law, and I'll leave it at that."*⁷⁰

On September 8, 2022, Chairman Gensler gave a speech reflecting on the flexibility of the securities laws and the SEC's consistency in applying those laws to cryptocurrency.⁷¹ Gensler noted that of the 10,000 different cryptocurrencies in the market, "the vast majority are securities."⁷² Gensler went on to note that the SEC has spoken with a "pretty clear voice" when it comes to cryptocurrency "through the DAO Report, the Muncie Order, and dozens of enforcement actions, all voted on by the Commission" and that "[n]ot liking the message isn't the same thing as not receiving it."⁷³

Last month, the nonprofit Better Markets released a report detailing the SEC's strong record on crypto regulation and enforcement.⁷⁴ The report identifies the SEC's three-pronged strategy to bring the crypto industry into compliance with federal securities laws: (1) publicly urging the industry to come in and speak with the agency in order to come into compliance, (2) selectively bringing enforcement actions, and (3) using its authority to "deny crypto firms' requests to unlawfully engage in certain types of activities."⁷⁵

Under the latter prong, the SEC has repeatedly rejected attempts by exchanges seeking to list shares of a trust or exchange-traded funds (ETFs) that track the price of Bitcoin. The SEC's main concern has always been manipulation in the underlying Bitcoin spot market. When they first rejected an application to list and trade shares of a Bitcoin trust in 2017, they noted that the proposal was inconsistent "with Section 6(b)(5) of the Exchange Act, which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices and to protect investors and the public interest."⁷⁶ Recent events reveal that crypto markets continue to be rife with fraud and manipulation, and the SEC's refusal to permit a Bitcoin ETF saved would-be investors a lot of money.⁷⁷

While the SEC has largely been an effective cop on the beat, their track record on crypto is not spotless. Unfortunately, they failed to stop Celsius and Gemini from offering their customers

⁷⁰ McSweeney, "Gensler Sets SEC Sights."

⁷¹ Gensler, "Kennedy and Crypto."

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Better Markets, "The SEC's Excellent Record on Crypto: Regulation & Enforcement," *Better Markets*, January 25, 2023, https://bettermarkets.org/wp-content/uploads/2023/01/BetterMarkets_SEC_Record_On_Crypto_01-25-2023.pdf.

⁷⁵ Ibid., 3.

⁷⁶ U.S. Securities and Exchange Commission, "Self-Regulatory Organizations; Bats BZX Exchange, Inc.; Order Disapproving a Proposed Rule Change, as Modified by Amendments No. 1 and 2, to BZX Rule 14.11(e)(4), Commodity-Based Trust Shares, to List and Trade Shares Issued by the Winklevoss Bitcoin Trust," March 10, 2017, <https://www.sec.gov/rules/sro/batsbzx/2017/34-80206.pdf>.

⁷⁷ I defended the SEC's approach to crypto exchange-traded products in two blog posts from 2018 and 2019. See Lee Reiners, "SEC Stands Firm Against New Bitcoin ETF Proposals," *The FinReg Blog*, January 12, 2018, <https://sites.duke.edu/finregblog/2018/01/12/sec-stands-firm-against-new-bitcoin-etf-proposals/>; Lee Reiners, "The SEC Should Continue to Say No to Bitcoin Exchange-Traded Products," *The FinReg Blog*, June 18, 2019, <https://sites.duke.edu/finregblog/2019/06/18/the-sec-should-continue-to-say-no-to-bitcoin-exchange-traded-products/>.

a cryptocurrency lending product despite these products being available for several years and the Commission filing successful enforcement actions in similar cases, like BlockFi, and preventing Coinbase from offering its cryptocurrency lending product, Lend. Celsius filed for bankruptcy last July, leaving roughly 600,000 account holders unable to access their assets, collectively valued at \$4.2 billion at the time of bankruptcy.⁷⁸ After the collapse of FTX last November, the cryptocurrency exchange Gemini halted customer withdrawals from its Earn program after its lending partner, Genesis Global, decided to pause withdrawals.⁷⁹ Last month, the SEC charged Genesis and Gemini with offering unregistered securities in connection with the Earn program, but this action came too late to help Gemini customers who have over \$900 million stuck in that program.⁸⁰

The SEC has also failed to bring civil charges against a cryptocurrency exchange for being an unregistered securities exchange or broker-dealer despite repeated claims by Chairman Gensler that most crypto platforms are offering unregistered securities and the Commission bringing enforcement actions in other cases that imply a crypto exchange was operating an unregistered securities exchange.⁸¹ Last July, the SEC filed “insider trading charges against a former Coinbase product manager, his brother, and his friend for perpetrating a scheme to trade ahead of multiple announcements regarding certain crypto-assets that would be made available for trading on the Coinbase platform.”⁸² In their complaint, the Commission provides a detailed analysis as to why nine of the cryptocurrencies defendants traded in are securities. These charges imply that Coinbase was offering unregistered securities on its platform, but the SEC has yet to file an enforcement action against Coinbase.

Regulating complex financial markets is difficult, and it is unrealistic to expect the SEC or any other agency to catch every violation before investors are harmed. With cryptocurrency, the SEC’s job is made that much harder by the fact that an unlimited supply of cryptocurrencies can

⁷⁸ Last month, the Celsius bankruptcy judge ruled that customers’ crypto deposits at Celsius are owned by Celsius, meaning these customers are now unsecured creditors in the bankruptcy estate. See Dietrich Knauth, “U.S. Judge Says Celsius Network Owns Most Customer Crypto Deposits,” *Reuters*, January 6, 2023, <https://www.reuters.com/business/finance/us-judge-says-celsius-network-owns-most-customer-crypto-deposits-2023-01-05/>.

⁷⁹ Q.Ai, “Gemini Crypto Pauses Withdrawals, Fallout Continues From FTX Collapse,” *Forbes*, November 30, 2022, <https://www.forbes.com/sites/qai/2022/11/30/gemini-crypto-pauses-withdrawals-fallout-continues-from-ftx-collapse/?sh=6d8de0264a84>.

⁸⁰ Shortly after the SEC filed charges, Genesis filed for Chapter 11 bankruptcy protection. See Rohan Goswami, “Crypto Firms Genesis and Gemini Charged by SEC with Selling Unregistered Securities,” *CNBC*, January 12, 2023, <https://www.cnn.com/2023/01/12/sec-charges-genesis-and-gemini-with-selling-unregistered-securities.html>; Rohan Goswami, “Crypto Lender Genesis Files for Bankruptcy in Latest Blow to Barry Silbert’s DCG Empire,” *CNBC*, January 20, 2023, <https://www.cnn.com/2023/01/20/crypto-lender-genesis-trading-files-for-bankruptcy-barry-silbert-digital-currency-group.html>.

⁸¹ See Gensler, “Aspen Security Forum,” where he noted, “A typical trading platform has more than 50 tokens on it. In fact, many have well in excess of 100 tokens. While each token’s legal status depends on its own facts and circumstances, the probability is quite remote that, with 50 or 100 tokens, any given platform has zero securities.” See also Gensler, “Kennedy and Crypto”, where he said, “Given that many crypto tokens are securities, it follows that many crypto intermediaries are transacting in securities and have to register with the SEC in some capacity,” “Furthermore, these platforms likely are trading securities,” and “I’ve asked staff to work on a number of projects related to the platforms. First is getting the platforms themselves registered and regulated much like exchanges.”

⁸² U.S. Securities and Exchange Commission, “SEC Charges Former Coinbase Manager, Two Others in Crypto Asset Insider Trading Action,” July 21, 2022, <https://www.sec.gov/news/press-release/2022-127>.

be minted out of thin air, the industry's deliberate choice not to comply with securities laws, and the industry's aggressive lobbying for light-touch regulation on Capitol Hill and state capitols throughout the country.⁸³

c. Federal Banking Agencies

The federal banking agencies (Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, and Office of the Comptroller of the Currency) also deserve commendation for limiting the systemic implications of the crypto market's collapse. Each agency had sound guidance in place at the time of FTX's failure expressing concerns over banks' abilities to engage in crypto-asset activities in a safe and sound manner and requiring banks to notify their appropriate regulator before engaging in such activity. This guidance likely limited banks' willingness to engage in crypto-asset activities and restricted a potentially large contagion channel through which volatility in the crypto markets could have spilled into the traditional financial system.

Budding bank-crypto connections and the crypto-asset sector's "significant volatility and vulnerabilities over the past year" prompted the federal banking agencies to issue a "Joint Statement on Crypto-Asset Risks to Banking Organizations" on January 3, 2023 (Joint Statement).⁸⁴ The Joint Statement lists eight "key risks associated with crypto-assets and crypto-asset sector participants that banking organizations should be aware of" and reinforces previously issued guidance by each agency that requires supervised firms to inform their respective regulators of any crypto-related activities they wish to engage in or are currently engaged in. However, the Joint Statement uses more forceful language and "calls into question the safety and soundness practices of those engaging in crypto-assets, including banks with concentrated exposure to the crypto-assets sector."⁸⁵ Furthermore, the Joint Statement includes language that suggests banks are not permitted to hold crypto-assets on their balance sheet (custody excluded):

*"Based on the agencies' current understanding and experience to date, the agencies believe that issuing or holding as principal crypto-assets that are issued, stored, or transferred on an open, public, and/or decentralized network, or similar system is **highly likely to be inconsistent with safe and sound banking practices**" (emphasis added).⁸⁶*

On January 23, 2023, the Board of Governors issued a Policy Statement (208.112) that provides additional clarity on the types of crypto-asset activity state member banks can engage

⁸³ For an example, see Alexander Sammon, "The Eight Congressmen Subverting the SEC's Crypto Investigation," *The American Prospect*, March 25, 2022, <https://prospect.org/power/eight-congressmen-subverting-secs-crypto-investigation/>.

⁸⁴ Board of Governors of the Federal Reserve System, "Agencies Issue Joint Statement on Crypto-Asset Risks to Banking Organizations," January 3, 2023, <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20230103a1.pdf>.

⁸⁵ Deloitte, *Banking Regulators Reinforce Wall for Bank Involvement in Crypto-Assets*, (New York: Deloitte, 2023) accessed January 16, 2023, https://www2.deloitte.com/content/dam/Deloitte/us/Documents/dcrs/Deloitte_Banking%20brick%20wall%20for%20crypto_January%202023.pdf.

⁸⁶ Board of Governors, "Joint Statement."

in.⁸⁷ The statement notes “the Board will presumptively exercise its authority to limit state member banks to engaging as principal in only those activities that are permissible for national banks,” and provides Supplementary Information that clarifies that state member banks are not permitted to hold crypto-assets as principal.

Despite clear guidance and repeated warnings around banks’ crypto-asset activities, FTX’s failure revealed that several banks were more exposed to crypto-asset activities than previously realized. Two notable examples are Silvergate Capital Corporation and Moonstone Bank. Silvergate positioned itself as the leading bank for cryptocurrency exchanges (including FTX) and investors. At the end of September 2022, deposits from crypto clients made up 90% of the bank’s overall deposit base, leaving the bank highly exposed to a volatile sector.⁸⁸ This risk became manifest post-FTX’s collapse when the bank experienced \$8.1 billion in deposit outflows during the fourth quarter of 2022, more than 60% of its total deposits.⁸⁹ To meet deposit outflows, Silvergate was forced to sell assets, resulting in a loss of \$718 million, which exceeded “the bank’s total profit since at least 2013.”⁹⁰ Silvergate was also forced to borrow \$4.3 billion from the Federal Home Loan Bank of San Francisco to stay afloat.⁹¹

Another unpleasant surprise came in a FTX bankruptcy filing when it was revealed that Alameda Research, a crypto trading firm founded and owned by Sam Bankman-Fried, made an \$11.5 million investment in the parent company (FBH Corp.) of Washington state-based Farmington State Bank in March 2022, more than double the bank’s net worth at the time.⁹² Farmington then changed its name to Moonstone Bank, and shortly thereafter, Moonstone’s deposit base jumped from \$10 million — where it had been for decades — to \$84 million, of which \$71 million came from just four accounts.⁹³ Alameda’s investment came on the heels of Farmington’s pivot to servicing crypto firms after the bank was purchased by FBH in 2020 and received a Federal Reserve Master Account in 2021.⁹⁴ According to Camden Fine, the former president and CEO of the Independent Community Bankers of America, “[t]he fact that an

⁸⁷ Board of Governors of the Federal Reserve System, “Policy Statement on Section 9(13) of the Federal Reserve Act,” January 27, 2023, <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20230127a2.pdf>.

⁸⁸ Marc Rubinstein, “These Banks Were Left Holding the Bag in Crypto Implosion,” *The Washington Post*, November 23, 2022, https://www.washingtonpost.com/business/these-banks-were-left-holding-the-bag-in-crypto-implosion/2022/11/22/b8de2096-6a2b-11ed-8619-0b92f0565592_story.html.

⁸⁹ David Benoit, “Silvergate’s Deposit Run Is Worse Than Great Depression-Era Runs,” *The Wall Street Journal*, January 5, 2023, <https://www.wsj.com/livecoverage/stock-market-news-today-01-05-2023/card/silvergate-s-deposit-run-is-worse-than-great-depression-era-runs-CqZpNYLAuWIR1Rwv422/?page=1>.

⁹⁰ David Benoit, “Silvergate Raced to Cover \$8.1 Billion in Withdrawals During Crypto Meltdown,” *The Wall Street Journal*, January 5, 2023, <https://www.wsj.com/articles/silvergate-raced-to-cover-8-1-billion-in-withdrawals-during-crypto-meltdown-11672895207?page=1>.

⁹¹ Kate Berry, “Silvergate Bank Loaded up on \$4.3 Billion in Home Loan Bank Advances,” *American Banker*, January 10, 2023, <https://www.americanbanker.com/news/silvergate-bank-loaded-up-on-4-3-billion-in-fhlb-advances>.

⁹² Protos, “The Curious Case of FTX and Farmington State Bank, aka Moonstone,” *Protos*, November 24, 2022, <https://protos.com/the-curious-case-of-ftx-and-farmington-state-bank-aka-moonstone/>.

⁹³ Stephen Gandel, “Crypto Firm FTX’s Ownership of a U.S. Bank Raises Questions,” *The New York Times*, December 6, 2022, <https://www.nytimes.com/2022/11/23/business/ftx-cryptocurrency-bank.html>; Moonstone Bank, “FBH Corp. raises \$11.5M in private equity funding from Alameda Research Ventures,” Cision PR Newswire, March 7, 2022, <https://www.prnewswire.com/news-releases/fbh-corp-raises-11-5m-in-private-equity-funding-from-alameda-research-ventures-301497307.html>.

⁹⁴ Protos, “The Curious Case.”

offshore hedge fund that was basically a crypto firm was buying a stake in a tiny bank for multiples of its stated book value should have raised massive red flags for the F.D.I.C., state regulators and the Federal Reserve.”⁹⁵

I encourage bank regulators to learn from these examples and ramp up their efforts to better understand all the ways in which banks under their supervision are exposed to crypto. Bank regulators should formalize a horizontal exercise that will gather this information and make the results public, so that bank customers and investors will not be surprised when the next large crypto firm fails and they find out their bank was over-exposed to crypto. I also encourage the FDIC to revisit its rules around brokered deposits, which may have played a role in Silvergate’s liquidity problems.⁹⁶

As noted in a forthcoming article I co-authored with Sangita Gazi, “the Joint Statement signals a new era of intense regulatory scrutiny of *any* bank involvement in crypto-asset activity, but there remains the question: where should regulators draw the line?” Some scholars have called for a “Glass-Steagall 2.0” that would completely separate banking and crypto, but this is beyond the agencies’ ability to implement and would require congressional action.⁹⁷ As the Joint Statement makes clear, “[b]anking organizations are neither prohibited nor discouraged from providing banking services to customers of any specific class or type, as permitted by law or regulation.” Provided cryptocurrency and its progeny, like stablecoins, are legal in the U.S., banks are free to conduct business with crypto firms. However, bank regulators do have the authority to impose additional prudential requirements on such activity and they should develop a comprehensive framework that clarifies the type of crypto-asset activity banks can engage in and the prudential requirements (capital and liquidity) required to engage in such activity. That may require the bank agencies to implement more rigorous standards than the Basel Committee on Banking Supervision’s final prudential standard for crypto-asset exposures, issued in December 2022.⁹⁸

IV. Regulatory Options That Do Not Involving New Financial System Safeguards

This section will introduce and briefly discuss three options for regulating cryptocurrency that do not involve Congress imposing traditional financial regulatory safeguards on the crypto sector. These options are (1) banning cryptocurrency, (2) regulating cryptocurrency as gambling, and (3) using existing regulatory authorities to regulate crypto without additional legislation. Any proposal to regulate the crypto industry must be assessed by how well it protects investors and maintains financial stability. I refer to these two goals as the “dual mandate” of crypto regulation.

⁹⁵ Gandel, “Crypto Firm.”

⁹⁶ Kyle Campbell, “Policy Advocates Question Brokered Deposit Role in Silvergate Run,” *American Banker*, February 3, 2023, <https://www.americanbanker.com/news/policy-advocates-question-brokered-deposit-role-in-silvergate-run>.

⁹⁷ Hilary J. Allen, “Crypto Crash: Why the FTX Bubble Burst and the Harm to Consumers,” Statement before the Senate Commission on Banking, Housing, and Urban Affairs, December 14, 2022, <https://www.banking.senate.gov/imo/media/doc/Allen%20Testimony%2012-14-22.pdf>.

⁹⁸ Basel Committee on Banking Supervision, *Prudential Treatment of Cryptoasset Exposures* (Basel: BIS, 2022), accessed January 7, 2023, <https://www.bis.org/bcbst/publ/d545.pdf>.

a. Banning Cryptocurrency

The most effective way to protect investors and preserve financial stability would be to ban cryptocurrency outright. I argued for this approach in the wake of the Colonial Pipeline hack in a 2021 op-ed, in which I called out crypto's connection to ransomware and noted that the associated costs outweigh any benefits crypto provides.⁹⁹ Given crypto's negative externalities detailed above, the case for a crypto ban has only grown stronger. More recently, Professor Hilary Allen argued for a crypto ban in front of this Committee in December.¹⁰⁰ Addressing the retort that crypto's decentralized nature makes a ban impossible to enforce, Professor Allen correctly noted:

"[C]rypto is not actually decentralized,¹⁰¹ and so there are many people against whom such a ban could be enforced. Most obviously, centralized exchanges (like FTX) serve as important gateways to the crypto markets. If they were banned from listing cryptoassets, then the market for cryptoassets would most likely diminish significantly."

Further buttressing Professor Allen's point is the fact that China banned cryptocurrency in 2021.¹⁰² While there are certainly some Chinese citizens who transact in crypto, the industry has completely pulled out of China, and the country was spared the fallout from the most recent "crypto winter." Berkshire Hathaway vice-chairman Charlie Munger is an admirer of China's crypto ban, writing in the Wall Street Journal in February 2023 that "the communist government of China recently banned cryptocurrencies because it wisely concluded that they would provide more harm than benefit."¹⁰³ You can disagree with the means — as Mr. Munger and I do — by which China implemented a ban, but they have proven it can be done.¹⁰⁴

b. Regulating Cryptocurrency as Gambling

Some commentators have noted that cryptocurrency's lack of fundamental value and speculative nature make crypto "investing" akin to gambling. Columbia professor Todd Baker noted:

"Crypto trading is wholly unconnected to the productive purpose that defines finance: helping businesses, individuals, and governments raise, save, transmit, and use money for socially and economically useful ends."¹⁰⁵

⁹⁹ Lee Reiners, "Ban Cryptocurrency to Fight Ransomware," *WSJ*, May 25, 2021, <https://www.wsj.com/articles/ban-cryptocurrency-to-fight-ransomware-11621962831>.

¹⁰⁰ Allen, "Crypto Crash."

¹⁰¹ Sirio Aramonte, Wenqian Huang, and Andreas Schrimpf, "DeFi Risks and the Decentralization Illusion," *BIS Quarterly Review*, (December 2021).

¹⁰² BBC News, "China Declares All Crypto-Currency Transactions Illegal," *BBC News*, September 24, 2021, <https://www.bbc.com/news/technology-58678907>.

¹⁰³ Charlie Munger, "Why America Should Ban Crypto," *WSJ*, February 2, 2023, <https://www.wsj.com/articles/why-america-should-ban-crypto-regulation-economy-finance-china-england-trading-currency-securities-commodity-gamble-11675287477>.

¹⁰⁴ Mr. Munger notes in his *WSJ* article: "What should the U.S. do after a ban of cryptocurrencies is in place? Well, one more action might make sense: Thank the Chinese communist leader for his splendid example of uncommon sense."

¹⁰⁵ Todd H. Baker, "Let's Stop Treating Crypto Trading as If It Were Finance," *The CLS Blue Sky Blog*, November 29, 2022, <https://clsbluesky.law.columbia.edu/2022/11/29/lets-stop-treating-crypto-as-if-it-were-finance/>.

Fabio Panetta, a member of the executive board for the European Central Bank, had similar things to say about unbacked crypto-assets:

“They do not perform any socially or economically useful function: they are rarely used for payments and do not fund consumption or investment. As a form of investment, unbacked cryptos lack any intrinsic value, too. They are speculative assets. Investors buy them with the sole objective of selling them on at a higher price. In fact, they are a gamble disguised as an investment asset.”¹⁰⁶

Baker argues that it is a categorical error to equate crypto with finance and that subjecting crypto to traditional financial regulation would legitimize crypto-asset activities and jeopardize financial stability. The solution, therefore, is to regulate crypto like gambling.

While these commentators are correct in their diagnoses that crypto investing is no different from gambling, I disagree that the cure is to regulate crypto as gambling. For starters, unlike with crypto exchanges, gamblers do not leave their money at the casino at the end of the night. This fact alone calls for more robust investor protections. Second, gambling is regulated at the state or tribal and local levels in the U.S. Regulating crypto as gambling would therefore allow some states to implement lax regulations and could lead to a race to the bottom whereby states compete to woo the crypto industry by adopting ever more lenient regulation (this is already happening to a certain extent).¹⁰⁷ Finally, while gambling's negative externalities have immediate effects on individual families and surrounding communities, those impacts don't have the same potential as crypto to create broader ripple effects through the financial system and the economy. Therefore, a more comprehensive financial regulatory approach that does not validate crypto as legitimate financial activity is needed.

c. Using Existing Authorities to Regulate Crypto without Additional Legislation

Post-FTX, many policymakers have called on financial regulators to use their existing legal authority more aggressively to clean up the crypto industry and protect investors.¹⁰⁸ I agree that regulators can, and should, do more, but I also believe that congressional action is needed to close gaps in the current regulatory framework. Most pleas for regulatory action are focused on the SEC, and as noted above, the SEC has aggressively used its enforcement authority when warranted. But bringing a successful enforcement action takes time and resources, two things that any regulator will tell you are always in short supply. Furthermore, despite repeated pleas from Chairman Gensler to the industry to come in and get registered, the crypto industry has willfully chosen to operate outside the regulatory perimeter. It simply is not possible for the SEC

¹⁰⁶ Fabio Panetta, “Caveat Emptor Does Not Apply to Crypto,” *Financial Times*, January 4, 2023, <https://www.ft.com/content/95249051-f9f0-494d-9fa0-c7eca8edaa69?shareType=nongift>.

¹⁰⁷ See Eric Lipton and David Yaffe-Bellany, “Crypto Industry Helps Write, and Pass, Its Own Agenda in State Capitols,” *The New York Times*, April 10, 2022, <https://www.nytimes.com/2022/04/10/us/politics/crypto-industry-states-legislation.html>.

¹⁰⁸ Jennifer Schonberger, “Elizabeth Warren Calls on SEC to Use ‘Full Force of its Regulatory Powers’ in Crypto Crackdown,” *Yahoo News*, January 26, 2023, <https://news.yahoo.com/elizabeth-warren-calls-on-sec-to-use-full-force-of-its-regulatory-powers-in-crypto-crackdown-210442856.html>.

to litigate an entire industry into compliance, and even if they did, there would still be some cryptocurrencies, like Bitcoin, that would be considered commodities and not securities.¹⁰⁹

The CFTC has classified Bitcoin and Ethereum — and by extension, other cryptocurrencies that are similarly structured — as commodities (courts have also upheld this classification). While the CFTC regulates commodity derivatives, they do not regulate commodity spot markets, although they do have enforcement authority for fraud and manipulation in commodity spot markets. The CFTC also needs to do more to protect crypto investors, but, apart from a few meaningful enforcement actions, the agency has unfortunately demonstrated little desire to do so at the scale needed.

Beginning with the CFTC's decision to permit the self-certification of cash-settled Bitcoin futures in 2017 — despite ample evidence of manipulation in Bitcoin that could lead to manipulation of the futures contract — the CFTC has given the crypto industry most of what they have asked for.¹¹⁰ That is why the agency became the preferred regulator of the crypto industry¹¹¹ and why Sam Bankman-Fried was an outspoken advocate¹¹² for the Digital Commodities Consumer Protection Act (DCCPA), which would create a new federally recognized asset class called digital commodities and give oversight of digital commodity markets to the CFTC.¹¹³ The CFTC was also actively considering granting FTX's application to amend its order of registration as a Derivatives Clearing Organization ("DCO"), which would have revised FTX's existing non-intermediated model to allow for clearing of margined, as well as fully collateralized, trades.¹¹⁴ I wrote a public comment letter with Professors Hilary Allen and Ryan Clements opposing FTX's application and attended a public roundtable held at the CFTC to discuss intermediation in derivatives trading and clearing, which was precipitated by FTX's application.¹¹⁵ The CFTC pretended that the roundtable was not designed to discuss any

¹⁰⁹ SEC Chairman Gary Gensler has said that Bitcoin is a commodity. See Kevin Helms, "SEC Chair Gensler Affirms Bitcoin Is a Commodity — 'That's the Only One I'm Going to Say,'" *Bitcoin.com*, June 27, 2022, <https://news.bitcoin.com/sec-chair-gensler-bitcoin-is-a-commodity/>.

¹¹⁰ The self-certification process allows designated contract markets (DCMs) to list new derivative products one day after submitting in writing to the CFTC that the product complies with the Commodity Exchange Act (CEA) and CFTC regulations.

¹¹¹ Robert Schmidt and Allyson Versprille, "Crypto Platforms Ask for Rules But Have a Favorite Watchdog," *Bloomberg*, March 31, 2022, <https://www.bloomberg.com/news/articles/2022-03-31/crypto-exchanges-want-say-in-rules-under-biden-administration?leadSource=uverify%420wall>.

¹¹² Paul Kiernan, "FTX's Collapse Upends Sam Bankman-Fried's Washington Play," *WSJ*, November 28, 2022, https://www.wsj.com/articles/ftx-collapse-upends-sam-bankman-frieds-washington-play-11669545002?mod=hp_lead_pos4. Note also that FTX hired several former CFTC employees, see Dennis M.

Kelleher, "FTX'S Penetration of the CFTC by a Revolving Door Hiring Spree of Former CFTC Officials," *Better Markets*, December 26, 2022, <https://bettermarkets.org/newsroom/ftx-penetration-of-the-cftc-by-a-revolving-door-hiring-spre-of-former-cftc-officials/>.

¹¹³ U.S. Congress, Senate, *Digital Commodities Consumer Protection Act of 2022*, S.4760, 117th Congress, introduced in Senate August 3, 2022, <https://www.congress.gov/bills/117/congress/senate/bills/4760/text>. I co-wrote a public letter with Hilary Allen and Mark Hays that identifies a number of shortfalls in the DCCPA, see <https://ourfinancialsecurity.org/wp-content/uploads/2022/09/AFR-Letter-Stabenow-Bill.pdf>.

¹¹⁴ Commodity Futures Trading Commission, "CFTC Seeks Public Comment on FTX Request for Amended DCO Registration Order," March 10, 2022, <https://www.cftc.gov/PressRoom/PressReleases/8499-22>.

¹¹⁵ Hilary Allen, Ryan Clements, and Lee Reiners, "Non-Intermediate Clearing of Crypto Derivatives on Margin Is a Bad Idea," *The FinReg Blog*, May 12, 2022, <https://sites.duke.edu/thefinregblog/2022/05/12/non-intermediate->

specific application, but the presence of Sam Bankman-Fried and several of his employees made it clear that participants were there to weigh in on FTX's application. Had FTX been successful in its attempt to offer retail investors direct access to crypto derivatives on margin 24/7, more Americans would have suffered losses when the firm collapsed.

As noted, the CFTC does have fraud and manipulation enforcement authority over commodity spot markets, but they have used this authority sparingly when it comes to crypto. In December, CFTC Chairman Rostin Behnam told the U.S. Senate Committee on Agriculture, Nutrition, and Forestry that the agency "has brought more than 60 enforcement cases in the digital asset space since 2014" and that these enforcement actions began with a referral or whistleblower tip from an external source.¹¹⁶ Relying on the goodwill of strangers to let you know when something is amiss in crypto markets is absurd. Crypto-related frauds and scams are discussed daily on Twitter, Discord, Telegram, Reddit, and countless other online communication channels. There is nothing stopping the CFTC from creating dedicated surveillance teams to monitor these channels for signs of commodities fraud. Chairman Behnam's testimony also betrays one of the reasons the CFTC gave for permitting the self-certification of Bitcoin futures in 2017:

*"Had it even been possible, blocking self-certification would not have stemmed interest in Bitcoin or other virtual currencies nor their spectacular and volatile valuations. Instead, it would have ensured that the virtual currency spot markets continue to operate without federal regulatory surveillance for fraud and manipulation."*¹¹⁷

At the time, the CFTC believed requiring Bitcoin futures exchanges to enter into information-sharing agreements with Bitcoin spot market platforms would give the agency greater visibility into the workings of the Bitcoin spot market. They were mistaken, and the agency is still flying blind.

V. Applying Traditional Financial Regulatory Principals and Frameworks to Crypto

The lack of crypto spot market regulation is a glaring gap in oversight that Congress must address. As noted above, the CFTC has jurisdiction over commodity derivatives, but they do not

[clearing-of-crypto-derivatives-on-margin-is-a-bad-idea/](https://www.cftc.gov/PressRoom/PressReleases/8519-22#:~:text=CFTC%20Announces%20Staff%20Roundtable%20Discussion%20on%20Non%20Intermediation,-April%2027%2C%202022&text=Washington%2C%20D.C.%20%E2%80%94%20Staff%20of%20the,in%20derivatives%20trading%20and%20clearing); Commodity Futures Trading Commission, "CFTC Announces Roundtable Discussion on Non-intermediation," April 27, 2022, <https://www.cftc.gov/PressRoom/PressReleases/8519-22#:~:text=CFTC%20Announces%20Staff%20Roundtable%20Discussion%20on%20Non%20Intermediation,-April%2027%2C%202022&text=Washington%2C%20D.C.%20%E2%80%94%20Staff%20of%20the,in%20derivatives%20trading%20and%20clearing>.

¹¹⁶ Commodity Futures Trading Commission, "Testimony of Chairman Rostin Benham Before the U.S. Senate Committee on Agriculture, Nutrition, and Forestry," December 1, 2022, <https://www.cftc.gov/PressRoom/SpeechesTestimony/opabehnam29>.

¹¹⁷ Commodity Futures Trading Commission, "CFTC Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets," January 4, 2018, https://www.skadden.com/-/media/files/publications/2018/10/the-distributed-ledger-october-2018/fn18_2_backgrounder_virtualcurrency01.pdf.

oversee commodity “spot” or cash markets, except in instances of fraud or manipulation.¹¹⁸ Because U.S.-based crypto exchanges argue that they only list commodities, no federal agency presently supervises crypto exchanges on an ongoing basis.¹¹⁹ No one would suggest that it is a good idea for the New York Stock Exchange or the NASDAQ to be unregulated, yet that is exactly the situation we currently have with crypto exchanges. As a result, cryptocurrency exchanges do not have to:

- Provide audited financial statements;
- Provide books and records upon request to a federal regulatory agency;
- Have exchange listing standards;
- Enforce codes of conduct against exchange members;
- Segregate customer assets from firm assets;
- Have rules governing conflicts of interest;
- Maintain net capital at required levels to protect customers and creditors from monetary losses if the exchange fails; or
- Pay into a government-mandated insurance fund that would make customers whole if the exchange were to fail or lose customer assets.¹²⁰

It also means that cryptocurrency exchanges are allowed to fulfill multiple functions that are typically separated in traditional securities markets, this includes being a broker, market maker, exchange, clearing agency, and custodian. As we saw with FTX, comingling these “various functions within crypto intermediaries creates inherent conflicts of interest and risks for investors.”¹²¹ And most importantly for crypto investors, the lack of federal cryptocurrency spot market regulation is one reason why investors become unsecured creditors when a crypto intermediary fails, as millions of Americans found out the hard way over the past year.¹²²

What is needed is one dedicated regulatory agency with exclusive oversight over cryptocurrency issuance and trading. The threshold questions, however, are which agency should be given this task, and what should be the extent of its authority? I have previously argued that

¹¹⁸ CFTC jurisdiction is also implicated when a commodity is offered for trading on a margined, leveraged, or financed basis. See LABCFTC, “A CFTC Primer on Virtual Currencies,” October 17, 2017,

https://www.cftc.gov/sites/default/files/ide/groups/public/documents/file/labcftc_primeronvirtualcurrencies100417.pdf.

¹¹⁹ Of course, SEC Chairman Gary Gensler believes most U.S. crypto exchanges are listing securities and operating unregistered securities exchanges. But the SEC has yet to file an enforcement action asserting that; therefore, crypto exchanges remain unregulated for the time being. Also, the U.S. Department of the Treasury’s Financial Crimes Enforcement Network (“FinCEN”) does consider “administrators” and “exchangers” of convertible virtual currencies to be money services businesses subject to regulations implementing the Bank Secrecy Act. See Financial Crimes Enforcement Network, “Application of FinCEN’s Regulations to Persons Administering, Exchanging, or Using Virtual Currencies,” March 18, 2013, <https://www.fincen.gov/resources/statutes-regulations/guidance/application-fincens-regulations-persons-administering>.

¹²⁰ This list is by no means exhaustive.

¹²¹ Gensler, “Kennedy and Crypto.”

¹²² Bankruptcy law is private law, and if there are adequate private law arrangements in place to segregate funds, crypto investors should be protected even if there is no regulation in place. But per crypto exchanges’ terms of service, there are no such arrangements. See Adam J. Levetin, “Not Your Keys, Not Your Coins: Unpriced Credit Risk in Cryptocurrency,” *Texas Law Review*, August 28, 2022, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4107019.

this authority should be given to the SEC.¹²³ The following section will detail the benefits of Congress granting the SEC exclusive oversight over crypto markets.

a. Congress Should Grant the SEC Oversight over Cryptocurrency Spot Markets

The debate around whether a given digital asset is a commodity, security, or something else must be addressed if one agency is to have sole authority over digital asset markets. This bifurcation has contributed to strange outcomes in trading markets. For example, the CFTC permitted the listing of cryptocurrency futures contracts, and the SEC subsequently authorized an ETF tracking cryptocurrency futures, but the SEC has yet to authorize a spot cryptocurrency ETF. A spot cryptocurrency ETF and cash-settled cryptocurrency futures both provide exposure to cryptocurrency without requiring investors to ever take possession of cryptocurrency. The fact that we have one without the other makes little sense. Furthermore, it is not entirely clear how securities and commodities law apply to novel crypto projects, such as decentralized finance (DeFi) protocols. For example, can a token issued by a decentralized autonomous organization (DAO) be considered an investment contract if there truly is no central party, or parties, essential to the DAO's performance?¹²⁴

The only way to address this uncertainty is by statutorily recognizing and defining cryptocurrency or a similar term (crypto-assets or digital assets) in federal law. Of course, most financial assets are digital, so the definition must be precise enough to exclude traditional assets that are already subject to robust regulation, yet broad enough to incorporate cryptocurrency as well as current and future cryptocurrency offshoots (DAOs, DeFi, non-fungible tokens (NFTs), etc.). Importantly, whatever crypto regulatory regime Congress devises cannot be less stringent than existing financial regulation, otherwise, it will be arbitrated by legacy firms.

I urge Congress to carve out cryptocurrency, or a similar term like crypto-asset, from the definition of a commodity in the Commodity Exchange Act and recognize cryptocurrencies as securities under a special definition to the securities laws. This would give the SEC exclusive authority to regulate all aspects of the crypto industry and provide greater certainty to market participants, as no Howey test analysis would be needed to determine whether the asset qualifies as a security. The SEC simply has more expertise, more resources (although, to be clear, additional funding would be required), and more appetite for enforcement in the digital assets area than the CFTC does. Most importantly, unlike the CFTC, the SEC has a statutory mandate to protect investors. It is worth noting that even former CFTC Chairman Timothy Massad

¹²³ Lee Reiners, "Congress Should Grant the SEC Oversight of Digital Asset Spot Markets," *The CLS Blue Sky Blog*, April 21, 2022, <https://clsbluesky.law.columbia.edu/2022/04/21/congress-should-grant-the-sec-oversight-of-digital-asset-spot-markets/>.

¹²⁴ The governance tokens for most DAOs tend to be concentrated in the hands of founders, venture capitalist funders, and crypto whales. Therefore, enforcement efforts could be targeted at these holders. See Chainalysis, "Dissecting the DAO: Web3 Ownership is Surprisingly Concentrated," *Chainalysis Blog*, June 27, 2022, available at <https://blog.chainalysis.com/reports/web3-daos-2022/>. The FSOC Report on Digital Asset Financial Stability Risks and Regulation uses the UNI governance token to illustrate the point that "the top 1 percent of addresses of certain governance tokens hold over 90 percent of the total supply." See Financial Stability Oversight Council, *Report on Digital Asset Financial Stability*.

agrees that the SEC should be given oversight over digital asset spot markets: “Despite my personal affection for the CFTC, the SEC may be better suited to the task because it is more focused on retail investors and cash markets.”¹²⁵

Bringing cryptocurrency within the definition of security in federal law does not necessarily mean that the requirements currently applicable to securities issuers and intermediaries will apply to crypto issuers and intermediaries on a one-for-one basis. Cryptocurrency is unique in multiple ways, and it may make sense for the SEC to craft more customized rules so that crypto issuers and intermediaries can better comply with the spirit of securities laws. Even Chairman Gensler has acknowledged this point, noting in a speech last September:

*“Given the nature of crypto investments, I recognize that it may be appropriate to be flexible in applying existing disclosure requirements. Tailored disclosures exist elsewhere — for example, asset-backed securities disclosure differs from that for equities.”*¹²⁶

SEC Commissioner Hester Peirce elaborated on this point in a speech at Duke University last month:

*“Whether Congress gives the disclosure task to the SEC or another regulator, several models exist. A few projects have been able to navigate their way through existing registration regimes. Disclosure under current regulations, however, is not well-suited to elicit the most useful and appropriate information for token purchasers because it does ‘not cover a number of features unique to digital assets that would undoubtedly be considered important when making an investment decision,’ as a recent petition to the SEC argued. Instead, traditional disclosures are ‘designed for traditional corporate entities that typically issue and register equity and debt securities’ and ‘focus on disclosure about companies, their management, and their financial results — topics that poorly fit the decentralized and open-source nature of blockchain-based digital asset securities.’ Thus, a more tailored crypto disclosure regime would be good for investors and crypto companies.”*¹²⁷

In authorizing legislation granting the SEC oversight over crypto, Congress can order the SEC to engage in notice and comment rulemaking around a crypto disclosure regime. This would have the added benefit of giving the public a formal opportunity to weigh in on the information they think is most relevant to make an informed crypto investment decision.

Beyond *what* information should be disclosed regarding prospective crypto purchases, there is also the issue of *who* is responsible for disclosure. Some cryptocurrencies, like Bitcoin, “do not provide a claim on an identifiable issuer since coins can be created or “minted” according to a protocol which has been coded by computer developers often based in overseas or unknown

¹²⁵ Timothy G. Massad, *It’s Time to Strengthen the Regulation of Crypto-Assets*, (Washington, D.C.: Brookings, 2017) <https://www.brookings.edu/wp-content/uploads/2019/03/Economis-Studies-Timothy-Massad-Cryptocurrency-Paper.pdf>.

¹²⁶ Gensler, “Kennedy and Crypto.”

¹²⁷ Hester M. Pierce, “Outdated: Remarks before the Digital Assets at Duke Conference,” (speech, Duke University, January 20, 2023), <https://www.sec.gov/news/speech/peirce-remarks-duke-conference-012023>.

locations.”¹²⁸ Therefore, who is responsible for Bitcoin’s disclosure? The European Union’s proposed Markets in Crypto-assets (MiCA) regulation punts on this issue by exempting crypto-assets that are created through mining from the obligation to publish a white paper (a form of prospectus).¹²⁹ The U.S. should not adopt that approach. Instead, for cryptocurrencies without an identifiable issuer, the crypto exchange should be required to take on the responsibilities of the issuer if they wish to list the cryptocurrency (this idea was recently proposed by His Majesty’s Treasury in the U.K.)¹³⁰

If cryptocurrency is classified as a security, then cryptocurrency exchanges would be required to register as national securities exchanges or else qualify for an exemption, such as operating an “alternative trading system.”¹³¹ As noted previously, crypto exchanges operate very differently than traditional securities exchanges; if they are forced to register with the SEC as a securities exchange, their business model would have to change (this is one reason why crypto exchanges have been so resistant to SEC registration). The Securities Exchange Act of 1934 (1934 Act) and the regulations thereunder list the requirements that apply to national securities exchanges. Among them, exchanges must permit any SEC-registered broker-dealer in good standing to become a member¹³² and must deny membership to a non-registered broker-dealer.¹³³ That means that absent any carve-out in new legislation, retail investors would no longer be able to directly access crypto exchanges. Instead, they would have to trade crypto through an SEC-registered broker-dealer (note that there are already broker-dealers, like Robinhood, providing crypto trading to retail investors).

Brokers serve valuable purposes in securities trading, mainly in terms of protecting investors and ensuring a smooth trading experience. Brokers are held to stringent requirements around asset custody, capital, rehypothecation, and order routing. Under the latter, brokers are subject to a “duty of best execution,” which requires them to obtain the best price possible on a customer’s order.¹³⁴ Given that crypto exchanges in the U.S. currently function as both the broker and the exchange, and that consumers seem to prefer this model as opposed to placing crypto trades through a broker, it may not make sense to split these functions apart provided sufficient investor safeguards are in place. Therefore, Congress should consider authorizing a new entity under

¹²⁸ His Majesty’s Treasury in the United Kingdom floated this possibility in a crypto-asset consultation released earlier this month. See HM Treasury, *Future Financial Services Regulatory Regime for Cryptoassets: Consultation and Call for Evidence* (London: HM Treasury, 2023)

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133404/TR_Privacy_edits_Future_financial_services_regulatory_regime_for_cryptoassets_vP.pdf

¹²⁹ Council of the European Union, “Proposal for a Regulation of the European Parliament and of the Council on Markets in Crypto-assets, and amending Directive (EU) 2019/1937 (MiCA) - Letter to the Chair of the European Parliament Committee on Economic and Monetary Affairs,” October 5, 2022, <https://data.consilium.europa.eu/doc/document/ST-13198-2022-INIT/en/pdf>

¹³⁰ HM Treasury, *Future Financial Services*.

¹³¹ U.S. Code 15 § 78e.

¹³² *Ibid.* § 78f(b)(2).

¹³³ *Ibid.* § 71f(c)(1).

¹³⁴ *Securities Exchange Act Release No. 51808* (June 9, 2005), 70 FR 37496, 37538 (June 29, 2005) (“Regulation NMS Adopting Release”). See also *Geman v. SEC*, 334 F.3d 1183, 1186 (10th Cir. 2003) (“[T]he duty of best execution requires that a broker-dealer seek to obtain for its customer orders the most favorable terms reasonably available under the circumstances.”) (quoting *Newton*, supra note 8, 135 F.3d at 270); *Kurz v. Fidelity Management & Research Co.*, 556 F.3d 639, 640 (7th Cir. 2009) (describing the “duty of best execution” as “getting the optimal combination of price, speed, and liquidity for a securities trade”).

federal securities law called a “national cryptocurrency exchange” and allow the SEC to craft rules to regulate such exchanges. That would give the SEC flexibility to force crypto exchanges to give up the multiple roles that they currently play (broker, exchange, custodian, etc.) or allow crypto exchanges to continue to perform some of these functions subject to appropriate safeguards. No matter what, national cryptocurrency exchanges should be required to segregate individual customers’ assets from firm assets and other customers’ assets. Nor should national cryptocurrency exchanges be permitted to list traditional securities (if they want to list both, they should be required to register as a traditional securities exchange with the SEC). If the SEC permits a national cryptocurrency exchange to custody customer assets — as opposed to requiring the use of a qualified custodian — that exchange should also be subject to special resolution administered by the Securities Investor Protection Corporation (“SIPC”) so that, in the event of exchange failure, customer assets fall outside the bankruptcy estate and customers are insured against losses up to \$500,000.¹³⁵

In authorizing legislation, Congress should also make clear that the SEC has the authority to draft rules governing DeFi applications. These rules may not look all that different from existing requirements. Accessing DeFi protocols directly requires a level of technological sophistication that most people do not have. Therefore, several firms have developed online user interfaces that allow users to access DeFi protocols.¹³⁶ These firms should be required to register as broker-dealers.¹³⁷ Protocols that truly are decentralized, meaning they run exclusively on blockchain-based smart contracts and are not reliant on the efforts of others, present more of a regulatory challenge. However, the potential risk associated with those protocols is limited by the fact that very few people have the technological wherewithal to access them directly as well as the fact that DeFi is an entirely self-referential system with little tie-in to real-world assets. Given that the main risks currently associated with DeFi are flaws in the underlying code that result in hacks,¹³⁸ the SEC could begin by requiring independent code audits and IT security tests of DeFi protocols.¹³⁹ The Commission should retain the flexibility to impose more stringent requirements on DeFi protocols if needed.

To be clear, if my recommendation is implemented, many, if not most, crypto issuers would be unable to comply. This is a good thing, as most cryptocurrencies provide no productive purpose — does anyone believe we need, or should want, over 20,000 different cryptocurrencies?¹⁴⁰ Crypto issuers who seek access to public markets will have to comply with Section 5 of the Securities Act of 1933, which prohibits the offer or sale of a security without

¹³⁵ SIPC, *The Investor’s Guide to Brokerage Firm Liquidations* (Washington, D.C.: SIPC, 2015)

<https://www.sipc.org/media/brochures/Liquidations-Web.pdf>

¹³⁶ See, e.g., Ariel Shapira, “DEXs and KYC: A Match Made in Hell or a Real Possibility?” *CoinTelegraph*, March 23, 2022, <https://cointelegraph.com/news/dexs-and-kyc-a-match-made-in-hell-or-a-real-possibility>.

¹³⁷ Sam Bankman-Fried made a similar argument last October: “If you host a website aimed at facilitating and encouraging US retail to connect to and trade on a DEX [decentralized exchange], this may end up falling under something like a broker-dealer/FCM/etc.” See Sam Bankman-Fried, “Possible Digital Asset Industry Standards,” October 19, 2022, <https://www.ftxpolicy.com/posts/possible-digital-asset-industry-standards>.

¹³⁸ According to Chainalysis, DeFi hacks accounted for 82%, or \$3.1 billion, of all crypto stolen by hackers in 2022. See Cheyenne DeVon, “Crypto Investors Lost Nearly \$4 Billion to Hackers in 2022,” *CNBC*, February 4, 2023.

<https://www.cnbc.com/2023/02/04/crypto-investors-lost-nearly-4-billion-dollars-to-hackers-in-2022.html>

¹³⁹ HM Treasury, *Future Financial Services*.

¹⁴⁰ Data on the number of cryptocurrencies comes from CoinMarketCap, accessed February 8, 2022, <https://coinmarketcap.com/>.

first registering with the SEC unless an exemption from registration is available. As Professor Hilary Allen noted, most “cryptocurrencies require significant amounts of demand and liquidity to support their value.”¹⁴¹ That means it will be unfeasible for most crypto issuers to seek an exemption from registration because those exemptions restrict who is eligible to purchase the securities in question and the resale of those securities. Thus, most crypto issuers will have to register with the SEC, and incurring the associated costs only makes sense if the token has “some long-term value creation potential.”¹⁴²

Bringing digital assets within the securities laws will also allow investors to avail themselves of Rule 10b-5 of the 1934 Act, which provides an additional measure of investor protection by making it illegal for any person to defraud or deceive someone, including through the misrepresentation of material information, with respect to the sale or purchase of a security.¹⁴³

My proposal would also grant the SEC oversight of stablecoins. If enacted, the Commission should impose strict requirements that all stablecoin reserves be held in cash or U.S. Treasury securities and subject stablecoin issuers to routine audits and disclosure. I offer more detailed thoughts on stablecoins below, but it is worth noting that my proposal does not preclude Congress from regulating stablecoin issuers as banks or bank subsidiaries. The Supreme Court’s *Marine Bank v. Weaver* decision held that “deposits” are “securities” for purposes of the federal securities laws unless those deposits are accepted either by FDIC-insured U.S. banks or by foreign banks that are governed by regulatory regimes providing comparable protections to their depositors.¹⁴⁴ Thus, as professor Arthur Wilmarth has noted, it is possible for stablecoins to be regulated as both “deposits” and “securities” unless Congress decides to bring stablecoins into the banking system and protect them with FDIC insurance.¹⁴⁵

b. Congress Can Enact Discrete Requirements for Crypto Intermediaries

If Congress does not want to assign crypto oversight to a single agency, lawmakers should consider passing legislation that requires crypto intermediaries to implement basic customer safeguards. The most urgently needed reform is a ban on the commingling of customer assets with company assets. Unfortunately, commingling seems to be the norm in the crypto industry, and restricting this practice will go a long way toward minimizing investor losses when crypto firms fail. Crypto intermediaries should also be required to inform customers about their rights and risks in a simple and easy-to-understand format. Too many crypto investors have found out the hard way that they have no legal rights vis-à-vis the crypto issuer, or that they will be an unsecured creditor if the crypto platform in possession of their assets fails.

In addition to those common-sense requirements, Congress should also consider requiring the following customer protections and market integrity guardrails recently put forth by CFTC Commissioner Christy Goldsmith-Romero:

¹⁴¹ Allen, “Crypto Crash.”

¹⁴² *Ibid.*

¹⁴³ U.S. Code 17 § 240.10b-5.

¹⁴⁴ *Marine Bank v. Weaver*, 455 U.S. 551 (1982).

¹⁴⁵ Arthur S. Wilmarth, “It’s Time to Regulate Stablecoins as Deposits and Require Their Issuers to Be FDI Insured Banks,” *Banking & Financial Services Policy Report*, 41, 2 (2022), https://scholarship.law.gwu.edu/cgi/viewcontent.cgi?article=2834&context=faculty_publications.

- Resolution of conflicts of interest with respect to insiders and affiliated entities;
- Broad application of the Bank Secrecy Act (including its anti-money laundering provisions);
- Strong cybersecurity requirements; and
- Broker fiduciary duties to customers.¹⁴⁶

If those requirements become law, some agency will need to enforce them. Rather than settle the “is it a commodity or security” debate, Congress could simply instruct the CFTC and SEC to engage in a joint rulemaking and share enforcement authority. There is precedent for this, as the two agencies did engage in joint rulemaking to implement Title VII, which governed the regulation of derivatives, of the Dodd-Frank Act.

c. Self-Regulatory Organizations Are a Mistake

Others have argued that Congress should designate crypto exchanges as self-regulatory organizations (SROs) as a first step toward comprehensive crypto regulation.¹⁴⁷ This is like letting the fox guard the henhouse. It is true that traditional financial exchanges have long operated as SROs, but these firms have also been subject to robust regulatory scrutiny by the CFTC or SEC, with both agencies having the ability to disapprove of SRO rule changes. Traditional SROs also operate within established regulatory regimes; in the absence of a clear regulatory regime for crypto, we would be asking crypto exchange SROs not only to supervise and take enforcement actions against market actors but also to devise a regulatory regime from first principles. That is more responsibility than traditional SROs have, and it is a responsibility that the crypto industry certainly hasn’t earned.

Furthermore, the members of traditional financial exchanges are sophisticated institutions — broker-dealers in the case of securities exchanges and futures commission merchants in the case of commodity derivatives exchanges — who themselves are typically subject to regulation and examination. In other words, I cannot place a trade directly on the NASDAQ, but I can place a trade on Charles Schwab who then routes the trade to NASDAQ, or some other venue or market maker, for execution. By contrast, crypto exchanges are principally used by less sophisticated retail investors who are more vulnerable to predacious behavior on the exchange.

Arguing for crypto exchanges to be designated as SROs rests on the false premise that exchanges have an economic incentive to police themselves and the behavior on their platforms. If you can trust the exchanges, then more users will trade on them — or so the logic goes. But if that were true, then crypto exchanges would have already come together and voluntarily formed an SRO. In fact, the industry attempted a voluntary SRO in 2018 that went nowhere. Gemini Exchange founders Cameron and Tyler Winklevoss advanced a proposal for the Virtual

¹⁴⁶ Commodity Futures Trading Commission, “Keynote Address by Commissioner Christy Goldsmith Romero at The Wharton School and the University of Pennsylvania Carey Law School,” (speech, Wharton, January 18, 2023), <https://www.cftc.gov/PressRoom/SpeechesTestimony/oparomero5>.

¹⁴⁷ Yesha Yadav, “Toward a Public-Private Oversight Model for Cryptocurrency Markets,” *Vanderbilt Law Research Paper No. 22-26*, accessed January 15, 2023, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4241062.

Commodity Association (VCA), which was intended to be non-profit, independent (not a trade organization), and “in compliance with global standards and best practices for SROs.”¹⁴⁸ In addition to “sound practices” compliance, the proposed VCA would also seek to promote “price discovery, efficiency, and transparency” while providing incentives for “the detection and deterrence of manipulative and fraudulent acts and practices.” As events over the past year have demonstrated, the VCA has had no impact in cleaning up the crypto spot market (the VCA’s website lists just two working group members: Gemini and bitFlyer).¹⁴⁹

Professor Ryan Clements noted that voluntary SROs face several challenges, including “classic economic problems like organizing ‘the commons’ and dealing with free-riders, as well as practical and legal considerations like ensuring [SRO] accountability, enforcing non-compliance penalties, facilitating government oversight, creating suitable member incentives to participate, and ensuring a high cost of expulsion.”¹⁵⁰ Some of these challenges may be addressed by SROs operating with a government mandate and the legal authority to enforce rules, but publicly mandated crypto SROs will only work if the industry has a serious interest in regulatory compliance. As noted previously, the crypto industry, including U.S.-based exchanges, has chosen to operate outside the regulatory perimeter and repeatedly thumb its nose at regulators. For example:

- After the SEC told Coinbase that their proposed Lend product needed to be registered with the Commission, Coinbase CEO Brian Armstrong tweeted: “Some really sketchy behavior coming out of the SEC recently.”¹⁵¹
- After the SEC filed a civil complaint against Gemini and Genesis alleging the Gemini Earn product was an unregistered security, Gemini co-founder Tyler Winklevoss tweeted that the SEC’s “behavior is totally counterproductive” and akin to a “manufactured parking ticket.”¹⁵²
- Last July, the CFTC filed a civil complaint against Gemini “for making false or misleading statements of material facts or omitting to state material facts to the CFTC in connection with the self-certification of a Bitcoin futures product.”¹⁵³ The complaint alleges that in the months leading up to the self-certification of the CBOE Futures Exchange (“CFE”) cash-settled Bitcoin futures contract in December 2017, Gemini

¹⁴⁸ Cameron Winklevoss, “A Proposal for a Self-Regulatory Organization for the U.S. Virtual Currency Industry,” *Medium*, January 30, 2020, <https://medium.com/@winklevoss/a-proposal-for-a-self-regulatory-organization-for-the-u-s-virtual-currency-industry-79e4d7891cfc>.

¹⁴⁹ “Members,” Virtual Commodity Association, accessed February 9, 2023, <https://virtualcommodities.org/#Members>.

¹⁵⁰ Ryan Clements, “Can a Cryptocurrency Self-Regulatory Organization Work? Assessing Its Promise and Likely Challenges,” *The FinReg Blog*, June 21, 2018, <https://sites.duke.edu/thefinregblog/2018/06/21/can-a-cryptocurrency-self-regulatory-organization-work-assessing-its-promise-and-likely-challenges/>.

¹⁵¹ Brian Armstrong (@brian_armstrong), tweet, September 8, 2021, 10:06 a.m., accessed February 10, 2023, https://twitter.com/brian_armstrong/status/1435439291715358721.

¹⁵² Tyler Winklevoss (@Tyler), tweet, January 13, 2023, 6:10 a.m., accessed February 10, 2023, <https://twitter.com/tyler/status/1613674686646484992?s=20&t=gKb89UeYRa7k99h7w3ZBeA>.

¹⁵³ Commodity Futures Trading Commission, “CFTC Charges Gemini Trust Company for Making Material False or Misleading Statements and Omissions to the Commission,” June 2, 2022, <https://www.cftc.gov/PressRoom/PressReleases/8540-22>.

engaged in a systematic effort to deceive the CFTC about the trading volume on the Gemini exchange and in the Gemini Bitcoin Auction.¹⁵⁴

- In 2015, after New York implemented the comprehensive BitLicense to regulate crypto firms operating in the state, the crypto exchange Kraken announced they were discontinuing service to New York residents and released a blog post calling the BitLicense “a creature so foul, so cruel that not even Kraken possesses the courage or strength to face its nasty, big, pointy teeth.”¹⁵⁵ Several years later, after the New York Attorney General’s office released a report on crypto trading platforms, Kraken’s CEO, Jesse Powell, tweeted: “NY is that abusive, controlling ex you broke up with 3 years ago but they keep stalking you, throwing shade on your new relationships, unable to accept that you have happily moved on and are better off without them.”¹⁵⁶
- Last week, after SEC Chairman Gary Gensler went on CNBC¹⁵⁷ to discuss the Commission’s charges against Kraken for failing to register the offer and sale of their crypto assets staking-as-a-service program,¹⁵⁸ Mr. Powell tweeted: “Oh man, all I had to do was fill out a form on a website and tell people that staking rewards come from staking? Wish I’d seen this video before paying a \$30m fine and agreeing to permanently shut down the service in the US. How dumb do I look. Gosh.”¹⁵⁹

These do not sound like firms and executives that are eager to assume the role of regulator.

Rather than allow crypto exchanges to serve as their own SROs, it would be better for Congress to grant SRO authority to an independent entity, like FINRA. CFTC Commissioner Christy Goldsmith Romero noted that an “independent SRO would avoid certain conflicts of interest and bring consistency across exchanges” and provide an “important bulwark to ensure that exchanges have the corporate governance, personnel, systems and controls required of a regulated market holding assets for U.S. customers.”¹⁶⁰

¹⁵⁴ Last June, I wrote a blog post that highlighted how Gemini’s deceit is a perfect example of why the CFTC’s self-certification process is flawed. See Lee Reiners, “CFTC Complaint Against Gemini Reveals Weaknesses in the Agency’s Approach to Virtual Currency,” *The FinReg Blog*, July 20, 2022, <https://sites.duke.edu/thefinregblog/2022/07/20/cftc-complaint-against-gemini-reveals-weaknesses-in-the-agencys-approach-to-virtual-currency/>.

¹⁵⁵ Krakenfx, “Farewell, New York,” *Kraken Blog*, June 8, 2017, <https://blog.kraken.com/post/253/farewell-new-york/>.

¹⁵⁶ Castro, Amy, “‘Someone’s Got to Be the Voice of Reason’ — Kraken Responds to NY AG Report,” *Bitcoin Magazine*, September 20, 2018, <https://bitcoinmagazine.com/business/someones-got-be-voice-reason-kraken-responds-ny-ag-report>.

¹⁵⁷ “SEC’s Gary Gensler on Kraken Staking Settlement: Other Crypto Platforms Should Take Note of This,” *CNBC*, February 10, 2023, <https://www.cnbc.com/video/2023/02/10/short-sec-chair-gensler-heres-why-we-cracked-down-on-kraken.html>.

¹⁵⁸ U.S. Securities and Exchange Commission, “Kraken to Discontinue Unregistered Offer and Sale of Crypto Asset Staking-As-A-Service Program and Pay \$30 Million to Settle SEC Charges,” February 9, 2023, <https://www.sec.gov/news/press-release/2023-25>.

¹⁵⁹ Jesse Powell (@jespow), tweet, February 11, 2023, 5:44 a.m., accessed February 10, 2023, https://twitter.com/jespow/status/1624177588074848256?s=20&t=HOdh3N_p01j2PI85fpalNA.

¹⁶⁰ Commodity Futures Trading Commission, “Keynote Address.”

VI. Stablecoins

I conclude by offering my thoughts on the best path forward on stablecoin regulation, where I do see the potential for a bipartisan solution. In November 2021, the President's Working Group on Financial Markets (PWG), joined by the FDIC and OCC, released a report on stablecoins that called on Congress to pass legislation that would require fiat-backed stablecoin issuers to be insured depository institutions.¹⁶¹ In an op-ed last November, I explained why this is the wrong approach, and I will borrow heavily from that piece here.¹⁶²

The PWG and banking agencies are concerned about a potential run on fiat-backed stablecoins that could be triggered if stablecoin holders have reason to doubt the quantity and quality of reserves backing their stablecoin. To address this risk, regulators want fiat-backed stablecoin issuers to be insured depository institutions subject to federal supervision and regulation. That approach would make sense if stablecoins were a widely used payment mechanism, but they are not, and I doubt they ever will be. Instead, stablecoins are principally used to trade other cryptocurrencies and participate in DeFi protocols, which is why Gary Gensler likens stablecoins to poker chips at the casino — if you want to speculate in the crypto economy, you need stablecoins.¹⁶³

If stablecoin issuers are forced to become banks, it would give stablecoins instant credibility, propel the growth of DeFi — a new form of shadow banking — and deepen connections between the highly regulated banking system and the unregulated crypto economy, thereby increasing the chances that a problem in one would spill into the other.

Fears about a run on fiat-backed stablecoins are misplaced. As I noted in November:

*"Runs are problematic for two reasons. First, the entity being run on could fail and cease its intermediating function. Second, to meet liability outflows, the entity would be forced to sell assets at discounted prices, which could trigger a fire sale that impacts the price of the assets being sold and the solvency of other institutions that hold similar assets."*¹⁶⁴

Because stablecoins are used for speculation, a run would have no impact on credit or payments intermediation in the real economy. Nor would a run on stablecoins produce a damaging fire sale. The total stablecoin supply is under \$140 billion, with the majority of fiat-backed stablecoin reserves consisting of bank deposits and Treasury securities. The market would easily absorb any sale of these reserves should a run on stablecoins occur.

¹⁶¹ U.S. Department of the Treasury, "President's Working Group on Financial Markets Releases Report and Recommendations on Stablecoins," November 1, 2021, <https://home.treasury.gov/news/press-releases/jv0454>.

¹⁶² Lee Reiners, "Regulators Are Thinking about Stablecoins in the Wrong Way," *The Hill*, November 12, 2022, <https://thehill.com/opinion/finance/3731399-regulators-are-thinking-about-stablecoins-in-the-wrong-way/>.

¹⁶³ Crypto News, "SEC Chair Gensler Compares Stablecoins to Poker Chips at Casinos," *Crypto News*, September 22, 2021, <https://cryptonews.net/news/legal/1909625/#:~:text=The%20SEC%20chair%20has%20previously,crypto%20tradin>

<e%20and%20ending%20programs>.

¹⁶⁴ Reiners, "Regulators."

Rather than force stablecoins into the banking system, Congress can grant the SEC the authority to regulate them like money market mutual funds, with strict requirements that stablecoin reserves be held in cash and Treasury securities. The composition of reserves should be subject to periodic audits and disclosure, which would impose much-needed market discipline.

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FEBRUARY 14, 2023

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Chief Global Regulatory Officer of the Crypto Council for Innovation, and Senior Lecturing
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Before the U.S. Senate Banking Committee on the "Crypto Crash: Why Financial System
Safeguards are Needed for Digital Assets"

Tuesday, February 14, 2023, 10:00am

I. Introduction

Chairman Brown, Ranking Member Scott and Members of the Committee: It is a distinct pleasure to be here with you today. The Banking Committee was where I cut my teeth on financial policy a decade ago, working on the response to the global financial crisis. I've always been impressed by, and grateful for, the bipartisanship this Committee has long embraced.

Today's hearing is yet another example. With inflationary pressures not seen since the 1970s¹, and changes to the Federal Reserve's decades-long monetary policies and the financial markets experiencing enormous volatility, I've been invited to talk about how best to strategically think about the regulatory future of digital assets, and how to build that regulatory future to ensure the best outcomes for American consumers. In this light, I am testifying in my personal capacity as an academic and researcher. I am a Visiting Scholar on Financial Technology and Adjunct Professor of Law, Institute of International Economic Law at Georgetown University Law Center. In addition, I am the Chief Global Regulatory Officer of the Crypto Council for Innovation, and a Senior Lecturing Fellow at Duke Law School.

I became interested in FinTech and crypto after a long career as a financial regulator, especially after chairing the Basel Committee on Banking Supervision's working group on open banking during my time at the Federal Reserve Board of Governors. While teaching and conducting research at Georgetown Law, I was approached by a blockchain startup to help design their digital dollar payment solution. I was perhaps one of the first former regulators to work in the crypto ecosystem directly with blockchain engineers.

Prior to my time in the startup ecosystem at the Centre Consortium and Transparent Financial Systems, I spent most of my career working on financial stability and reg reform, including at the Financial Stability Board working on international standards addressing Too-Big-to-Fail, in the U.S. Senate working on the response to the financial crisis, and the U.S. Treasury Department on the international implementation of G20-led reforms. I also worked at the Securities & Exchange Commission, and the Office of the Comptroller of the Currency. In addition to my

¹ <https://www.bls.gov/news.release/cpi.nr0.htm>
<https://www.cbsnews.com/news/inflation-june-cpi-report-hit-new-high-40-years-9-1-percent/>

public sector roles, I have worked on these issues in both the private and nonprofit sectors. Last year, I published a book on Open Banking,² examining how the Internet is decentralizing traditional banking and issues raised by the role personal data plays in an data-driven economy - issues similar to many raised by blockchain technologies today. Today, I continue to study digital transformation and lecture law students about the myriad of legal issues raised by blockchain technologies.

a. Why I'm here

This is a key moment for our transition to a digital economy. We are at a decision point where how we build our legal and regulatory foundation will determine our digital future for decades to come.

My five-year-old daughter Isabel will be watching this hearing from home later today because I want her to see that I am working towards building the brightest possible financial and economic future for her and her generation. As a former regulator who worked on reg reforms after the 2008 financial crisis here in this very room, I helped build a new framework to ensure financial stability. Later at startup companies, I built financial technology products with engineers to make payments faster, cheaper and more available. And today, I see myself together with all of you in this room as builders of a new regulatory future for digital assets.

Since the 1970s, the Internet and advances in computing power have transformed our economy and the American way of life. When I was a child in 1980s suburban Atlanta, my parents shopped at the local K-Mart. We had to get into a car and drive to the strip mall. Today, I shop on Amazon.com and other online sites with access directly at my fingertips. My parents had to drive to physical bank branches. I now bank online and via my smartphone. My parents used paper cash and wrote paper checks. I now use Zelle, Venmo and my credit cards and rarely even carry cash. My parents commuted to work, sometimes driving long distances. I work remotely from home. Who knows what Isabel and her generation will be doing when they're my age in a few decades - but all signs point to them engaging in some manner with computer networks that operate in increasingly sophisticated ways.

b. What's in this testimony

This testimony proceeds in the following parts.

First, I would like to contextualize the so-called "crypto collapse." I argue that it is important to situate the events within the broader economic moment and to take a nuanced approach to the different players in the ecosystem. Attempts to declare crypto "dead" will only lead to delaying much-needed action.

Second, I discuss why regulation matters, and why it's needed urgently. Regulation matters for: (a) Building the new highways of tomorrow, (b) Supporting the evolution to Web3; (c) Creating a

² Jeng, Linda, ed. Open Banking, Oxford University Press (NY 2022).
<https://global.oup.com/academic/product/open-banking-9780197582879?cc=us&lang=en&>

clear and supporting environment for innovation; (d) Ensuring consumer access; and (e) Maintaining a competitive edge, national security, and oversight.

Third, I provide recommendations based on what I call the "Building Blocks" for a digital future. These include: (i) Consumer protection and empowerment; (ii) National security, AML and privacy; (iii) Innovation and international competitiveness; (iv) Building blocks beyond banking like digital money, digital identity, and decentralized finance.

Let me also say what is not in this written testimony. Crypto is a highly technical space with varying models and definitions. It is not my aim to go through definitions in this testimony. Rather, I link to resources that I have found helpful in building out my understanding of this complicated space.

II. Contextualizing the "Crypto Collapse"

I would like to begin by situating the current moment. Americans are facing an extremely difficult economic outlook.³ The tech industry as a whole has been hit hard with declining share prices, layoffs, and existential questions about their products and services.⁴ There is declining trust in institutions and governments around the world.⁵

I am saddened by the human cost of the loss of jobs and assets that we have seen recently, across a variety of sectors. It is, as I will discuss, the reason that I think the need for policy and regulation is so urgent. We do not have time to waste when it comes to protecting consumers and investors, while securing the foundational future of the global digital economy in the U.S.

That is also why I think we need to be very clear and precise about how we frame the current moment. While prices have fallen and individual projects have collapsed, crypto itself has not. As of February 10, 2023, crypto still had a market cap of over \$1 trillion USD.⁶ The number of full-time developers in the crypto space grew 8% year-over-year in 2022, despite a 70% decline in prices.⁷

Just as we didn't eliminate or ban banking after the collapse of Lehman Brothers, we should not shutter the entire crypto industry because of a small number of bad actors. If we pretend crypto is "dead" and fail to put into place appropriate frameworks, we will only have willful ignorance to blame.

a. Importance of precision and nuance

The "collapse" was a failure of people, not technology.

³ <https://www.imf.org/en/News/Articles/2023/01/31/tr-13123-world-economic-outlook-update>

⁴ <https://news.crunchbase.com/startups/tech-layoffs/>

⁵ <https://www.edelman.com/trust/2023/trust-barometer>

⁶ <https://coinmarketcap.com/>

⁷ <https://www.developerreport.com/developer-report>

What we saw with FTX and other collapses within the crypto ecosystem was a failure of humans. We are not strangers to the issues that caused the failures: fraud, manipulation, and irresponsible actors. These are all issues that regulators, including myself, have been fighting for decades. It is why we have put frameworks in place to deter bad actors, and why we now have a path to hold them accountable.

It was not, that is to say, a failure of technology.⁸ A reason I remain excited about the potential of areas like decentralized finance (DeFi) is because the system is, by design, meant to mitigate potential fallout from centralized, bad actors. Indeed, DeFi has survived the contagion we have seen from recent events directly as a result of deliberate design choices.⁹ There has been a higher volume of activity, and applications have remained fully functional.¹⁰ Decentralization is the concept that was core to the creation of the Internet¹¹ – and continuing its spirit in applications like financial services could be revolutionary.

Since the space is so new, definitions, categories, and boundaries remain unclear.¹² While there have been some attempts to map out distinctions, there is still a lot of debate both within and outside the industry on fundamental classification questions. So, when events like this occur, it is especially important to look under the surface of calling something a "crypto service" to understand how it was really operating, and consequently, what the nature of any failures was.¹³

As someone who has worked on these issues, I know how much your teams are juggling and the challenges associated with staying up to speed on such a technically complex space. But, the investment of time at the outset will pay dividends. This distinction between governance of technology and the technology itself is critical as we build regulatory frameworks for the digital economy.

b. Crypto's social value

Innovative applications of crypto are being used now to help others.

As I have discussed, part of what excites me about crypto is what it will mean for our digital future. The other part is crypto's social value in action today.

⁸ Unique DeFi users have risen by 40% in 2022. Despite market conditions, DeFi users have gone from 4.7 million at the start of 2022 to more than 6.5 million. The number of unique DeFi users has increased by nearly 700% over a two-year period, with just 940,000 users at the start of 2021. Cumulative DeFi revenue grew from \$3.7 billion at the beginning of 2022 to \$5.22 billion at the end of the year, meaning DeFi generated north of \$1.5 billion in 2022. These figures are up from \$239 million at the start of 2021: cumulative DeFi revenue has increased by more than 2,100% since 2021.

<https://www.nansen.ai/guides/defi-statistics-in-2022> see also <https://www.economist.com/by-invitation/2022/12/06/a-crypto-exchange-founder-makes-his-case-for-decentralised-finance>.

⁹ <https://www.coindesk.com/layer2/2022/07/22/why-defi-might-be-safer-than-traditional-finance/>

¹⁰ <https://www.galaxy.com/research/insights/ftx-contagion-impact-on-defi/>

¹¹ <https://internethealthreport.org/v01/decentralization/>

¹² See, for example: A model of the "DeFi stack" in: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3843844

¹³ <https://www.bis.org/publ/work1066.pdf>

A substantial percentage of adults around the world today lack access to basic banking and financial opportunities. An oft-cited World Bank report found that 1.4 billion people worldwide are unbanked (i.e., does not have a bank account).¹⁴ Despite progress, almost 30% of individuals in developing countries have no bank accounts.

Although lack of access is more significant in developing countries, it is also common in advanced economies. Almost one in five U.S. adults is at least partially constrained in their ability to use traditional financial services: 4.5% are unbanked and another roughly 14% are underbanked (i.e., has a bank account but conducts some or all of their financial transactions outside of the mainstream banking system, relying on alternative financial services providers, cash or other financial arrangements).¹⁵

Most adults who are unbanked or underbanked represent communities that have historically been the victim of discriminatory or exclusionary financial practices, including those with low education or low income, and people of color.¹⁶ Digital assets, which have lower barriers to entry and do not suffer from a legacy of exclusionary practices and stigmas, offer people from historically-excluded or unbanked/underbanked communities new access to secure, low-cost, and effective financial services—and members of those communities have already shown a strong interest in and adoption of digital assets.¹⁷

As a recently-released report from the Crypto Research and Design Lab or CRADL highlights:

"It turns out that the popular narrative of the 'crypto bro' is misleading. Purchasers of digital assets actually vary widely in terms of demographics:

- Average cryptocurrency buyer is under 40 (mean age is 38);
- 55% do not have a college degree;
- 44% of crypto traders are not white;
- 41% of traders are women; and

¹⁴

<https://www.worldbank.org/en/news/feature/2022/07/21/covid-19-boosted-the-adoption-of-digital-financial-services>

¹⁵ <https://www.fdic.gov/analysis/household-survey/index.html>

¹⁶ In 2019, 7.1 million households in the U.S. were unbanked. Unbanked rates were higher among lower-income households, less-educated households, Black households, American Indian or Alaska Native households, working-age disabled, and households with volatile income. Among the unbanked, 29% stated that they don't have enough money to meet the minimum balance requirement (48.9% cited this as a reason), while 16.1% expressed a distrust of banks (36.3% cited it as a reason).

<https://www.atlantafed.org/-/media/documents/research/publications/policy-hub/2021/08/02/09-digital-payments-and-unbanked.pdf>

¹⁷ Founded in Kenya, the M-Pesa demonstrates some of the unique benefits offered by a digital payment and money transfer service via mobile phones for the underbanked. Notably, M-Pesa is not a deposit-taking institution like a bank. M-Pesa had not only been quickly adopted by most Kenyans over the previous few years, but one impact was that 2% of households were lifted out of poverty as a result. Moreover, the M-Pesa has aided in increasing the country's financial inclusion from only 26% in to 84% in 2021.

<https://www.mckinsey.com/industries/financial-services/our-insights/driven-by-purpose-15-years-of-m-pesa-evolution>; see also

<https://www.atlantafed.org/-/media/documents/research/publications/policy-hub/2021/08/02/09-digital-payments-and-unbanked.pdf>

- 35% have household incomes of less than \$60K annually.¹⁸

Further, in many places in the world, especially where people are living under authoritarian regimes or suffer from hyperinflation or strife, crypto can provide a lifeline to store value out of the reach of corrupt or poorly run governments.¹⁹ Crypto has also been used as a tool to quickly mobilize resources during times of acute need with examples in Ukraine (following Russia's invasion)²⁰, India (for COVID Relief)²¹ – and even in the last week, in Syria and Turkey (following the devastating earthquakes)²². More specifically, during my time at the Centre Consortium, we supported Stellar's partnership with the United Nations High Commissioner for Refugees (UNHCR) to distribute USD Coin on the Stellar blockchain as a form of financial assistance to Ukrainian refugees.²³

Meanwhile, in the energy space, blockchain can be used to improve the transparency, accountability, and traceability of greenhouse gas emissions. Governments and businesses can also use blockchain to better report, track and calculate in real-time the reduction of the carbon footprint across the entire value chain.²⁴ For example, the World Bank Group's International Finance Corp is exploring a blockchain solution with Chia Network²⁵ that can enable transparent, instant sharing and reporting of information among governments and climate registry systems about climate projects.²⁶

While the collapse has had devastating effects, we must also keep in mind that crypto is servicing some very real needs around the world. A nuanced and global outlook is key.

III. Regulation matters

¹⁸

<https://www.kansascityfed.org/research/payments-system-research-briefings/the-cryptic-nature-of-black-onsumer-cryptocurrency-ownership/>

¹⁹

<https://www.thenationalnews.com/business/money/2022/07/27/why-cryptocurrencies-are-a-lifeline-for-people-in-developing-countries/>

²⁰

<https://www.economist.com/the-economist-explains/2022/04/05/how-is-ukraine-using-crypto-to-fund-the-war>

²¹

<https://cryptorelief.in/>

²²

<https://hub.elliptic.co/analysis/turkey-and-syria-earthquakes-crypto-exchanges-and-donors-raise-12-million-in-aid/>

²³

<https://www.stellar.org/press-releases/unhcr-launches-pilot-cash-based-intervention-using-blockchain-technology-for-humanitarian-payments-to-people-displaced-and-impacted-by-the-war-in-ukraine>; see also:

<https://cointelegraph.com/news/stellar-partners-with-unhcr-to-give-ukrainian-refugees-cash-via-usdc>

²⁴

<https://digital-strategy.ec.europa.eu/en/policies/blockchain-climate-action>

²⁵

<https://www.reuters.com/business/environment/exclusive-world-banks-ifc-taps-blockchain-carbon-offsets-2022-08-17/>

²⁶

<https://www.coindesk.com/business/2021/11/05/chia-network-to-develop-prototype-for-world-banks-climate-warehouse/>

a. Building the new highways of tomorrow

We are in the middle of building new digital highways – blockchains.

In 1919, a convoy of 81 Army vehicles set out from Washington, D.C., to see if they could cross the country to San Francisco. They averaged about 6 miles an hour, about only 58 miles a day, and did not arrive in San Francisco until 62 days and 3,251 miles later.²⁷

On that truck convoy was future President Dwight D. Eisenhower, who later signed the Federal-Aid Highway Act of 1956, which led to the building of the U.S. Interstate System. The Interstate System transformed the American way of life.²⁸ Not only did it add jobs²⁹ through its construction project, but it also changed our way of life as motorists, the food we eat, and nearly every item we purchase.

We are right now building new digital highways – blockchains. Technological innovation enhances people's lives in meaningful ways. In the financial sector, policy should focus on consumer benefits, including empowering individuals to make informed financial decisions, ensuring competitive and open markets for products and services, increasing efficiency and reducing costs, minimizing abuse, and expanding access and opportunities for those who have been underserved by traditional financial providers. In short, technological innovation should be harnessed to improve access, efficiency, and equity for digital consumers.

To facilitate the growth of a resilient and sustainable digital future, policymakers need to be intentional in their choice of building blocks to lay down as the foundation for a digital economy. I discuss this further in the "Recommendations" section of my testimony.

Developing a flourishing digital ecosystem ultimately relies upon not only a foundation of optimistic innovators, but also on laws, regulations, and policies that guide policymakers, investors, and businesses to facilitate long term value. While the building blocks of principles I describe below are by no means exhaustive, they nevertheless provide a valuable starting point when formulating more granular rules, design choices, economic incentive structures, and governance structures for the future.

b. Supporting the evolution to Web3

The Web3 digital future depends on openness, interoperability and composability.

²⁷

<https://www.washingtonpost.com/history/2019/07/07/driving-cross-country-was-crazy-idea-an-army-convoy-set-out-show-it-could-be-done/>

²⁸ <https://www.archives.gov/milestone-documents/national-interstate-and-defense-highways-act>

²⁹ <https://highways.dot.gov/public-roads/summer-1996/federal-aid-highway-act-1956-creating-interstate-system>

Web3, which builds on decentralization, blockchain, and tokens and other digital assets, is the next stage in the evolution of the Internet.³⁰ Web3 can foster new creative and economic opportunities and systems for creators, investors, and consumers.³¹ The technological revolution arising out of the invention of the Internet was based on the Internet's ability to move information nearly in real-time. Web3 will be based on community-governed, decentralized networks that will allow us to move value at these speeds without losing control of our personal data.³²

Web3's success depends on having standards that promote openness, interoperability, and composability.³³ Open source code allows anyone to examine and verify the technical underpinnings of service provision, which furthers the integrity of the code and the system. Open APIs also facilitate interoperability—the reliable exchange of information between nodes in a system. And composability ensures that system components can be evaluated independently and combined in various ways with other components to meet evolving user needs. Together, these features enable effective and trustworthy products and services. In contrast, market asymmetries and monopolies flourish when there are closed, proprietary technical standards. The associated costs and friction can lead to suboptimal products for consumers and deprive creators of control over their work and data.³⁴

c. Creating a clear and supporting environment for innovation

We need regulation by public rulemaking, not regulation by enforcement.

Importantly, regulators should set rules via clear regulations through a considered public rulemaking process rather than after-the-fact enforcement. Enforcement actions enforce regulations, but regulations should be promulgated through a public notice and comment period. Congress devised this public process because we require our agencies to be accountable to the American people. When U.S. regulators consider a rulemaking, they must provide public notice of its draft rule for public comment. The public is given generally 30 to 90 days to comment.³⁵ After the comment period ends, the agency must carefully consider all the public comments received and provide a written response to these comments when the finalized rule is issued.

³⁰ <https://future.com/why-web3-matters/>

³¹ <https://www.cnn.com/2022/04/20/what-is-web3-gavin-wood-who-invented-the-word-gives-his-vision.html>

³² <https://onezero.medium.com/why-decentralization-matters-5e3f79f7638e>

³³ https://a16z.com/wp-content/uploads/2022/04/principles-and-models-of-decentralization_miles-jennings_a16zcrypto.pdf

³⁴ For example, the web browser Mozilla Firefox, which adheres to open standards of the World Wide Web Consortium, surpassed Microsoft's Internet Explorer, which followed a proprietary standard and had dropped to 20% of the market by 2014.

³⁵ https://www.4ipcouncil.com/application/files/3615/4357/8178/4IP_Council_-_Proprietary-vs-Open-Standards_-_Nov18.pdf

³⁶ https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf

As I will elaborate, other countries are not waiting for the U.S. to act. Rather, they are proposing comprehensive frameworks and engaging in consultations with the public and industry on key issues. Innovation will move, and is moving, where innovators feel that their voices can be heard and that they will not be surprised by enforcement actions, when they are acting in good faith.

Last year, there were a number of enforcement actions from both the SEC and CFTC, but only very limited engagement on proactive rulemaking. There were approximately 30 cases brought forth by the SEC³⁶ and 18 cases brought forth by the CFTC³⁷. By comparison, there were two proposed rules on limited issues from the SEC and two from the CFTC³⁸.

A patchwork approach to regulation will not work.

While there is an important role for state governments to play, leadership must come at the national level and from the legislative branch. Having vastly different approaches and regulations across states presents a big problem for companies that are looking to headquarter in the U.S. We are, for instance, already seeing divergent approaches when it comes to data protection, which has significant implications for financial services. Similarly, separate licensing processes and requirements in each state could cause a significant amount of friction.

This is concerning for a few reasons. First, there should be basic customer protection for individuals, regardless of where they live. National policymakers and regulators who have decades of experience in this type of rulemaking should be involved in setting the standard. Second, a patchwork approach could drive activity offshore. Offshore activity has been a major concern and risk for crypto and consumers. Third, because crypto is global, it will be critical to have an internationally-coordinated approach. This requires the U.S. to come to the table with a unified stance, in order to maintain its position of leadership in these standard-setting and cooperative bodies.

d. Ensuring consumer access

Web3 has the potential to go beyond consumer protection into consumer empowerment through greater access, efficiency and improved distribution of control or ownership interests.

Digital assets have already proved capable of furthering these goals. Digital assets often serve as a medium of exchange that is faster, more secure, and less expensive than traditional mediums.³⁹ Digital assets, which can be accessed and used by anyone with a

³⁶ <https://decrypt.co/119448/nearly-half-sec-crypto-enforcement-actions-2022-were-against-icos>

³⁷ <https://www.cftc.gov/PressRoom/PressReleases/8613-22>

³⁸ https://www.federalregister.gov/documents/search?conditions%5B%5D=commodity-futures-trading-commission&conditions%5B%5D=securities-and-exchange-commission&conditions%5Bpublication_date%5D%5B%5D=2022&conditions%5Bterm%5D=%22digital+asset%22&conditions%5Btype%5D%5B%5D=PRORULE

³⁹ Automated Clearing House (ACH) in the U.S. has phased in a twice-a-day clearing and settlement system, whereas blockchain can process transactions in-real time. Using ACH data, a research report

smartphone, are also more widely available than traditional banking and investment mechanisms.⁴⁰ Continued collaboration between governments and industry can further develop mechanisms to realize the full benefits of digital assets for all.

e. Maintaining a competitive edge, national security, and oversight.

Other countries are making significant policy, regulatory, and technological advancements.

As someone who has worked in the international arena, I have particular interest in following global developments and international standard-setting by bodies like the Financial Stability Board and the Basel Committee. We saw a large uptick in activity both at the national level and the international level in 2022. Last year, Japan adopted the first piece of legislation for stablecoins and crypto exchange registration.⁴¹ The European Union is adopting its own comprehensive crypto framework (the "Markets in Crypto-Assets Regulation" or MiCA).⁴² The United Kingdom has announced its first consultation on digital assets, including crypto lending.⁴³ In Asia-Pacific, Singapore closed its consultation period in December on additional crypto rules, and Australia recently proposed a taxonomy of digital assets for public comment.⁴⁴ And Hong Kong is expected to release a proposal for public comment in the next few months.⁴⁵

In the meantime, international standard setters working under the auspices of the G20 and G7 have been working toward globally-consistent rules for crypto-assets. The Financial Stability Board is finalizing its recommendations after closing its public comment period in December.⁴⁶ The Basel Committee on Banking Supervision (BCBS) is also finalizing its capital framework for

calculated the annual opportunity cost of using a *real-time* model such as blockchain versus ACH's discrete, *twice-a-day* clearance and settlement procedure. For 2016, the real-time protocol would have resulted in benefits for businesses and customers of \$10 billion. This figure may even be an underestimate to the true value, as the assumption in this calculation does not take into account cost savings from transactions larger than \$25,000 or international exchanges.

<https://www.ingentaconnect.com/contentone/haiti/2019/00000021/00000001/art00002?crawler=true&mimetype=application/pdf>

⁴⁰ It turns out that the popular narrative of the "crypto bro" is misleading. Purchasers of digital assets actually vary widely in terms of demographics. Average cryptocurrency buyer is under 40 (mean age is 38); 55% do not have a college degree; 44% of crypto traders are not white; 41% of traders are women; 35% have household incomes of less than \$60K annually.

<https://www.kansascityfed.org/research/payments-system-research-briefings/the-cryptic-nature-of-black-consumer-cryptocurrency-ownership/>

⁴¹

<https://www.bloomberg.com/news/articles/2022-06-03/japan-passes-stablecoin-bill-that-enshrines-investor-protection>

⁴² <https://data.consilium.europa.eu/doc/document/ST-13198-2022-INIT/en/pdf>

⁴³

<https://www.gov.uk/government/consultations/future-financial-services-regulatory-regime-for-cryptoassets>

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<https://www.mas.gov.sg/news/media-releases/2022/mas-proposes-measures-to-reduce-risks-to-consumers-from-cryptocurrency-trading-and-enhance-standards-of-stablecoin-related-activities>

⁴⁵ <https://www.reuters.com/technology/hong-kong-set-shortlist-crypto-tokens-retail-trading-2023-01-11/>

⁴⁶

<https://www.fsb.org/2022/10/regulation-supervision-and-oversight-of-crypto-asset-activities-and-markets-consultative-report/>

banks holding crypto-assets.⁴⁷ The International Organization of Securities Commissions (IOSCO) is currently drafting separate sets of regulatory principles for crypto exchanges and DeFi, respectively,⁴⁸ and had jointly issued guidance with the Committee on Payments and Market Infrastructure (CPMI) on how the *Principles for Financial Market Infrastructures* (PFMI), could apply to stablecoin arrangements.⁴⁹ The Financial Action Task Force (FATF) is continuing to push for countries to implement its 2019 guidance for anti-money laundering and combating the financing of terrorism (AML/CFT) regulation of virtual asset service providers and is monitoring and evaluating implementation across jurisdictions.⁵⁰

Central Banks are experimenting directly with digital asset activities. For example,

- Project mBridge - the BIS Innovation Hub Hong Kong Centre, the Hong Kong Monetary Authority, the Bank of Thailand, the Digital Currency Institute of the People's Bank of China, and the Central Bank of the United Arab Emirates are building a multi-central bank digital currencies platform that could enable cross border trade without going through traditional correspondent banking of foreign exchange markets.⁵¹
- Project Dunbar - led by the BIS Innovation Hub in partnership with the Reserve Bank of Australia, Central Bank of Malaysia, Monetary Authority of Singapore, and South African Reserve Bank, is testing the use of central bank digital currencies for improving international settlement.⁵²
- Project Mariana - a joint project between the Switzerland, Singapore, and Eurosystem BIS Innovation Hub Centres, the Bank of France, the Monetary Authority of Singapore, and the Swiss National Bank, is exploring the use of DeFi for the cross-border exchange of hypothetical Swiss franc, euro, and Singapore dollar wholesale Central Bank Digital Currencies (CBDCs) between financial institutions to settle foreign exchange trades in financial markets.⁵³

At the national level, China has been leading the way on CBDCs, being the largest economy with a CBDC pilot already involving hundreds of millions of transactions.⁵⁴ Other jurisdictions are following a similar trajectory. The European Union is moving swiftly in its CBDC exploration and has already outlined design options for a digital euro.⁵⁵ And the Bank of England last week announced a consultation period to review options for a digital pound, which it assessed will

⁴⁷ <https://www.bis.org/bcbis/pub/d545.htm>

⁴⁸ <https://www.iosco.org/news/pdf/IOSCONWS649.pdf>

⁴⁹ <https://www.bis.org/cpmi/pub/d206.htm>

⁵⁰ <https://www.fatf-gafi.org/en/publications/Fatfrecommendations/Targeted-update-virtual-assets-vasps.html>

⁵¹ https://www.bis.org/about/bisih/topics/cbdc/mcdbc_bridge.htm

⁵² <https://www.rba.gov.au/payments-and-infrastructure/central-bank-digital-currency/pdf/project-dunbar-report-2022-03.pdf>

⁵³ <https://www.bis.org/about/bisih/topics/cbdc/mariana.htm>

⁵⁴ <https://www.wired.com/story/chinas-digital-yuan-ecny-works-just-like-cash-surveillance/> see also

⁵⁵ <https://www.lawfareblog.com/china-making-smart-money>

<https://www.consilium.europa.eu/en/press/press-releases/2023/01/16/eurogroup-statement-on-the-digital-euro-project-16-january-2023/>

eventually be necessary.⁵⁶ These developments by central banks make it more important for the U.S. policymakers to become more familiar with the array of technologies and approaches that are likely to impact the future of digital finance and commerce. The technical ingenuity and resources within the crypto asset space can help U.S. policymakers identify an approach to digital finance that reflects principles of market openness and financial privacy.

Mainstream financial institutions are entering the fray as well.

- Banks in the Regulated Liability Network (RLN) and the New York Fed are exploring how to use bank deposits to tokenize money.⁵⁷ The RLN includes Citi, BNY Mellon, Wells Fargo, HSBC, and Mastercard are among the participants.
- Another project is Project Guardian – a collaborative initiative with the financial industry that seeks to test the feasibility of applications in asset tokenization and DeFi while managing risks to financial stability and integrity.⁵⁸ DBS, JP Morgan, and SBI Digital Asset Holdings explored how they were able to launch the first industry pilot where the banks conducted foreign exchange and government bond transactions against liquidity pools comprising of tokenized Singapore Government Securities Bonds, Japanese Government Bonds, Japanese Yen (JPY), and Singapore Dollar (SGD) on public blockchain networks.
- Last week, JPMorgan Chase released a white paper, arguing for "deposit tokens" over stablecoins.⁵⁹

Segregating the crypto sector from the traditional financial sector would present national security and oversight risks.

We are at a crossroads today with the transformation of money and assets, and their overall implications for the financial services sector and society at large. The rise of the Internet and advances in modern computing power have led to the creation of blockchain and other types of distributed ledger technologies. They have also led to the unbundling of financial services and fintech firms finding innovative ways to disintermediate, providing services and tokenizing assets along the financial services stacks. Make no mistake, this is a revolution.

Furthermore, this policy stance further segregates crypto finance from traditional finance, dangerously bifurcating our financial system as it continues to grow and transform. This could lead to distortions in market integrity and efficiencies.⁶⁰ We may end up with part of the economy transacting in Fed-sanctioned U.S. dollars while the other part transacts in non-USD digital

⁵⁶ <https://www.bankofengland.co.uk/paper/2023/the-digital-pound-consultation-paper>

⁵⁷ <https://www.newyorkfed.org/aboutthefed/nyic/facilitating-wholesale-digital-asset-settlement>

⁵⁸ <https://www.mas.gov.sg/schemes-and-initiatives/project-guardian>

⁵⁹ <https://cointelegraph.com/news/jpmorgan-sees-deposit-token-advantages-over-stablecoin-for-commercial-bank-blockchains>

⁶⁰ Evidence has demonstrated that derisking in other contexts, such as terminating CBRs, carries severe economic impacts which include harms to financial inclusion, financial integration, and financial transparency with pronounced impacts on poor populations, small businesses, and women. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/17496/1162_SIDS_CBR_derisking.pdf?sequence=1; see also <https://www.csis.org/analysis/there-new-normal-de-risking-caribbean>

assets outside the governance and monitoring of the Fed.⁶¹ As this shadow economy grows, this erodes the Fed's ability to do its job - implementing effective monetary policies and ensuring economic stability.⁶²

Practices like "de-risking" this space generally have led more often than not to unfavorable outcomes. We have seen, in the past, U.S. banks terminate relationships with certain countries or industries due to concerns about money-laundering and failure to comply with U.S. regulations. However, this harmed those economies – as they no longer have access to banks – leading to lowered financial inclusion and, importantly, a push into shadow banking that the U.S. has no control over. The FATF itself has acknowledged that de-risking driven financial exclusion presents a risk to the financial system. Analogously, if we place crypto outside the U.S. regulatory perimeter, similar issues would arise. We will no longer have the ability to oversee or influence an ever-increasing asset class. This oversight gap gives illicit actors like terrorists, traffickers, and sanctions evaders more not less room to operate.⁶³

Also, we have clear evidence that attempts to exclude crypto markets from the regulated financial sector do not deter crypto activity. China banned crypto trading in 2021, but blockchain analysis shows that such activity continues underground.⁶⁴ Also in 2021, Nigeria prohibited its banking sector from servicing crypto businesses. However, crypto usage there continues to soar through informal and peer-to-peer trading.⁶⁵

IV. Recommendations: Building Blocks for a Digital Future

To build a strong and secure digital future, we need to put down the right building blocks.

There are various building blocks for constructing a legal and regulatory framework that would support the growth of a resilient and sustainable digital economy. Any framework must address a range of issues, including: consumer and investor protection, digital money, decentralized

⁶¹ Bifurcation between crypto and tradfi may create what's known as a regulatory paradox, as it pushes crypto operations to less regulated and less monitored markets, creating net more opacity and risk in the financial system.

<https://www.asbasupervision.com/es/bibl/i-publicaciones-asba/i-2-otros-reportes/1598-an-overview-on-de-risking-drivers-effects-and-solutions/file>; derisking historically has also made it more difficult for humanitarian organizations to operate in countries and provide humanitarian assistance to refugees from political conflicts or natural disasters.

<https://www.worldbank.org/en/topic/financialsector/brief/de-risking-in-the-financial-sector>

⁶² IMF economists estimated that the shadow economy of Europe's major economies could already be as high as 20% to 35%.

<https://www.reuters.com/article/uk-global-digitalcurrency/column-central-bank-digi-cash-spooking-shadow-economy-to-crypto-idUSKBN2AHDRR>; see also

<https://cryptoforinnovation.org/what-recent-banking-agencies-statements-could-mean-for-crypto/>

⁶³ See also,

<https://cryptoforinnovation.org/what-recent-banking-agencies-statements-could-mean-for-crypto/>

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<https://asia.nikkei.com/Spotlight/Cryptocurrencies/Chinese-crypto-activity-slows-but-not-dead-despite-ban>

⁶⁵

<https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/cryptocurrency-usag-e-soars-in-nigeria-despite-bank-ban-70497781>

finance (DeFi), digital identity, private commercial law, bankruptcy, accounting, tax, energy, technology standards, illicit finance and national security.

While some of these are not in the direct scope of the Banking Committee, it is important to remain vigilant to the many interrelated issues that crypto policy and regulation raises.

Coordination is key. To avoid unintended consequences, regulatory arbitrage, and the fallout from pushing activity offshore, it is critical to have both intra-government coordination – across our relevant Departments and Agencies, and in partnership with legislators – and intergovernmental coordination – through international bodies as discussed above.

Some of the top areas of consideration are:

a. Consumer protection and empowerment

There should be a comprehensive consumer protection framework to allow individuals to have a right to control their digital assets.

Property rights are the basis of our modern economy. They are fundamental in the physical world, and they should have the same status in the digital world as well. Consumers should be able to maintain control of their digital assets, including the right to transfer, give, host, and display their assets. Earlier Internet platforms typically provided only some of these rights, but the successful implementation of a Web3 ecosystem can provide this entire bundle of rights to empower consumers in new ways, such as consumer data rights, so that consumers can control what personal data to share, with whom and for how long.⁶⁶

The meaningful protection of these rights depends on many safeguards and practices: there should be disclosure requirements for token issuers, safeguards against risks, clear governance, and operational resilience processes. These regimes should be accessible and comprehensible by the average customer without the need for a lawyer to interpret complex terms and conditions.

Web3 has the potential to go beyond consumer protection toward consumer empowerment.

Instead of simply re-creating and digitizing the systems of today, we should be thinking about how technology can create a *better* financial system. To me, this means going beyond consumer protection and thinking about consumer empowerment. How can individuals own and control their financial data – and reap themselves the benefits of its value? How can we create a marketplace of options, where customers have greater choice? How can related aspects, like identification, be managed in a manner that preserves privacy and autonomy?

⁶⁶ Jeng, Linda, ed. Open Banking, Oxford University Press (NY 2022).
<https://global.oup.com/academic/product/open-banking-9780197582879?cc=us&lang=en&#>;
<https://www.zdnet.com/finance/blockchain/how-web3-is-driving-new-relationships-with-your-customers/>

Features of Web3, as discussed in the "Beyond Banking" section of my testimony, can enable some of these realities, which can seem like a fantasy today. But, if we get this foundation right, I believe we can build a digital economy that looks different than the one we see today. I am especially excited about this potential for those who have been left out of or under-served by the current systems.

For this to become a reality, we need the appropriate frameworks and investments in place. A transition to a better digital economy cannot happen without corresponding investments in digital public infrastructure, digital literacy, and innovation for the public good. For example, we have seen localized efforts to provide crypto education to users so that engagement takes place in a risk aware manner.⁶⁷ But, we need more education to avoid any potential harm to those that may be new to engaging with these types of services and assets.⁶⁸ So, consumer protection and empowerment must be viewed as a multi-pronged and holistic endeavor.

Private commercial law should provide legal clarity to transactions in digital assets.

The legal characterization and treatment of digital asset transactions should provide parties with confidence over key transactional issues, such as property rights, settlement finality, how to legally protect oneself from adverse claims in digital asset sales, or how to perfect and enforce security interests in digital assets against third parties, where applicable.

In common law countries, private commercial laws govern private transactions. For example, the U.S. has the Uniform Commercial Code, which was recently revised to take into account digital assets and is in the process of being adopted by the 50 states. In the United Kingdom, the UK Law Commission has proposed a new asset class: "data objects".⁶⁹ Private commercial law around the globe should be flexible enough to cover the many different types of digital assets: ranging from digital money to digital securities to digital art along with new types of assets.

The legal recognition of property rights over digital assets should not hinge on impractical transfer mechanics or complex categorical definitions, as this can lead to uncertainty over the legal validity of transfers. Moreover, a successful crypto ecosystem cannot operate without digital money free of security interests. To the extent possible, perfecting a security interest in a digital asset should parallel the process of perfecting a security interest in the digital asset's analogous, physical counterpart. Private law should outline straightforward procedures that good faith purchasers can undertake to ensure the acquisition of digital assets free from any prior security interests.

Insolvency rules should put consumers first as technologies evolve.

⁶⁷ <https://www.oakcommunity/>; see also:

<https://www.businessinsider.com/jay-z-jack-dorsey-bitcoin-academy-marcy-houses-2022-9?r=US&IR=T>

⁶⁸ <https://web3athon.xyz/>

⁶⁹ <https://s3-eu-west-2.amazonaws.com/lawcom-prod-storage-11isxou24u7q/uploads/2022/07/Digital-Assets-Consultation-Paper-Law-Commission-1.pdf>

Insolvency respects property rights granted under either private commercial laws or regulatory regimes. Distinct features of digital assets necessitate insolvency rules for digital assets that differ from the insolvency rules for cash, securities, commodities, and associated accounts.

Within the broader class of crypto, however, insolvency rules should be drawn flexibly to cover different crypto platforms, both as they exist today and as they might evolve, to provide continued predictability and integrity to investors and customers alike. And as with traditional insolvency rules, crypto-oriented insolvency rules should reflect investor and customer interests, not internal organization, technology, or business models, except to the extent needed to promote investor and customer interests.

Within this framework, bankruptcy rules for crypto should protect customer interests while minimally impeding counterparty transactional flexibility. Insolvency rules should honor commercially-agreed terms for digital assets. Those terms should define the specifics of the relationship between entities that transact with crypto and those customers. Customers should be provided with default customer protections, but customers should have the ability to opt-out of this default relationship and its protections.

Default customer protections should include: i) mandated segregation of customers' digital assets from proprietary custodian assets, which can be achieved through the custodian's books and records; (ii) prohibitions on encumbrances on the digital assets, other than as directed by and for the benefit of the customer; and (iii) fast and easy netting of customer positions and transferring of net custodied digital assets.⁷⁰

b. National security, AML, and privacy

U.S. national security and law enforcement officials need to be familiar with crypto to mitigate risks

Crypto is a global technology that by its very nature cannot be contained within borders. As various state and non-state actors seek to take advantage of crypto's borderless nature to harm the United States, U.S. personnel need the expertise to combat them. U.S. law enforcement and intelligence agencies must understand how blockchains work, they must have the technical tools to monitor illicit finance, and they must remain on the cutting edge of crypto to foresee how national security threat actors will evolve in Web3 environments. U.S. national security officials will also need familiarity with decentralized technology stacks in order to create more innovative and agile tech approaches for keeping our country safe. The U.S. government needs blockchain expertise and will benefit from a robust private crypto sector located in the United States that can provide support via talent and tools to the public sector.

Also, in order for policymakers to ensure that U.S. regulators continue to maintain efficacy in their mission to prevent money laundering, terrorist financing, and sanctions evasion, regulators

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<https://cryptoinnovation.org/wp-content/uploads/2023/01/FSB-Comment-Letter-and-Global-Regulatory-Blueprint.pdf>

need to be deeply familiar with finance as it is evolving. If the regulators remove themselves from the oversight of crypto assets by segregating crypto from the traditional financial sector, it will be difficult to develop the regulatory frameworks which will address internet-based financial innovation.

There should be privacy-preserving technologies that respect national security interests.

Privacy is a fundamental human right and social good. Privacy-preserving technology allows data computation and targeted analysis while remaining encrypted to those performing the computation and malicious actors who might seek to steal or corrupt that information.

Crypto has been on the cutting edge of experimentation in this area. Zero-knowledge rollups and configurable privacy blockchains are emerging forms of privacy-preserving technologies that balance individuals' privacy interests with broader public policy and societal requirements, such as effective compliance, transparency, and safety.⁷¹ Private crypto should not be exempt from all regulations, but rather, the regulatory perimeter should extend to crypto in a manner similar to how it already covers anonymous cash transactions.⁷²

Governments should adopt laws and policies that allow for the development and use of privacy-preserving technologies, while also enabling appropriate compliance. For example, regulators could establish processes to evaluate the way novel mechanisms can be used to create and maintain digital identity records, including the adoption of digital identity verification techniques that can use a combination of decentralized blockchain-based technologies and secure "off-chain" data repositories. Regulators could also encourage zero-knowledge proof technologies⁷³, which allow users to interact with systems without revealing specific personal identifying information. Concurrently, governments should respect personal privacy themselves by accessing or using data on individuals only when doing so is necessary to further a specific, narrowly tailored, and legitimate governmental objective. In 2016, the European Union adopted its General Data Protection Regulation (GDPR), which provides EU citizens with active consumer data rights, including the rights to delete and correct. California followed suit with its adoption of the California Consumer Privacy Act of 2018 (CCPA). In the past year, several states passed broad privacy laws that go into effect this year:

- Virginia Consumer Data Protection Act ("Virginia Act"), which became effective January 1, 2023;
- Colorado Privacy Act ("Colorado Act"), which becomes effective July 1, 2023;
- Connecticut Act Concerning Personal Data Privacy and Online Monitoring ("Connecticut Act"), which becomes effective July 1, 2023; and
- Utah Privacy Act ("Utah Act"), which becomes effective December 1, 2023.⁷⁴

⁷¹ <https://ethereum.org/en/developers/docs/scaling/zk-rollups/>

⁷² <https://www.coincenter.org/the-case-for-electronic-cash/>

⁷³ <https://ethereum.org/en/zero-knowledge-proofs/>

⁷⁴ <https://www.gunder.com/news/start-preparing-for-new-state-privacy-laws-that-take-effect-in-2023/#:~:text=This%20alert%20highlights%20key%20requirements.Connecticut%20and%20Utah%20in%202023>

c. Innovation and international competitiveness

Web3 is the evolution of the Internet, and the U.S. risks being left behind in innovation and new markets by not fostering its development.

If the crypto ecosystem were de-banked, it would have dire consequences for the U.S. financial industry and the U.S.'s ability to be a leader in digital innovation. The industry would be driven off-shore to other countries or into shadow banking where regulators would lose the ability to monitor and regulate digital asset activities - thus bifurcating the U.S. financial system. Such siloing of crypto activities would stifle innovation and suppress our leadership in the digital innovation.

Failure to enact rules – either through rulemaking or legislation – that protect consumers and investors and allow digital assets to develop in the U.S. would risk offshoring innovation and putting American businesses, consumers, and the economy at a competitive disadvantage with our foreign peers. It could also jeopardize an important national security lever of the U.S. government – the preeminence of our financial system.

d. Building blocks beyond banking: Considering the future of crypto

(i) Digital money

Fiat-backed payment tokens should be treated as cash-equivalents for legal and accounting purposes.

Payment tokens, including stablecoins, power the digital assets ecosystem⁷⁵. Fiat-backed stablecoins issued by centralized issuers should be backed by fiat currency 1:1, secure, audited, and subject to sufficient risk management practices. Such fiat-backed payment tokens should be backed only by segregated cash, bank deposits, or high-quality liquid assets ("HQLA"), such as short-term U.S. Treasuries or other internationally liquid denominated government debt instruments (Euro, GBP, CHF, JPY).⁷⁶ Issuers should also be required to publish quarterly third-party attestations and an annual third-party audit. Accordingly, regulations and accounting rules should treat fiat-backed tokens as cash-equivalent and avoid double-counting and capital charges. Correspondingly, such payment tokens should be subject to appropriate taxation policies. And private commercial law should prohibit secured interests in such payment tokens.⁷⁷

(ii) Digital identity

Decentralized, self-custodied identity is critical to the digital economy.

As discussed above, promoting privacy-preserving technology is vital. Emerging

⁷⁵ <https://www.coindesk.com/learn/what-is-a-stablecoin/>

⁷⁶ <https://www.centre.io/blog/lessons-learned-from-terra>

⁷⁷ <https://www.centre.io/blog/centres-response-to-australian-treasury>

decentralization technologies facilitate privacy and control by enabling self-management of digital identity. Self-custodied identity allows individuals to manage their personal digital assets that can attest to their identities. For verifying a user's identity, the user can choose which digital assets to share, with whom to share, and for how long. Self-managed identity in turn enables users to verify their identities remotely and participate in financial activity without having to present personally-identifiable information numerous times to intermediaries and, more broadly, to reap many benefits of online activities without the restrictions, intrusions, and privacy risks posed by intermediaries—which often face strong incentives to harvest, sell, or exploit individuals' personally identifiable data.⁷⁸

Regulators should prioritize appropriate frameworks to ensure access to, respect for, and the integrity of self-managed digital identity. Individuals should be required to share identifiable information only to the extent necessary to perform desired tasks and transactions.⁷⁹ including allowing financial institutions to rely on self-custodied identity solutions for KYC purposes.⁸⁰

(iii) Decentralized finance (DeFi)

DeFi has the potential to level the playing field for consumers by removing traditional intermediaries.

Decentralized finance ("DeFi") is an emerging area of blockchain-enabled financial services and products, including brokerage, banking, and exchange services, that do not involve the use of traditional intermediaries.⁸¹ Though historically brokers of trust, financial intermediaries often introduce inefficiency through higher costs, slower execution or both. By eliminating intermediaries – and, instead, relying on tech-enabled models of trust – DeFi holds the potential to level the playing field for many financial actors who have traditionally been disadvantaged, such as lower-income and unbanked/underbanked individuals and small businesses.⁸²

To realize these DeFi benefits, an appropriately-tailored regulatory framework for DeFi is necessary and should involve the regulation of the centralized/business-owned applications, or onboarding access points to protocols, not the protocols or software themselves.⁸³ In a decentralized system, no one particular entity controls the protocol, and a protocol cannot

⁷⁸ See, <https://www.forbes.com/sites/forbestechcouncil/2021/12/10/how-decentralized-identity-is-reshaping-privacy-for-digital-identities/?sh=256588ab3226>; <https://www.centre.io/verite>

⁷⁹ See, Letter from CCI to Himamauli Das, U.S. FinCEN, re: Response to FinCEN's Request for Information on the Modernization of U.S. AML/CFT Regulatory Regime, at 3 (Feb. 13, 2022).

⁸⁰ <https://www.centre.io/blog/centres-response-to-fincen-rfi>

⁸¹ <https://cointelegraph.com/defi-101/defi-a-comprehensive-guide-to-decentralized-finance>; https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3866699

⁸² <https://www.cato.org/events/differentiating-defi-understanding-efforts-regulate-decentralized-finance>

⁸³ <https://a16zcrypto.com/web3-regulation-apps-not-protocols/>; <https://a16zcrypto.com/regulate-web3-apps-not-protocols-part-ii-framework-for-regulating-web3-apps/>

incorporate subjective determinations that traditional financial regulations sometimes require. Unlike the protocol layer, businesses and developers of DeFi applications do not have the same constraints with respect to subjective determinations. They can comply with different jurisdictional regulations and design flexible access points that minimize legal and regulatory risks.

Adoption of a regulatory framework that captures the software infrastructure, rather than the applications which operate as access points, could lead to challenges. These include jeopardizing the benefits of DeFi for millions of people, and pushing lending protocol developers to jurisdictions with particularly loose regulatory frameworks.

Similarly, in the context of Bank Secrecy Act applicability, FinCEN has recognized that suppliers of tools (communications, hardware, or software such as protocols) that may be utilized in money transmission, like anonymizing software, are engaged in trade and *not* money transmission.

If regulators were to impose subjective and globally-inconsistent regulations on DeFi protocols, innovation in decentralization would be stifled. However, these are the very properties that make DeFi protocols, and the Web3 business models they support, functional and useful in the first place. Thus, regulators must account for decentralization when crafting policies and rules, and acknowledge that frameworks for centralized platforms and instruments are unsuitable for decentralized ones.

Governments should take time to carefully study DeFi before making policy frameworks for this quickly-developing space. Governments may consider aspects such as progressive decentralization, varying governance and economic models, and the unique risks and benefits associated with operating financial services in this manner. For example, regulators should carefully consider the practice of progressive decentralization (a process whereby a blockchain-enabled application shifts gradually from centralized to decentralized, aka transmigration), the diversity of governance and economic models supported by DeFi, and the distinct risks and benefits of DeFi.⁸⁴

Decentralization versus centralization is not binary and is in fact a spectrum of varying levels of decentralization. For example decentralization might be evaluated according to the following multi-pronged test:

- Has the protocol been deployed beyond the developer team's unilateral control?;
- Is the protocol deployed on a blockchain with a high number of unaffiliated validator nodes?;
- Is the governance model of the protocol controlled by hundreds of unaffiliated participants or by only a few participants?; and
- Are users' funds or assets held by a single party or

⁸⁴ <https://www.weforum.org/whitepapers/decentralized-finance-defi-policy-maker-toolkit/>

custodian or in the user's own wallets or bank accounts?⁸⁵

(iv) Additional considerations

In addition to the above issues, areas including taxation and accounting, among others, merit additional consideration in terms of how they intersect with digital assets.⁸⁶

V. Conclusion

Thank you again for the opportunity to discuss these important topics and your support for the regulatory certainty that could be established by legislation.

As I said at the outset of my remarks here today, the crypto ecosystem needs and desires a clear regulatory framework to protect consumers and national security. The future of digital asset regulation will require much more than just defining agency jurisdiction and placing various digital assets into governmental organizational charts. More legal and regulatory brainpower will be needed, and lawmakers have a unique opportunity to step into the void, especially in periods of crisis or uncertainty, to make a real difference for all of our children, including my young daughter. But moving the dial, whether it be on consumer and investor protection, or financial inclusion, requires understanding the technology, its limitations, and opportunities - and having a builder's mentality. Thanks so much to you all for the invitation to speak to you today. I look forward to your questions.

⁸⁵ Note: I added a fourth prong to Rebecca Rettig's three-pronged test for measuring decentralization. See, <https://cross-chain-examination.simplecast.com/episodes/global-crypto-regulation-and-the-rebecca-decentralization-test-unQWCHsx>

⁸⁶ See, <https://crypto4innovation.org/wp-content/uploads/2023/01/FSB-Comment-Letter-and-Global-Regulatory-Blueprint.pdf>

PREPARED STATEMENT OF YESHA YADAV
VANDERBILT UNIVERSITY LAW SCHOOL
FEBRUARY 14, 2023

Chairman Brown, Ranking Member Scott, Members of the Committee:

Thank you for this opportunity to appear before you today. It is an extraordinary honor and privilege for me.

The urgency of this hearing cannot be overstated. In the course of a single year, the cryptocurrency market has experienced a whipsawing state of crisis – moving from record-high valuations in November 2021 to the collapse of the Terra/Luna ecosystem in May 2022 and, most recently, the chaotic insolvency of FTX and that of other brand-name, crypto-finance firms.¹ We have been asked to speak to the question of why financial system safeguards are needed. This fallout points to a number of reasons. Chiefly, however, it highlights that digital asset markets have become popular, sophisticated, institutionalized, financialized, and interconnected.² Yet the risks within the ecosystem – technological, financial, and legal – remain poorly understood. Importantly, even as innovation advances apace, it does so without stable and clear guardrails that can better ensure that those creating and taking risks are doing so responsibly, with information, and in a way that does not produce disorderly externalities that fall on those least able to bear them. As our agencies and lawmakers continue the hard work of crafting a framework for overseeing digital assets, my remarks below focus on outlining a regulatory solution – a public mandate for self-regulation by cryptocurrency exchanges – that can be up and running rapidly to bring a layer of systematic oversight and standardization to the market. This solution is not a substitute for public regulation, nor is it without its problems. Rather, it seeks to offer a complement to public oversight – and one that can fluidly integrate into a thoughtful, expert and comprehensive system for regulating and overseeing digital assets within our financial system.³

As detailed in this testimony and elaborating on my academic work, the proposal seeks to achieve the following aims:

- To bring crypto-currency exchanges within a systematic public regulatory framework by requiring venues to commit to providing private oversight of their market as self-regulatory organizations (SROs). Such self-regulation is already codified in the law for securities and commodities exchanges. As SROs, crypto-venues would have to demonstrate their organizational capacity to provide oversight; be preemptively incentivized to clean house by improving the quality of internal governance and

¹ See e.g., *Factbox: From BlockFi to Genesis, Crypto Firms Reel from Exposure to FTX*, REUTERS, JAN. 5, 2023. On record high crypto-asset market capitalizations in November 2021, Joanna Ossinger, *Crypto World Hits \$3 Trillion Market Cap as Ether, Bitcoin Gain*, BLOOMBERG, NOV. 8, 2021; On the Terra/Luna collapse, Alexander Osipovich, *Cutting-Edge Crypto Coins Tout Stability. Critics Call Them Dangerous*, WALL ST. J., Apr. 18, 2022 (workings of algorithmic stablecoins and discussing Terra/Luna); Alexander Osipovich & Jiyoung Sohn, *Do Kwon's Crypto Empire Fell in a \$40 Billion Crash. He's Got a New Coin for You*, WALL ST. J., Jun. 22, 2022.

² For the most part, in this testimony, I typically use the terms “digital assets,” “cryptocurrency” and “crypto-assets” interchangeably.

³ I detail and analyze this proposal more fully in, Yesha Yadav, *A Public Mandate For Private Oversight in Cryptocurrency Markets* (Working Paper) (Feb. 2023) (formerly titled, *Toward a Public-Private Oversight Model for Cryptocurrency Markets*).

customer protection systems; and regulators would need to monitor ongoing compliance to ensure that exchanges are performing effectively.

- To create a mechanism of public accountability for crypto-asset trading venues, shifting the tradeoffs against irresponsible risk-taking and governance by making it more expensive to behave in ways contrary to the public interest.
- To have crypto-exchanges use their expertise, reach and resources, and to pay for monitoring their marketplace, reducing the burden on the taxpayer.

A. The Critical Importance of Cryptocurrency Exchanges

As once thriving crypto-firms like FTX have suddenly collapsed or fallen into distress, the pain is being felt most viscerally by everyday customers. They are confronting lengthy, complex, expensive, and uncertain legal processes in a bid to recover their assets.⁴ These customers represent everyday people – as well as institutions. According to one December 2022 survey examining five million active checking account customers, around 15% of individuals in the United States were estimated to have transacted in some crypto, up from a “tiny fraction” of the population just five years prior.⁵ Crypto-assets have proven to be especially appealing to minority Americans, with approximately 25% of Black Americans owing some at the start of 2022, compared to 15% of White Americans. For Black Americans under 40 years of age, this figure stood at 38% relative to 29% of White Americans.⁶ Institutions, too, represent a key user base for an increasingly sophisticated and financializing crypto-ecosystem. FTX’s largest 50 creditors are owed a total of more than \$3 billion – ten of these creditors have more than \$100 million each locked-up on the venue as part of FTX’s bankruptcy proceedings, with two owed more than \$200 million each.⁷

Cryptocurrency exchanges have played an essential part in this popularization. At around the market’s peak in December 2021, exchange trading volumes globally stood at approximately \$14 trillion for the year – a reported increase of 689% from 2020 figures.⁸ To be sure, exchange trading volumes have tumbled alongside the fortunes of the crypto-market and the collapse of FTX.⁹ But everyday trading volumes do not come close to conveying the anchoring significance of exchanges for the crypto-ecosystem. By offering users a convenient, usable, and often exciting trading environment, exchanges have built an easy on-ramp into cryptocurrencies for retail as well as

⁴ Andrew Scuria & Soma Biswas, *FTX Collapses Into Bankruptcy System That Still Hasn’t Figured Out Crypto*, WALL ST. J., NOV. 16, 2022.

⁵ JP Morgan Chase Research, *The Dynamics and Demographics of U.S. Household Crypto-Asset Use*, <https://www.jpmorganchase.com/institute/research/financial-markets/dynamics-demographics-us-household-crypto-asset-cryptocurrency-use> (Dec. 2022).

⁶ Charles Schwab, *Ariel-Schwab Black Investor Survey*, <https://www.schwabmoneywise.com/tools-resources/ariel-schwab-survey-2022> (2022). On record.

⁷ Joshua Oliver & Sajeet Indap, *FTX Businesses Owe More than \$3bn to Largest Creditors*, FIN. TIMES, NOV. 30, 2022.

⁸ Yogita Khatri, *Centralized Crypto Exchanges Saw over \$14 Trillion in Trading Volume This Year*, THE BLOCK, DEC. 24, 2021 (these figures reference trading volumes on centralized trading venues).

⁹ Vildana Hajric and Olga Kharif, *‘Spectacular’ Trading Drop Plagues Still-Reeling Crypto Market*, BLOOMBERG, JAN. 7, 2023.

institutional users. Notably, exchanges facilitate access and overcome frictions for those daunted by transacting on blockchains, being responsible for self-custody of crypto assets, worried about lengthy settlement times, or paying potentially high fees.¹⁰ Major exchanges often provide one-stop-shops for crypto-trading.¹¹ In addition to matching buyers with sellers, they offer crypto-custody, maintaining user passwords (or keys) to move value rapidly between accounts. This allows exchanges to provide virtually instantaneous settlement: as soon as a trade is matched, the exchange's own internal ledger updates user credit and debit balances. In other words, the action takes place "off-chain" – and settlement on public blockchains becomes unnecessary for real-time trading.¹² In addition, exchanges also offer users a suite of commercial products, like margin loans, general loans, credit cards, as well as various types of crypto-rewards programs, some of which have come in for regulatory scrutiny recently.¹³ As exemplified by FTX, Alameda Research and FTX Ventures, some venues also constitute critical financiers within the larger crypto-economy, funding venture capital and other types of investment across the crypto-economy.¹⁴

Notwithstanding the cryptocurrency market's adherence to notions of decentralization, then, its key pillars – the exchanges – constitute highly centralized institutions – indeed, to a far deeper degree than more traditional counterparts like the New York Stock Exchange (NYSE) or Nasdaq. But despite their importance for the crypto-economy, people, and institutions, regulation has so far failed to provide a comprehensive framework for their oversight. Outside of discrete contexts (like payments), cryptocurrency exchanges have grown in size, stature, and organizational complexity largely absent the guardrails that could be provided by a comprehensive federal system of regulation.¹⁵ As our agencies debate what legal categories cryptocurrencies fall into – whether these constitute securities, commodities, or some other classification – a lack of clarity on threshold determinations of which regulatory body has jurisdiction, and on what legal grounds, mean that the work of crafting oversight for crypto-exchanges remains a work-in-progress.¹⁶

¹⁰ David Easley & Maureen O'Hara, *From Mining to Markets: The Evolution of Bitcoin Transaction Fees*, 134 J. FIN. ECON. 91 (2019) (detailing the need for fees to be included in the context of transactions on the Bitcoin blockchain).

¹¹ Kristin Johnson, *Decentralized Finance: Regulating Cryptocurrency Exchanges*, 62 WM. & MARY L. REV. 1911, 1953-1955 (2021) (detailing the various trading functions performed by centralized cryptocurrency exchanges).

¹² Blockchain-based transfers are needed in some cases, notably, where crypto is moved off the exchange and to a user's personal wallet.

¹³ Ephrat Livni, *S.E.C. Charges Crypto Companies With Offering Unregistered Securities*, N.Y. TIMES, JAN. 12, 2022; Andrew Ross Sorkin et al., *The S.E.C. Signals a Crackdown on Another Crypto Practice*, N.Y. TIMES, FEB. 10, 2023.

¹⁴ Joshua Oliver, Nikou Asgari & Kadhim Shubber, *FTX: Inside the Crypto Exchange that 'Accidentally' Lost \$8bn*, FIN. TIMES, NOV. 18, 2022.

¹⁵ Exchanges are generally regulated as money transmission businesses and subject to licensing requirements at the state-level. At the federal level, such businesses are thus regulated to ensure compliance with laws against money laundering and illicit financing. In addition, and importantly, the states of New York and Wyoming provide licensing regimes for digital asset businesses and platforms. The New York State Department of Financial Services, for example, operates a regime for a "Bitlicense" that can supervise companies providing, for example, trading and custody services for digital assets. For discussion, Adam Levitin, *Not Your Keys, Not Your Coins: Unpriced Risk in Cryptocurrency*, TEXAS L. REV. (forthcoming), 8-9, 62-66. For discussions of state money transmission frameworks, including analysis how these are "antiquated" and not well-adapted to meet the firm structures and risks created by large-scale, tech payment services providers see, Dan Awrey, *Bad Money*, 106 CORNELL L. REV. 1 (2020).

¹⁶ See also, Chris Brummer, Testimony Before the Agriculture Committee, U.S. House of Representatives Subcommittee on Commodity Exchanges, Energy, and Credit The Future of Digital Asset Regulation (Jun. 23, 2022).

Yet as the collapse of FTX demonstrates, weak or limited guardrails on major crypto-exchanges risk leaving customers and the marketplace vulnerable to suffering heavy losses.¹⁷ By now, the extent of FTX's abysmal governance and risk management is fairly well-known. \$8 billion in customer money looks to be lost, possibly stolen.¹⁸ It ranks as *the worst* example of corporate mismanagement ever witnessed by current FTX-CEO, Mr. John Ray III, during a 40-year career as a restructuring expert that spans overseeing the fallout from the egregious fraud and self-dealing seen at Enron. With billions of dollars of capital locked and loans unable to be repaid, other companies have fallen into their own states of distress following FTX's bankruptcy. BlockFi and Genesis Global Capital, for example, have cited the resulting post-FTX cash crunch on their own books as a trigger for their own Chapter 11 petitions.¹⁹ But FTX is not the only exchange to have found itself treading troubled waters. Other top crypto-exchanges have faced a variety of difficulties and reputational costs, from heavy withdrawal requests, outages, to penalties for failures to implement robust money laundering controls.²⁰ The Securities and Exchange Commission (SEC) has recently pursued enforcement actions against two major venues for alleged violations of securities laws.²¹

The absence of a comprehensive federal oversight framework means that decisions with respect to proper exchange structure, customer protection norms, risk compliance and corporate governance are being taken *ex post* in litigation by the Bankruptcy Court, or by way of enforcement actions. For example, instead of expert, technically savvy rulemaking clearly setting out how customer crypto-assets ought to be looked after before the fact, customers must now wait for the Bankruptcy Court to rule whether customer assets constitute the property of debtor's estate in bankruptcy or whether they belong to the customer. But such consequential determinations will ultimately come too late, with losses already incurred and the reputation of the industry as well as the regulatory system tarnished. In other words, policymakers too must contend with damaged confidence and expectation for more from the American public. According to one survey of Black cryptocurrency

(noting the for example, the need for thoughtful disclosures adapted to reflect the unique technological risks posed by digital asset offerings),

¹⁷ To be clear, FTX was regulated and organized under the laws of the Bahamas, including under the provisions of the Digital Assets and Registered Exchanges Act 2020 (DARE). However, commentators have raised concerns regarding the robustness of this framework and whether oversight was sufficiently comprehensive. For example, Bahamas' regulators did not have full sight of all the entities involved, including activities relating to Alameda Research. Katanga Johnson & Jim Wyss, *One of FTX's Biggest Victims Could Be the Bahamas' Finance Reputation*, BLOOMBERG, JAN. 19, 2023.

¹⁸ Joshua Oliver, Nikou Asgari & Kadhim Shubber, *FTX: Inside the Crypto Exchange that 'Accidentally' Lost \$8bn*, FIN. TIMES, NOV. 18, 2022.

¹⁹ BUSINESS WIRE, *BlockFi Commences Restructuring Proceeding to Stabilize Business and Maximize Value for all Clients and Stakeholders*, Nov. 28, 2022, <https://www.businesswire.com/news/home/20221128005451/en/BlockFi-Commences-Restructuring-Proceeding-to-Stabilize-Business-and-Maximize-Value-for-all-Clients-and-Stakeholders>;

Genesis Global Capital, *Genesis Initiates Process to Achieve Global Resolution to Maximize Value for All Clients and Stakeholders and Strengthen Its Business for the Future*, Jan. 19, 2023, <https://genesistrading.com/press-releases/genesis-initiates-process-to-achieve-global-resolution-to-maximize-value-for-all-clients-and-stakeholders-and-strengthen-its-business-for-the-future>; Vicky Ge Huang, Caitlin Ostroff, & Akiko Matsuda, *Crypto Lender Genesis Files for Bankruptcy, Ensnared by FTX Collapse*, WALL ST. J., JAN. 23, 2023.

²⁰ Menqi Sun, *Crypto Exchange Kraken Settles Alleged Sanctions Violations*, WALL ST. J., NOV. 29, 2022; Russell Brandom, *Coinbase Experiencing Major Outage as Crypto Prices Plummets*, THE VERGE, May 12, 2022.

²¹ Livni, *supra* note [13]; Sorkin et al., *supra* note [13].

customers, for example, 30% of those responding believed that crypto was regulated by the government. 51% of Black Americans under-40 years of age stated they thought that crypto was safe, with 41% of respondents thinking that the government already regulated the industry.²²

B. A Public Mandate for Private Self-Regulation

Policy must reconcile two issues quickly. One, cryptocurrency exchanges have become popular, financially significant, complex, and interconnected institutions with the capacity to convene large numbers of crypto-customers, professional traders, crypto-ventures, and a diverse range of other stakeholders (like equity investors).²³ Actions taken by crypto-exchanges can create externalities for the larger crypto-system. How customer crypto-assets are held, for example, the technological safeguards by which these assets are protected, or the wording in the terms of service reflecting these arrangements, determine whether customers are at risk of losing their rights in property, or seeing their assets dissipated through co-mingling, hacks and thefts.²⁴ And two, exchanges mostly lack a comprehensive federal system of oversight that can offer a reliable set of guardrails, regulatory clarity and assurance about their capacity to make good on their promises to customers and others. These two factors leave platforms relatively unconstrained to adopt privately beneficial, experimental organizational practices, even if these result in firm structures and habits that heighten the risks facing customers and counterparties.

In my [academic work](#), I advocate for the creation of a public mandate for private self-regulation, where cryptocurrency exchanges, as self-regulatory organizations (SROs), are tasked by regulators to write rules for, supervise as well as discipline the marketplace.²⁵ This proposal has three goals:

- First, it seeks to encourage the rapid creation of a layer of oversight for the crypto-market, even as federal regulators work to develop a detailed and comprehensive framework.
- Secondly, it aims to make industry assume the costs for its own self-protection, harnessing their expertise, reach, and resources to the task, and making them accountable for lapses in performing effectively.
- Thirdly, the mandate seeks to make an aspiring crypto-SRO clean house. To show that they can perform effectively, an aspiring SRO would have to satisfy regulators of their

²² Charles Schwab, *supra* note [6].

²³ For example, FTX has filed its Chapter 11 claim with an estimated nine million possible creditors. Noele Illien, Tom Wilson and Dietrich Knauth, *FTX Opposes New Bankruptcy Investigation As It Probes Bankman-Fried Connections*, REUTERS, JAN. 26, 2023.

²⁴ Multiple exchanges have suffered hacks and thefts owing to sub-optimal asset custody arrangements. In the case of Canada's once largest crypto-exchange, Quadriga, the passwords were held on the laptop of the founder, who suddenly died in murky circumstances, in sole custody of over \$100 million in customer funds. Doug Alexander, *Quadriga Downfall Stemmed from Founder's Fraud, Regulators Find*, BLOOMBERG, JUN. 11, 2020.

²⁵ Yadav, *supra* note [3].

organizational capacity, internal compliance, risk management, and their processes for monitoring customer activities and assets.²⁶

Importantly, this proposal is envisioned as representing but one component within the larger regulatory framework for crypto-assets. It is categorically not a substitute for thorough public oversight – but a complement, designed to mobilize both public and private expertise to regulate a technically complex, novel, innovative and risky asset class.

1. *Why Self-Regulation for Crypto-Exchanges?*

Self-regulation by financial exchanges is deeply established in U.S. capital markets. Dating back to the earliest days of the Republic, the originating brokers forming the beginnings of what would one day become the NYSE convened to create trading standards, monitoring compliance and punishing those that strayed from group norms. Allowing participants to transact on known terms, parties could avoid haggling over each contract, seeing that it would be honored and using their own idiosyncratic judgments to make good on the bargain. On account of the exchange taking on the role of rule-setter, monitor, and disciplinarian, contracting parties could count on a more standardized trading experience, laying the groundwork for the creation of liquid and informationally efficient markets.²⁷ Self-regulation further sought to elevate the overall quality of the market. Prohibitions against manipulation, for instance, worked to build confidence in the integrity of the nascent market, and to nudge traders to start trusting one another.²⁸ In commodities markets, too, so-called Boards of Trade – like the Chicago Board of Trade – developed standardizing conditions according to which commodities could be widely traded, covering such matters like specifying the conditions of the goods themselves, through grading and inspections.²⁹

Today, self-regulation is codified within the law. Section 6 of the Securities Exchange Act 1934, for example, requires national exchanges to maintain a marketplace that is free of fraud and manipulation, is fair and equitable and works to protect investors and the public interest.³⁰ When applying to become a national exchange, applicants must prove to the SEC that their organization is capable of carrying out effective self-regulation, producing standards and rules, monitoring as

²⁶Proposals for crypto-self-regulation have also been advanced in different forms by legislators and policy experts. Notably, the draft Responsible Financial Innovation Act, advanced on a bipartisan basis by Senators Lummis and Gillibrand, includes provision for the CFTC and the SEC to explore and report on the creation of an SRO framework for the digital asset industry. In addition, former CFTC Chair, Timothy Massad and Professor Howell Jackson have proposed the creation of a joint SEC/CFTC SRO body, akin to FINRA, that could work to oversee the crypto-industry. For discussion of the Responsible Financial Innovation Act, see e.g., Sen. Kirsten Gillibrand, *Lummis, Gillibrand Introduce Landmark Legislation To Create Regulatory Framework For Digital Assets*, Press Release, Jun. 7, 2022, <https://www.gillibrand.senate.gov/newsroom/record/press-release/lummis-gillibrand-introduce-landmark-legislation-to-create-regulatory-framework-for-digital-assets/>; See also, Timothy Massad & Howell Jackson, *Self-Regulation Could Cut Through Crypto Quagmire*, Dec. 15, 2022, <https://www.omfif.org/2022/12/self-regulation-could-cut-through-crypto-quagmire/>.

²⁷ Paul Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453, 1459-1462 (1997).

²⁸ Mahoney, *supra* note [27], 1459-1462 (1997); For detailed discussion, Yadav, *supra* note [3], Part II.

²⁹ See for example, Joseph Santos, *A History of Futures Trading in the United States*, *EH.Net*, <https://eh.net/encyclopedia/a-history-of-futures-trading-in-the-united-states/>.

³⁰ 15 U.S.C. 78f.

well as compelling enforcement from members and users.³¹ This means that regulators must first satisfy themselves that an applicant organization is well-governed, houses experience and expertise, and wields financial and operational resources to perform the task of protecting complex, electronic markets.³² Indeed, even more lightly regulated venues – Alternative Trading Systems (ATS) – designed to provide much more flexible trading ecosystems – are still subject to implementing core standards of fairness, transparency, honesty and integrity on their venue.³³ Taken as a whole, exchanges and ATS that fall short in discharging their duties can be sanctioned publicly, forced to pay penalties as well as face reputational damage.³⁴

To be sure, self-regulation is not a perfect system – far from it. It is rife with conflicts of interest, where for-profit exchanges police their own members and clients.³⁵ Major exchanges are powerful, essential actors and may not always be punished strictly. But despite these flaws, the SRO model has grown deep roots within U.S. markets, where industry is made responsible and accountable for the task of protecting its own marketplace within a larger framework of regulation.

This proposal thus seeks to create simple alignment between cryptocurrency and traditional markets. I believe this alignment would achieve several advantages, creating positive externalities from the perspective of both exchanges and regulators.

- Crypto-exchanges would come within federal regulation systematically. To designate an SRO, authorities would first have to vet a firm for its capacity to perform oversight.
- This vetting would mean that regulators would have to carefully check a firm's internal governance, risk management, legal and compliance, technical architecture for surveillance, customer monitoring, and systems for protecting customer assets. Recognizing the various governance failures at FTX, as well as a lack of organizational transparency at many major crypto-exchanges, such vetting can mitigate the risks of non-standard, opaque, risk-tolerant and weak controls.
- Industry will gain motivation to preemptively clean house. Before it appears before a regulator, it makes sense for a venue to take steps to improve the quality of its governance, for example, by taking measures like hiring professionals such as legal and compliance staff, switching to industry-accepted accounting and auditing (e.g., GAAP), putting in place high-quality technology to protect customer assets, deploying dedicated units for

³¹ 15 U.S.C. 78f(b) and 15 U.S.C. 78s(a).

³² See e.g., Sec. & Exch. Comm'n, *In the Matter of the Application of Investors' Exchange, LLC for Registration as a National Securities Exchange*, Release No. 34-78101 (Jun. 16, 2016).

³³ Keri Geiger & Sam Manudi, *Barclays, Credit Suisse Agree to Dark Pools Settlements*, BLOOMBERG, Jan. 31, 2016; Sec. & Exch. Comm'n, *SEC Adopts Rules to Enhance Transparency and Oversight of Alternative Trading Systems*, <https://www.sec.gov/news/press-release/2018-136>.

³⁴ See e.g., Sec. & Exch. Comm'n, *SEC Charges NYSE, NYSE ARCA, and NYSE MKT for Repeated Failures to Operate in Accordance with Exchange Rules*, Press Release, May 1, 2014, <https://www.sec.gov/news/press-release/2014-87>.

³⁵ See e.g., Jonathan Macey & Maureen O'Hara, *From Markets to Venues: Securities Regulation in an Evolving World*, 58 STAN. L. REV. 563 (2005).

conducting surveillance and enforcement, and ensuring financial solvency and organizational resiliency. Well before an application is made, a would-be crypto-exchange can start to behave in a safer way, bringing benefits to itself, customers and the market.

- Industry standard-setting and rulemaking can be informed by expertise being shared between public regulators and crypto-exchange SROs. This can help make new rules more responsive and adapted to the specific characteristics of the crypto-market. For example, rulemaking that protects client assets in traditional securities markets will likely need to be adapted to account for the specifics of how crypto-assets are held and trades cleared and settled off-chain.³⁶ Rules relating to disclosure (e.g., of new token listings) can gain from reflecting the importance of technological risks inherent to crypto-tokens, applications, and blockchains.³⁷ In this way, public regulators can take advantage of the technical proximity enjoyed by major crypto-exchanges to gain insight into the latest shifts in technology and the risks/benefits involved. This can help tailor rulemaking more thoughtfully to crypto, promoting fit and meaningful compliance. Crypto-exchanges too can gain from this dialogue. Regular engagement with regulators can help build a more systematic focus on compliance and risk management as core part of a maturing industry culture.
- Venues are responsible for their failures to meet the standard expected of an SRO, creating public accountability. This prospect of public punishment changes the cost-benefit trade-off crypto-exchanges face when deciding whether to pursue risky activities or to cooperate with peers and regulators in delivering sound governance. Without an SRO regime in place, risk-taking and non-cooperation are much cheaper. The chances of being caught and sanctioned are more remote where rules either do not exist or supervisory levers are ineffectual. Disciplinary mechanisms might look to dispersed customers to bring lawsuits or act on social media. But such processes can be inefficient and ultimately *ad hoc*.
- Regular dialogue, rules clarity, and transparency can also help promote conditions that prevent industry from surprise enforcement actions or unanticipated rulemaking. Where SROs are continually in conversation with regulators, they can engage early on whether certain financial products or marketing strategies may be desirable, potentially helping to steer firms away preemptively from actions that could result in punishment.

2. Some Considerations for Implementing the Mandate

Establishing a mandate for self-regulation within the cryptocurrency market will require careful, difficult work from federal regulators as well as prospective SROs. However, a key goal here lies

³⁶ 17 C.F.R. sec. 240.15c3-3.

³⁷ Chris Brummer, *Disclosure, Dapps & De-Fi*, Working Paper, 2-4 (Mar. 24, 2022); Chris Brummer, Jai Massari & Trevor Kivat, *What Should be Disclosed in an ICO?* CRYPTO-ASSETS: LEGAL, REGULATORY & MONETARY PERSPECTIVES, 157-202 (2019).

in progressing this work rapidly in a bid to catch up with an industry that is already well-evolved and growing in complexity, sophistication, and financialization.

I am hopeful that the process of drafting and passing a specific mandate for crypto-exchange self-regulation can progress efficiently. In particular, threshold definitional questions perplexing agencies need not be addressed in this context. The requirement for SRO status could attach to venues seeking to intermediate trading in *digital assets*. In deploying the nomenclature of *digital assets* generally, debates surrounding the legal categories for crypto-tokens (e.g., securities vs. commodities) need not be resolved in this case. Crucially, even though the SEC and Commodity Futures Trading Commission (CFTC) have been vigorously debating their spheres of jurisdictional authority to oversee crypto, they have already agreed on a joint definition for *digital assets* for the purposes of certain discrete proposed rulemaking.³⁸ By relying on this already-agreed upon definition, both agencies might consider establishing a joint panel for licensing and supervising new SROs, recognizing the experience that each agency possesses in overseeing exchange self-regulation.³⁹ Wheels need not be reinvented. Extensive expertise already housed within each agency to deal with designation, vetting, monitoring, inspection and dialogue can provide a starting point for a framework to set-up industry self-regulation quickly for digital asset markets.

There are further complexities to consider. A fuller discussion of issues is set out in my Article. However, two points are worth raising when considering the design of an SRO-mandate within the cryptocurrency market.

First, the ecosystem includes both centralized exchanges as well as venues that seek to operate in a more decentralized way, using smart contracts, automated market making and self-custody, instead of central limit order books and exchange custody of customer assets. Decentralized platforms lack the mass-market appeal of centralized crypto-exchanges. However, they have acquired popularity in the wake of FTX's failures, with new customers looking to opt-into a trading system where they can take care of their own funds and use applications that look to operate transparently on public blockchains.⁴⁰

Engaging decentralized platforms within self-governance presents a challenge. But it is not an insurmountable one. For one, the traditional market includes different categories of platform subject to different degrees of compliance. National securities exchanges are subject to the fullest set of requirements to ensure self-regulation across the market. By contrast, smaller ATS, come under a more permissive regime, tasked with fewer requirements, but still mandated to disclose their workings and to ensure compliance with basic standards of honesty, fairness and transparency. Similarly, a self-regulatory regime for cryptocurrencies could include a two-tier

³⁸ Sec. & Exch. Comm'n, *Form PF: Reporting Requirements for All Filers and Large Hedge Fund Advisers*, 17 CFR Parts 275 and 279 (Aug. 10, 2022).

³⁹ See also, Massad & Jackson, *supra* note [26] (proposing joint SEC/CFTC action to create an SRO).

⁴⁰ See e.g., Michael Boyle, *FTX Collapse Will Spur Move to Decentralized Exchanges, Franklin's CEO Says*, BLOOMBERG, Nov. 17, 2022.

model, whereby the major centralized exchanges apply for full designation. Meanwhile, smaller, lower-volume, decentralized venues could adhere to a tailored ATS classification.

Secondly, crypto-exchanges have evolved within a highly centralized organizational model. The case of FTX, for example, revealed an exchange operating across 130+ entities, with its own private investment fund and market maker (Alameda Research), alongside a venture capital arm (FTX Ventures), and a platform that provided pre-trade, trading, custody, clearing and settlement.⁴¹ This structure raises troubling concerns about thickly embedded conflicts of interest, concentrated platform risk, information leakage, alongside the danger of client assets being used across multiple units. A key question for policymakers seeking to designate an SRO, lies in deciding how to address the current structural model adopted by many top exchanges and how to reform this model to make it more conducive to the exercise of oversight. As discussed more fully in my Article, some options to consider can include:

- Outright prohibitions on exchanges offering certain services – such as market making, where an exchange or related entities take the other side of a trade against customers. As shown by FTX’s reliance on Alameda Research as a market maker, customers face the risk of being front-run by an in-house entity’s superior information. In addition, an exchange market-maker may get to trade on preferential terms. This raises the risk that an exchange SRO might overlook infractions by its own market-maker or fail to sanction practices like front-running that benefit its in-house trader.
- Structural separation of key units – reforms could look to separate out the main units of an exchange to ensure strong walls between different functions. Entities are separately capitalized, staffed, and adhere to prohibitions on information sharing. This model of entity separation has been used for more traditional investment firms and in exchanges – like the NYSE – for example, where the NYSE has hived off its regulatory functions from its trading and commercial arms to better safeguard due process.⁴²
- Using disclosure to build transparency and awareness of risks – such a technique looks to warning customers of the risks of centralization, conflicts, and platform default. It might be used alongside other options or provide the main way in which risks are controlled. Such a method is lighter touch and depends on customers and others being diligent about reading warnings and understanding their significance.⁴³

C. Conclusion

⁴¹ FTX Trading, *Voluntary Petition for Non-Individuals Filing for Bankruptcy*, Case 22-11068-JTD (Nov. 11, 2022); In Re FTX Trading Ltd., *Declaration of John Ray III in Support of Chapter 11 Petitions and First Day Pleadings*, Case No. 22-11068 (JTD) (Nov. 17, 2022).

⁴² NYSE, NYSE REGULATION, <https://www.nyse.com/regulation>.

⁴³ See e.g., Brummer, *supra* note [37].

Applying the old adage to never let a good crisis go to waste, this current moment in financial markets regulation offers a unique opportunity to develop a thoughtful, robust and protective framework of rules and standards to address the risks and opportunities of digital asset innovation. FTX has shown us – in appalling ways – what can go wrong when the guardrails are missing and who bears the costs when the party stops. Recognizing the work underway to develop a plan for regulation, I have sought to describe a proposal that looks to the most system critical of institutions within the crypto-market – the exchanges – to play a committed and meaningful role in its oversight, and in doing to, to ensure the integrity of their own internal governance. Opting into an SRO model gives industry a chance to take advantage of this crisis, to engage in reform, mature, and to innovate, not just on technology but also on how to create a safer market that does not repeatedly crush the confidence and enthusiasm of its cheerleaders, customers and stakeholders.

Importantly, private exchange self-regulation forms just one part of a robust and comprehensive public regulatory framework for cryptocurrency markets. Much more is clearly needed. As digital innovation grows more complex, sophisticated, and connected to the wider market, we cannot be left behind to wonder yet again what we could have done differently if the next FTX comes along.

Thank you so much for this opportunity to speak before you today. I look forward to responding to your questions.

RESPONSES TO WRITTEN QUESTIONS OF CHAIR BROWN FROM LEE REINERS

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**Questions for Mr. Lee Reiners, Policy Director, Duke Financial Economics Center, from
Chairman Sherrod Brown:**

1. In response to a question Senator Menendez asked about the global trends in cryptocurrency regulation, you discussed how crypto undermines U.S. national security by facilitating sanctions and the strength of the U.S. dollar as an instrument of foreign policy. Please elaborate further on how cryptocurrency undermines the U.S. dollar and U.S. sovereignty.

The U.S. dollar’s status as world reserve currency, and New York City’s role in dollar clearing, has allowed U.S. policymakers to leverage the dollar and our financial system as an instrument of foreign policy. We see this most clearly in the unprecedented economic and financial sanctions that were imposed on Russia after their illegal invasion of Ukraine. For example, in February 2022, the United States, in coordination with the European Union (EU), United Kingdom, Canada, and Japan, blocked the Russian central bank’s access to its holdings of foreign exchange reserves worth approximately \$300 billion.¹

Cryptocurrency provides a convenient option for America’s adversaries to bypass economic sanctions; although you cannot run an entire economy on crypto because there is not enough liquidity. We know that Iran, Russia, and North Korea are using cryptocurrency to bypass U.S. economic and financial sanctions.² The United Nations and U.S. intelligence officials have noted that North Korea’s cyber operations are used to fund the country’s illicit ballistic missile and nuclear programs.³ North Korea’s brazenness was revealed to the public last year when the venture capital-backed “Web 3” video game, Axie Infinity, was hacked by the Lazarus Group and \$620 million in the cryptocurrency Ether was stolen.⁴ In January, the FBI announced that the Lazarus Group was also behind the \$100 million hack of Harmony Protocol.⁵ Chainalysis estimates that North Korea-linked hackers stole roughly \$1.7 billion worth of cryptocurrency in 2022 (by way of comparison, North Korea’s total exports totaled \$142 million in 2020).⁶ Just last week, Reuters reported on a confidential United Nations report that found North Korea stole

¹ Congressional Research Service, “Russia’s War on Ukraine: Financial and Trade Sanctions,” Feb 22, 2023, <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwio6bb0ZX-AhW2kWoFHaCTA40QFn0ECAoQAQ&url=https%3A%2F%2Fcrsreports.congress.gov%2Fproduct%2Fpdf%2F1%2F12062&usq=AOvVaw1wO1p07ot3z2N94uLUKs>

² Emily Flitter and David Yaffe-Bellany, “Russia Could Use Cryptocurrency to Mitigate U.S. Sanctions,” *The New York Times*, February 24, 2022, <https://www.nytimes.com/2022/02/23/business/russia-sanctions-cryptocurrency.html>; Kyle Barr, “Iran Plans to Use Crypto to Pay for Imports to Help Get Around Sanctions,” *Gizmodo*, August 9, 2022, <https://gizmodo.com/iran-crypto-imports-sanctions-1849389297>; Mike Orcutt, “This Is How North Korea Uses Cutting-Edge Crypto Money Laundering to Steal Millions,” *MIT Technology Review*, April 2, 2020, <https://www.technologyreview.com/2020/03/05/916688/north-korean-hackers-cryptocurrency-money-laundering/>.

³ Christian Davies and Scott Chipolina, “How North Korea Became a Mastermind of Crypto Cybercrime,” *Ars Technica*, November 14, 2022, <https://arstechnica.com/information-technology/2022/11/how-north-korea-became-a-mastermind-of-crypto-cyber-crime/>.

⁴ Aaron Schaffer, “North Korean Hackers Linked to \$620 Million Axie Infinity Crypto Heist,” *The Washington Post*, April 14, 2022, <https://www.washingtonpost.com/technology/2022/04/14/us-links-axie-crypto-heist-north-korea/>.

⁵ Sander Lutz, “FBI Confirms North Korea Behind \$100 Million Harmony Hack,” *Decrypt*, January 24, 2023, <https://decrypt.co/119861/fbi-north-korea-lazarus-horizon-harmony-bridge-hack>.

⁶ Chainalysis, “Biggest Year Ever.”

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more cryptocurrency assets in 2022 than any other year.⁷ Anne Neuberger, US deputy national security adviser for cyber security, said in July 2022 that North Korea “uses cyber to gain, we estimate, up to a third of their funds for their missile program.”⁸

Terrorist organizations have also been soliciting cryptocurrency donations for several years.⁹ In December 2022, blockchain analytics firm TRM Labs reported that an ISIS affiliate in Afghanistan recently began “accepting cryptocurrency donations amid ramped-up propaganda and recruitment efforts.” That is in keeping with a trend, noted by the Treasury Department last November, of ISIS increasingly using virtual assets service providers to finance their subordinates in central and south Asia.¹⁰ In January, TRM Labs also reported that KillNet, a pro-Russian cybercriminal group, uses crypto to raise funds for Russia’s illegal invasion of Ukraine and targets critical infrastructure in countries opposed to the invasion.¹¹ The U.S. Cybersecurity and Infrastructure Security Agency (CISA) noted last April that KillNet is just one of many Russia-aligned cyber groups conducting malicious activities against the U.S. and our allies.¹² Finally, in January 2022, the Government Accountability Office (GAO) issued a report finding that “[v]irtual currency is increasingly used illicitly to facilitate human and drug trafficking.”¹³

The U.S. Department of the Treasury’s Office of Foreign Assets Control (OFAC) has ramped up its designations of crypto-related entities over the past year-and-a-half, with most of these entities having a Russian-nexus. Chainalysis found that OFAC sanctioned ten crypto-related entities last year, which included 350 crypto addresses.¹⁴ But given Russia’s non-compliance with international standards around anti-money laundering and terrorist financing (AML/CFT),

⁷ Michelle Nichols, “Exclusive: Record-Breaking 2022 for North Korea Crypto Theft, UN Report Says,” *Reuters*, February 7, 2023, <https://www.reuters.com/technology/record-breaking-2022-north-korea-crypto-theft-un-report-2023-02-06/>.

⁸ Davies and Chipolina, “North Korea.”

⁹ For example, see The United States Department of Justice, “Global Disruption of Three Terror Finance Cyber-Enabled Campaigns,” August 13, 2020, <https://www.justice.gov/opa/pr/global-disruption-three-terror-finance-cyber-enabled-campaigns>.

¹⁰ See TRM, “New Evidence Confirms ISIS Affiliate in Afghanistan Accepting Cryptocurrency Donations,” *TRM Insights*, accessed February 10, 2023, <https://www.trmlabs.com/post/new-evidence-confirms-isis-affiliate-in-afghanistan-accepting-cryptocurrency-donations> and U.S. Department of the Treasury, *Fact Sheet: Countering ISIS Financing*, November 18, 2022, <https://home.treasury.gov/system/files/136/Fact-Sheet-on-Countering-ISIS-Financing.pdf>.

¹¹ TRM, “Spotlight on KillNet: The Cybercriminal Group Raising Funds for Russia’s War in Ukraine,” *TRM Insights*, accessed February 10, 2023, <https://www.trmlabs.com/post/spotlight-on-killnet-the-cybercriminal-group-raising-funds-for-russias-war-in-ukraine>.

¹² Cybersecurity and Infrastructure Security Agency, “Russian State-Sponsored and Criminal Cyber Threats to Critical Infrastructure,” accessed February 10, 2023, <https://www.cisa.gov/uscert/ncas/alerts/aa22-110a>.

¹³ U.S. Government Accountability Office, “Virtual Currencies: Additional Information Could Improve Federal Agency Efforts to Counter Human and Drug Trafficking [Reissued with Revisions Feb. 7, 2022],” January 10, 2022, <https://www.gao.gov/products/gao-22-105462>.

¹⁴ Chainalysis, “How 2022’s Biggest Cryptocurrency Sanctions Designations Affected Crypto Crime,” January 9, 2023, <https://blog.chainalysis.com/reports/how-2022-crypto-sanction-designations-affected-crypto-crime/>.

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OFAC is playing a game of whack-a-mole. In addition, as reported in February 2023 by Politico, sanctioned Russian banks are still able to transact with crypto exchanges in other jurisdictions.¹⁵

Even prominent crypto intermediaries operating in jurisdictions with strict requirements for AML/CFT have failed, sometimes willingly, to implement appropriate processes and controls. In a March 27, 2023 complaint against Binance and Binance’s CEO and former Chief Compliance Officer (CCO), the CFTC noted that the former CCO admitted that “[Binance].com doesn’t even do AML namescreening/sanctions screening.”¹⁶ The former CCO at one point told the CEO that “Binance’s customer support was “teaching ppl how to circumvent sanctions.”¹⁷

The emergence of Decentralized Finance in recent years presents another threat to the efficacy of U.S. economic and financial sanctions. The Treasury Department says DeFi “refers to virtual asset protocols and services that purport to allow some form of automated peer-to-peer transactions, often through use of self-executing code known as “smart contracts” based on blockchain technology.” On April 6, 2023, the Department issued the world’s first illicit finance risk assessment conducted on DeFi.¹⁸ According to the assessment:

“[I]llicit actors, including ransomware cybercriminals, thieves, scammers, and Democratic People’s Republic of Korea (DPRK) cyber actors, are using DeFi services in the process of transferring and laundering their illicit proceeds. To accomplish this, illicit actors are exploiting vulnerabilities in the U.S. and foreign AML/CFT regulatory, supervisory, and enforcement regimes as well as the technology underpinning DeFi services. In particular, this assessment finds that the most significant current illicit finance risk in this domain is from DeFi services that are not compliant with existing AML/CFT obligations”

Tornado Cash is one example of a DeFi protocol that is used for money laundering and sanctions evasion. Tornado Cash provides virtual asset mixing services and was used to obfuscate “the movement of over \$455 million worth of virtual assets stolen in March 2022 by the OFAC-designated, DPRK-controlled Lazarus Group, in the largest known virtual currency heist to date. Malicious cyber actors subsequently used the Tornado Cash smart contracts to launder more than \$96 million of funds derived from the June 24, 2022 Harmony Bridge Heist and at least \$7.8 million from the August 2, 2022 Nomad Heist.”¹⁹ OFAC sanctioned Tornado Cash in August 2022 and redesignated Tornado Cash in November 2022 after additional information came to light. Tornado Cash is the first, and thus far only, DeFi protocol to have been sanctioned by OFAC.

2. Many industry proponents argue that cryptocurrency is a mechanism of financial inclusion. In your testimony, you cited to a body of research that crypto does not meet the needs of

¹⁵ Sam Sutton and Lara Seligman, “Two major crypto exchanges failed to block sanctioned Russians,” Politico, February 24, 2023, <https://www.politico.com/news/2023/02/24/two-major-crypto-exchanges-failed-to-block-sanctioned-russians-00084391>

¹⁶ CFTC v. Changpeng Zhao, Binance, Samuel Lim, <https://www.cftc.gov/PressRoom/PressReleases/6680-23>

¹⁷ Id at 35

¹⁸ U.S. Department of the Treasury, *Illicit Finance Risk Assessment of Decentralized Finance*, April 6, 2023, <https://home.treasury.gov/news/press-releases/jy1391>

¹⁹ Id at 25

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underserved communities and increases risks to the financial health of those groups. Are you aware of any evidence that refutes these analyses or concludes that they are unfounded?

According to the World Bank, “[f]inancial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way.”²⁰ In my written testimony, I provide detailed evidence that cryptocurrency is NOT a mechanism of financial inclusion. In fact, I have not seen any credible evidence that crypto promotes financial inclusion. Since the hearing on February 14th, additional evidence has emerged that crypto represents the latest form of predatory inclusion – a process wherein financial actors offer needed services to minority households on exploitative terms that limit or eliminate their long-term benefits. On February 16, 2023, Emily Stewart, writing for Vox, wrote a detailed article on all the ways that crypto has failed African American investors.²¹ Stewart cites survey data from LendingTree that finds “Black crypto investors were likelier than white crypto investors to say that they had borrowed money to make their investment and that they had sold their crypto for less than it was worth.”²² Additionally, on February 20, 2023, the Bank for International Settlements (BIS) released a bulletin highlighting findings from a new data set on retail holdings of crypto assets.²³ The BIS notes that “[d]ata on major crypto trading platforms over August 2015–December 2022 show that ... a majority of crypto app users in nearly all economies made losses on their bitcoin holdings.”

3. You discussed how the Securities and Exchange Commission (SEC) has been clear about the registration and other securities requirements of crypto firms. Yet, some claim that the SEC failed to prevent the failure of FTX and other cryptocurrency firms because they did not provide sufficient guidance or clarity to the industry. Please explain what actions the SEC has taken to regulate the crypto industry and protect investors from risks.

In her written testimony to the Senate Banking Committee on December 14, 2022, Professor Hilary Allen rebuts the argument that somehow the SEC bears responsibility for FTX’s collapse.²⁴ She notes:

“If we accepted this narrative, we would also have to blame the New York Department of Financial Services for FTX’s failure, because the NYDFS never agreed to approve FTX’s application for a BitLicense, and so they were not able to supervise FTX. 25 In reality, the NYDFS applied New York law to protect New Yorkers, just as the SEC applies the federal

²⁰ <https://www.worldbank.org/en/topic/financialinclusion/overview>

²¹ Emily Stewart, “How crypto failed Black investors,” Vox, February 16, 2023, <https://www.vox.com/the-goods/23599845/crypto-bitcoin-black-investors-ftx-freedmans-bank-civil-war>

²² Id.

²³ BIS Bulletin No 60, “Crypto shocks and retail losses,” February 20, 2023, <https://www.bis.org/publ/bisbull69.pdf>

²⁴ Hilary J. Allen, “Crypto Crash: Why the FTX Bubble Burst and the Harm to Consumers,” Statement before the Senate Commission on Banking, Housing, and Urban Affairs, December 14, 2022, <https://www.banking.senate.gov/imo/media/doc/Allen%20Testimony%2012-14-22.pdf>.

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securities laws where it has jurisdiction. Geographical arbitrage of regulation is a longstanding problem, but it generally occurs because firms go abroad in search of more lax regulation – not more certain regulation. As SEC Chair Gary Gensler previously noted in response to criticism that the SEC has failed to provide regulatory clarity around crypto: For the past five years, though, the Commission has spoken with a pretty clear voice here: through the DAO Report, the Munchee Order, and dozens of Enforcement actions, all voted on by the Commission. Chairman Clayton often spoke to the applicability of the securities laws in the crypto space. Not liking the message isn’t the same thing as not receiving it.”

In my written testimony, I provide detailed evidence of all the ways the SEC has fulfilled their statutory mandate to regulate crypto asset securities and protect investors from crypto’s risks, which I will borrow from below.

Despite the crypto industry’s self-serving cries for “regulatory clarity,” the SEC’s stance on cryptocurrency has been clear and consistent dating from the chairmanship of Jay Clayton. Both Clayton and his successor, Gary Gensler, have said most cryptocurrencies are securities that need to be registered with the Commission.²⁵ As John Reed Stark, the former head of the SEC’s Office of Internet Enforcement, noted, critics of the SEC’s stance toward cryptocurrency overlook an important aspect of U.S. securities law — “securities regulation is not meant to be precise but is instead intentionally drafted to be broad and all-encompassing.”²⁶ This is why the definitions of “security” in Section 2(a)(1) of the Securities Act of 1933 (Securities Act), 15 U.S.C. 77b(a)(1) and Section 3(a)(10) of the Securities Exchange Act of 1934 (Exchange Act), 15 U.S.C. 78c(a)(10) include not only conventional securities, such as “stock[s]” and “bond[s],” but also the more general term “investment contract.” In the seminal case *SEC v. Howey*, the Supreme Court found that the term “investment contract:”

“[E]mbodies a flexible, rather than a static, principle, one that is capable of adaptation to meet the countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.”²⁷

Along these lines, in *Reves v. Ernst & Young*, in which the Supreme Court was asked to decide whether demand notes offered by a business are securities, the Court stated that:

“The fundamental purpose undergirding the Securities Acts is ‘to eliminate serious abuses in a largely unregulated securities market.’ United Housing Foundation, Inc. v. Forman, 421 U.S. 837, 421 U.S. 849 (1975). In defining the scope of the market that it wished to regulate, Congress painted with a broad brush. It recognized the virtually limitless scope of human ingenuity, especially in the creation of ‘countless and variable schemes devised by those who seek the use of the money of others on the promise of profits,’ SEC v. W.J. Howey Co., 328 U.S. 293, 328 U.S. 299 (1946), and determined that

²⁵ Gary Gensler, “Kennedy and Crypto,” (speech, Washington, D.C., September 8, 2022), <https://www.sec.gov/news/speech/gensler-sec-speaks-090822>.

²⁶ John Stark, “Big Crypto’s Bogus Demands for ‘Regulatory Clarity,’” *The FinReg Blog*, November 28, 2022, <https://sites.duke.edu/thefinregblog/2022/11/28/big-cryptos-bogus-demands-for-regulatory-clarity-2/>.

²⁷ *SEC v. W.J. Howey Co.*, 328 U.S. 293 (1946).

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the best way to achieve its goal of protecting investors was ‘to define the term “security” in sufficiently broad and general terms so as to include within that definition the many types of instruments that in our commercial world fall within the ordinary concept of a security.’ . . . Congress therefore did not attempt precisely to cabin the scope of the Securities Acts . . . Rather, it enacted a definition of ‘security’ sufficiently broad to encompass virtually any instrument that might be sold as an investment” (emphasis added).²⁸

Federal courts have repeatedly confirmed the SEC’s jurisdiction in numerous crypto-related enforcement actions. In fact, as of January 18, 2023, the SEC has brought over 130 crypto-related enforcement actions without losing a single case.²⁹ In most of these cases, the SEC has applied the Howey Test to argue that the cryptocurrency in question is an investment contract, and therefore a security subject to SEC registration and disclosure requirements. The U.S. Supreme Court’s *Howey* case and subsequent case law have found that an “investment contract” exists when there is the investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others.

The SEC has used “multiple distribution channels to share its message and concerns regarding crypto, digital trading platforms, initial coin offerings, and other digital asset products and services over the past decade.”³⁰ The SEC first made investors aware of the dangers of investing in cryptocurrency in 2013 when the Office of Investor Education and Advocacy issued an Investor Alert on “Ponzi Schemes Using Virtual Currencies.”³¹ A year later, the same office issued an Investor Alert on “Bitcoin and Other Virtual Currency-Related Investments.”³² In 2017, the Commission released a Section 21(a) Report of Investigation that looked at the facts and circumstances of The DAO, which offered and sold approximately 1.15 billion DAO tokens in exchange for a total of approximately 12 million ether (“ETH”) over a one-month period in 2016.³³ The SEC applied the Howey Test to the DAO tokens and concluded they were securities under the Securities Act of 1933 (“Securities Act”) and the Securities Exchange Act of 1934 (“Exchange Act”). While The DAO and DAO tokens were no longer operational at the time due to a high-profile hack that had resulted in the theft of most of the tokens, the Commission chose to release the report so as “to advise those who would use a Decentralized Autonomous Organization (“DAO Entity”), or other distributed ledger or blockchain-enabled means for

²⁸ *Reves et al. v. Ernst & Young*, 494 U.S. 56 (1990).

²⁹ Cornerstone Research, “SEC Tightens Cryptocurrency Enforcement,” January 18, 2023, <https://www.cornerstone.com/insights/press-releases/sec-tightens-cryptocurrency-enforcement/>; John Reed Stark, “Why ‘SEC Regulation by Enforcement’ is a Bogus Big Crypto Catchphrase,” LinkedIn, January 23, 2023, <https://www.linkedin.com/pulse/why-sec-regulation-enforcement-bogus-big-crypto-john-reed-stark/?published=t>.

³⁰ Stark, “Big Crypto’s Bogus Demands.”

³¹ U.S. Securities and Exchange Commission, “Ponzi Schemes Using Virtual Currencies,” accessed January 9, 2023, https://www.sec.gov/investor/alerts/ia_virtualcurrencies.pdf.

³² U.S. Securities and Exchange Commission, “Investor Alert: Bitcoin and Other Virtual Currency-Related Investments,” May 17, 2013, <https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-alerts/investor-39>.

³³ U.S. Securities and Exchange Commission, “Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO,” July 25, 2017, <https://www.sec.gov/litigation/investreport/34-81207.pdf>.

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capital raising, to take appropriate steps to ensure compliance with the U.S. federal securities laws.”³⁴ In 2019, the SEC released a “Framework for ‘Investment Contract’ Analysis of Digital Assets,” which provided additional details on when a digital asset has the characteristics of an investment contract and “whether offers and sales of a digital asset are securities transactions.”³⁵ On March 23, 2023, the SEC issued a new Investor Alert that “continues to urge investors to be cautious if considering an investment involving crypto asset securities.”³⁶ This new alert highlighted the following concerns:

1. Those offering crypto asset investments or services may not be complying with applicable law, including federal securities laws.
2. Investments in crypto asset securities can be exceptionally risky, and are often volatile.
3. Fraudsters continue to exploit the rising popularity of crypto assets to lure retail investors into scams, often leading to devastating losses.

The SEC has also publicized its position on cryptocurrency in countless enforcement actions,³⁷ multiple speeches,³⁸ congressional testimony,³⁹ and several official SEC statements⁴⁰ and proclamations.⁴¹ Chairman Gensler, has spoken frequently about the perils and illegality of crypto lending platforms and decentralized finance,⁴² warning that their failure to register with the SEC may violate U.S. securities laws.⁴³ In one interview, Gensler said:

“The law is clear, it’s not about waving a wand. Congress spoke about this in 1934 . . . When a [digital] platform has securities on it, it is an exchange, and it’s a question of

³⁴ Ibid.

³⁵ U.S. Securities and Exchange Commission, “Framework for ‘Investment Contract’ Analysis of Digital Assets,” April 3, 2019, <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets>.

³⁶ SEC Investor Alert, Exercise Caution with Crypto Asset Securities: Investor Alert. <https://www.sec.gov/oiea/investor-alerts-and-bulletins/exercise-caution-crypto-asset-securities-investor-alert>

³⁷ U.S. Securities and Exchange Commission, “Crypto Assets and Cyber Enforcement Actions,” November 4, 2022, <https://www.sec.gov/spotlight/cybersecurity-enforcement-actions>.

³⁸ Gary Gensler, “Remarks Before the Aspen Security Forum,” (speech, Washington D.C., August 3, 2021), <https://www.sec.gov/news/speech/gensler-aspen-security-forum-2021-08-03>.

³⁹ Gary Gensler, “Testimony Before the Subcommittee on Financial Services and General Government, U.S. House Appropriations Committee,” (speech, Washington, D.C., May 26, 2021), <https://www.sec.gov/news/testimony/gensler-2021-05-26>.

⁴⁰ Jay Clayton, “Statement on Cryptocurrencies and Initial Coin Offerings,” U.S. Securities and Exchange Commission, December 11, 2017, <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11>.

⁴¹ U.S. Securities and Exchange Commission, “Statement on Potentially Unlawful Online Platforms for Trading Digital Assets,” March 7, 2018, <https://www.sec.gov/news/public-statement/enforcement-tm-statement-potentially-unlawful-online-platforms-trading>.

⁴² Michael McSweeney, “Gensler Sets SEC Sights on DeFi, Crypto Lending and More in Expansive Speech on Regulation,” *The Block*, February 10, 2023, <https://www.theblock.co/post/113416/gensler-speech-crypto-defi-lending-sec>.

⁴³ Ben Werschul, “Crypto Platforms that Don’t Register with the SEC do Business ‘Outside the Law’: Gensler,” *Yahoo News*, March 4, 2022, <https://finance.yahoo.com/news/crypto-platforms-dont-register-with-sec-outside-the-law-gensler-164215740.html>.

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whether they’re registered or they’re operating outside of the law, and I’ll leave it at that.”⁴⁴

On September 8, 2022, Chairman Gensler gave a speech reflecting on the flexibility of the securities laws and the SEC’s consistency in applying those laws to cryptocurrency.⁴⁵ Gensler noted that of the 10,000 different cryptocurrencies in the market, “the vast majority are securities.”⁴⁶ Gensler went on to note that the SEC has spoken with a “pretty clear voice” when it comes to cryptocurrency “through the DAO Report, the Munchee Order, and dozens of enforcement actions, all voted on by the Commission” and that “[n]ot liking the message isn’t the same thing as not receiving it.”⁴⁷

In January, the nonprofit Better Markets released a report detailing the SEC’s strong record on crypto regulation and enforcement.⁴⁸ The report identifies the SEC’s three-pronged strategy to bring the crypto industry into compliance with federal securities laws: (1) publicly urging the industry to come in and speak with the agency in order to come into compliance, (2) selectively bringing enforcement actions, and (3) using its authority to “deny crypto firms’ requests to unlawfully engage in certain types of activities.”⁴⁹

Under the latter prong, the SEC has repeatedly rejected attempts by exchanges seeking to list shares of a trust or exchange-traded funds (ETFs) that track the price of Bitcoin. The SEC’s main concern has always been manipulation in the underlying Bitcoin spot market. When they first rejected an application to list and trade shares of a Bitcoin trust in 2017, they noted that the proposal was inconsistent “with Section 6(b)(5) of the Exchange Act, which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices and to protect investors and the public interest.”⁵⁰ Recent events reveal that crypto markets continue to be rife with fraud and manipulation, and the SEC’s refusal to permit a Bitcoin ETF saved would-be investors a lot of money.⁵¹

⁴⁴ McSweeney, “Gensler Sets SEC Sights.”

⁴⁵ Gensler, “Kennedy and Crypto.”

⁴⁶ *Ibid.*

⁴⁷ *Ibid.*

⁴⁸ Better Markets, “The SEC’s Excellent Record on Crypto: Regulation & Enforcement,” *Better Markets*, January 25, 2023, https://bettermarkets.org/wp-content/uploads/2023/01/BetterMarkets_SEC_Record_On_Crypto_01-25-2023.pdf.

⁴⁹ *Ibid.*, 3.

⁵⁰ U.S. Securities and Exchange Commission, “Self-Regulatory Organizations; Bats BZX Exchange, Inc.; Order Disapproving a Proposed Rule Change, as Modified by Amendments No. 1 and 2, to BZX Rule 14.11(e)(4), Commodity-Based Trust Shares, to List and Trade Shares Issued by the Winklevoss Bitcoin Trust,” March 10, 2017, <https://www.sec.gov/rules/sro/batsbzx/2017/34-80206.pdf>.

⁵¹ I defended the SEC’s approach to crypto exchange-traded products in two blog posts from 2018 and 2019. See Lee Reiners, “SEC Stands Firm Against New Bitcoin ETF Proposals,” *The FinReg Blog*, January 12, 2018, <https://sites.duke.edu/thefinregblog/2018/01/12/sec-stands-firm-against-new-bitcoin-etf-proposals/>; Lee Reiners, “The SEC Should Continue to Say No to Bitcoin Exchange-Traded Products,” *The FinReg Blog*, June 18, 2019, <https://sites.duke.edu/thefinregblog/2019/06/18/the-sec-should-continue-to-say-no-to-bitcoin-exchange-traded-products/>.

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4. Following the sharp downturn in the crypto market and the failure of several crypto companies, several banks that had exposure to the crypto sector are reducing or reevaluating their ties. Many of these banks had unique business models tailored to the cryptocurrency industry. How different were these business models compared to other similarly-sized banks and do they pose unique risks to the safety and soundness of the individual institutions and the banking system as a whole?

At the time of FTX’s failure, the federal bank regulators, such as the Board of Governors of the Federal Reserve System (the Federal Reserve), Federal Deposit Insurance Corporation (FDIC), and Office of the Comptroller of the Currency (OCC), each had outstanding guidance in place expressing concerns over banks’ ability to engage in crypto-asset activities in a safe and sound manner and requiring banks to notify their appropriate regulator before engaging in such activity.⁵² This stance limited crypto’s integration into the banking system and did not threaten financial stability or the broader health of the banking system. However, despite regulators’ warnings, FTX’s failure revealed that several banks were more exposed to crypto-asset activities than previously realized. Three notable examples are Silvergate Capital Corporation, Moonstone Bank, and Signature Bank. I do believe these banks had distinct business models compared to similar-sized banks and I do not believe there are other banks within the system that have such a concentrated exposure to crypto.

Silvergate positioned itself as the leading bank for cryptocurrency exchanges (including FTX) and investors.⁵³ At the end of September 2022, deposits from crypto clients comprised 90% of the bank’s overall deposit base, leaving the bank highly exposed to a volatile sector.⁵⁴ This risk became manifest post-FTX collapse when the bank experienced \$8.1 billion in deposit outflows during the fourth quarter of 2022, more than 60% of its total deposits.⁵⁵ Silvergate was forced to sell assets to meet deposit outflows, resulting in a loss of \$718 million, which exceeded “the bank’s total profit since at least 2013.”⁵⁶ Silvergate also borrowed \$4.3 billion from the Federal Home Loan Bank of San Francisco in an unsuccessful effort to stay afloat.⁵⁷ On March 8, 2023, Silvergate’s holding company announced they were voluntarily liquidating the bank.⁵⁸

⁵² Mike Winters, ‘Contagion risk’: After the FTX Collapse, Top U.S. Regulators Warn Banks About Crypto, CNBC (Jan. 6, 2023, 8:30 AM), [https://perma.cc/YUQ7-XPQ5]; see also Pete Schroeder, U.S. Banks Must Seek Regulatory Permission Before Engaging in Certain Crypto Activities—Regulator, REUTERS (Nov. 23, 2021, 4:42 PM), [https://perma.cc/9V7S-P4KG].

⁵³ SILVERGATE, [https://perma.cc/663S-R693] (last visited Mar. 7, 2023).

⁵⁴ Marc Rubinstein, *These Banks Were Left Holding the Bag in Crypto Implosion*, WASH. POST (Nov. 23, 2022, 7:07 AM), [https://perma.cc/XMT3-2QZW].

⁵⁵ David Benoit, *Silvergate’s Deposit Run Is Worse Than Great Depression-Era Runs*, WALL ST. J. (Jan. 5, 2023, 1:30 PM), [https://perma.cc/L6DM-C6P2].

⁵⁶ David Benoit, *Silvergate Raced to Cover \$8.1 Billion in Withdrawals During Crypto Meltdown*, WALL ST. J. (Jan. 5, 2023, 4:30 PM), [https://perma.cc/B4TL-SHG7].

⁵⁷ Kate Berry, *Silvergate Bank Loaded Up on \$4.3 Billion in Home Loan Bank Advances*, AM. BANKER (Jan. 10, 2023, 1:56 PM), [https://perma.cc/W48Q-PNNR].

⁵⁸ <https://ir.silvergate.com/news/news-details/2023/Silvergate-Capital-Corporation-Announces-Intent-to-Wind-Down-Operations-and-Voluntarily-Liquidate-Silvergate-Bank/default.aspx>

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Another unpleasant surprise came in an FTX bankruptcy filing when it was revealed that Alameda Research, a crypto trading firm founded and owned by Sam Bankman-Fried, made an \$11.5 million investment in the parent company (FBH Corp.) of Washington state-based Farmington State Bank in March 2022, more than double the bank’s net worth at the time.⁵⁹ Farmington then changed its name to Moonstone Bank, and shortly thereafter, Moonstone’s deposit base jumped from \$10 million—where it had been for decades—to \$84 million, of which \$71 million came from just four accounts.⁶⁰ Alameda’s investment came on the heels of Farmington’s pivot to servicing crypto firms after the bank was purchased by FBH in 2020 and received a Federal Reserve Master Account in 2021.⁶¹ According to Camden Fine, the former president and CEO of the Independent Community Bankers of America, “The fact that an offshore hedge fund that was a crypto firm was buying a stake in a tiny bank for multiples of its stated book value should have raised massive red flags for the F.D.I.C., state regulators, and the Federal Reserve.”⁶²

The banking industry took a major hit when Silicon Valley Bank (SVB) experienced massive deposit outflows and was put into FDIC receivership on March 10, 2023. Following the SVB collapse—the biggest bank failure since the global financial crisis of 2008 and the second biggest bank failure in U.S. history – attention turned to Signature Bank, which had a similarly high percentage of uninsured deposits (more than 93 percent of SVB’s deposits were uninsured, and 89 percent of Signature Bank’s deposits were uninsured).⁶³ Unlike SVB, Signature had heavy exposure to the crypto industry, which created additional concerns about the bank’s health; it operated a “24/7 payments network for crypto clients and had \$16.5 billion in deposits from digital-asset-related customers.”⁶⁴ Signature was put into FDIC receivership on Sunday, March 12, 2023, prompting bank board member and former congressman Barney Frank to claim that “regulators wanted to send a very strong anti-crypto message.”⁶⁵ However, the New York Department of Financial Services – they took possession of Signature and appointed the FDIC as a receiver – said that the decision to close Signature “had nothing to do with crypto.”⁶⁶ On March 20, 2022, the FDIC entered into a purchase and assumption agreement with Flagstar Bank for most deposits and certain loan portfolios of Signature.⁶⁷ Flagstar did not bid on

⁵⁹ *The Curious Case of FTX and Farmington State Bank, aka Moonstone*, PROTOS (Nov. 24, 2022, 1:18 PM), [https://perma.cc/TFL8-Y5XX].

⁶⁰ Stephen Gandel, *Crypto Firm FTX’s Ownership of a U.S. Bank Raises Questions*, N.Y. TIMES (Dec. 6, 2022), [https://perma.cc/N5JZ-XM4N]; Moonstone Bank, *FBH Corp. Raises \$11.5M in Private Equity Funding from Alameda Research Ventures*, CISION PR NEWSWIRE (Mar. 7, 2022, 9:24 PM), [https://perma.cc/D8P8-9ZD8].

⁶¹ *The Curious Case of FTX and Farmington State Bank, aka Moonstone*, *supra* note 14.

⁶² Gandel, *supra* note 15.

⁶³ David Hayes, *SVB, Signature Racked Up Some High Rates of Uninsured Deposits*, S&P GLOBAL MARKET INTELLIGENCE (Mar. 14, 2023) [https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/svb-signature-racked-up-some-high-rates-of-uninsured-deposits-74747639].

⁶⁴ Hugh Son, *Why Regulators Seized Signature Bank in Third-Biggest Bank Failure in US History*, CNBC (Mar. 13, 2023) [https://www.cnbc.com/2023/03/13/signature-bank-third-biggest-bank-failure-in-us-history.html].

⁶⁵ *Id.*

⁶⁶ Hannah Lang and Pete Schroeder, *Signature Bank’s Closure Had ‘Nothing to Do with Crypto’ – New York Regulator*, REUTERS (Mar. 14, 2023) [https://www.reuters.com/business/finance/signature-banks-closure-had-nothing-do-with-crypto-new-york-regulator-2023-03-14/].

⁶⁷ [FDIC: PR-2023 3/19/2023](https://www.fdic.gov/pr-2023-3/19/2023)

The runs on these crypto-friendly banks, following the crypto-winter of 2022, raises an interesting question: Can exposure to crypto-activities undermine depositors' trust and public confidence in banks? Although a causal relationship has yet to be established, it certainly appears likely. As evidence, Silvergate started losing deposits after FTX – a large depositor – failed. When the bank announced they were “less than well capitalized” in early March 2023, several of the bank's crypto clients (Coinbase and Galaxy Digital) pulled their business, which hastened Silvergate's collapse.⁷⁰ At the same time, the bank ended its operation of the popular Silvergate Exchange Network—a seamless platform that provided instant transfers between a crypto wallet and a traditional bank account.⁷¹ Taken as a whole, the bankruptcies of several large crypto firms, these firms' lack of transparency and internal controls,⁷² a liquidity crunch in crypto markets, and crypto's uncertain regulatory status led to fear that crypto-exposed banks may not survive. Of course, such fear can, and did, become a self-fulfilling prophecy, and it remains to be seen whether banks can have even modest crypto exposure without negatively affecting counterparty and market trust.

⁷² *Bankrupt FTX's New CEO Outlines Fund Abuses, Untrustworthy Records*, REUTERS (Nov. 17, 2022), <https://www.reuters.com/technology/new-ftx-ceo-slams-complete-failure-corporate-control-2022-11-17/>.

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Committee on Banking, Housing, and Urban Affairs
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Questions for Mr. Lee Reiners, Policy Director, Duke Financial Economics Center, from
Senator John Fetterman:

1. Cryptocurrency proponents argue that cryptocurrency is a valuable tool for “democratizing” finance for traditionally underbanked communities. But as discussed in a 2022 report by the Brookings Institute⁷³, cryptocurrency largely fails to address many of the underlying issues which prevent underbanked communities from fully participating in financial systems. How does cryptocurrency fail to serve as an innovation that promotes greater financial inclusion?

Cryptocurrency “is wholly unconnected to the productive purpose that defines finance: helping businesses, individuals, and governments raise, save, transmit, and use money for socially and economically useful ends.”⁷⁴ This leaves you with an asset class with no fundamentals that trades entirely on sentiment. In fact, I have repeatedly asked crypto proponents to explain their valuation methodology to me and I have yet to receive a straight answer. Put simply, crypto fails to promote financial inclusion because it has no fundamental value.

In fact, as I detail in my written testimony, crypto has had the opposite effect of promoting financial inclusion. Since the hearing on February 14th, additional evidence has emerged that crypto represents the latest form of predatory inclusion – a process wherein financial actors offer needed services to minority households on exploitative terms that limit or eliminate their long-term benefits. On February 16, 2023, Emily Stewart, writing for Vox, wrote a detailed article on all the ways that crypto has failed African American investors.⁷⁵ Stewart cites survey data from LendingTree that finds “Black crypto investors were likelier than white crypto investors to say that they had borrowed money to make their investment and that they had sold their crypto for less than it was worth.”⁷⁶ Additionally, on February 20, 2023, the Bank for International Settlements (BIS) released a bulletin highlighting findings from a new data set on retail holdings of crypto assets.⁷⁷ The BIS notes that “[d]ata on major crypto trading platforms over August 2015–December 2022 show that ... a majority of crypto app users in nearly all economies made losses on their bitcoin holdings.”

⁷³ Tonantzin Carmona, “Debunking the narratives about cryptocurrency and financial inclusion,” *Brookings Institute*, October 26, 2022, <https://www.brookings.edu/research/debunking-the-narratives-about-cryptocurrency-and-financial-inclusion/#footref-1>

⁷⁴ Todd H. Baker, “Let’s Stop Treating Crypto Trading as If It Were Finance,” *The CLS Blue Sky Blog*, November 29, 2022, <https://clsbluesky.law.columbia.edu/2022/11/29/lets-stop-treating-crypto-as-if-it-were-finance/>.

⁷⁵ Emily Stewart, “How crypto failed Black investors,” *Vox*, February 16, 2023, <https://www.vox.com/the-goods/23599845/crypto-bitcoin-black-investors-ftx-freedomans-bank-civil-war>

⁷⁶ *Id.*

⁷⁷ BIS Bulletin No 60, “Crypto shocks and retail losses,” February 20, 2023, <https://www.bis.org/publ/bisbull69.pdf>

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2. So far, aside from Fidelity Investments, which has begun to offer its 401(k) customers an option to invest in cryptocurrencies, cryptocurrency has been effectively kept out of traditional retirement accounts. In light of the recent crash in the cryptocurrency market, what would have been the implications for Americans holding retirement accounts if cryptocurrency was more fully integrated into our traditional financial system?

Last October, the Financial Stability Oversight Council warned:

“Crypto-asset activities could pose risks to the stability of the U.S. financial system if their interconnections with the traditional financial system or their overall scale were to grow without adherence to or being paired with appropriate regulation, including enforcement of the existing regulatory structure.”⁷⁸

At its peak in November 2021, the crypto market (\$3 trillion) was significantly larger than the value of subprime mortgages in the U.S. in March 2007 (\$1.3 trillion), and we have never had “appropriate regulation.”⁷⁹ Therefore, the lack of systemic implications is due primarily to the limited interconnections between the crypto ecosystem and the traditional financial system.

If cryptocurrency had been more fully integrated into our traditional financial system over the past year, millions more Americans would have experienced financial losses and we may have experienced a systemic risk event. We cannot precisely know how much more would have been lost by hard working Americans, but we do know that according to the Census Bureau, approximately 35% of working age individuals have a 401(k)-style account.⁸⁰ Had it been an option, some of these individuals would have allocated some percentage of their portfolio to cryptocurrency. More Americans would have also been exposed to crypto if the SEC had not rejected numerous attempts to list a spot Bitcoin ETF.

3. As you mentioned during the hearing, disclosures for cryptocurrency would not necessarily be a one-to-one match of disclosures required for traditional securities. What sort of additional or different information should be included in cryptocurrency disclosures for investors?

This is an important question, and I am still at the beginning stages of my thinking on this issue. That said, in a July 2022 petition to the SEC, crypto exchange Coinbase highlighted a few examples of the type of information crypto investors would like to know before deciding whether or not to invest, including: information about the risk of a network attack, what kind of

⁷⁸ Financial Stability Oversight Council, *Report on Digital Asset Financial Stability Risks and Regulation 2022* (Washington, D.C.: Financial Stability Oversight Council, 2022) <https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf>.

⁷⁹ Associated Press, “Will Subprime Mess Ripple through Economy?” *NBC News*, March 13, 2007, <https://www.nbcnews.com/id/wbna17584725>. The Financial Crisis Inquiry Commission also provided information about subprime mortgage originations in the years leading up to 2008, showing that “[i]n 2006, \$600 billion of subprime loans were originated,” with slightly more being originated in 2005 and somewhat fewer in 2004. Financial Crisis Enquiry Commission, “The Financial Crisis Enquiry Report,” (Washington, D.C.: GPO, 2011), <https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf>.

⁸⁰ <https://www.census.gov/library/stories/2022/08/who-has-retirement-accounts.html>

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governance rights are embedded in which tokens, and who has the ability to change the code underlying the assets or the network.⁸¹ SEC Commissioner Hester Peirce has also laid out several potential disclosure elements, including: source code, token economics matters like an asset’s supply schedule or protocol governance, development team, the network development plan, prior token sales, and listing the trading platforms on which the tokens trade.⁸² European Markets in Crypto-Assets (MiCA) legislation would require crypto companies to produce a white paper with information about the issuer, the crypto asset, and the related project, an explanation of rights and obligations of the asset, various technological information about the asset, and a description of investment risks.⁸³ My initial reaction is that all of these items should be included in any kind of bespoke crypto disclosure regime.

⁸¹ Coinbase, *Re: Petition for Rulemaking – Digital Asset Securities Regulation* at 6 (Jul. 21, 2022), <https://www.sec.gov/rules/petitions/2022/petr4-789.pdf>.

⁸² Hester M. Pierce, “Outdated: Remarks before the Digital Assets at Duke Conference,” (speech, Duke University, January 20, 2023), <https://www.sec.gov/news/speech/peirce-remarks-duke-conference-012023>.

⁸³ Azad Ali and Pietro Piazzi, *EU’s Proposed Legislation Regulating Cryptoassets, MiCA, Heralds New Era of Regulatory Scrutiny*, Skadden, Arps, Slate, Meagher & Flom LLP (Nov. 23, 2022), <https://www.skadden.com/insights/publications/2022/11/eus-proposed-legislation>.

RESPONSES TO WRITTEN QUESTIONS OF SENATOR FETTERMAN FROM LINDA JENG

Committee on Banking, Housing, and Urban Affairs
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Questions for Professor Linda Jeng, Visiting Scholar on Financial Technology, Georgetown Institute of International Economic Law; Adjunct Professor of Law, from Senator John Fetterman:

1. Proponents of cryptocurrency make the argument that cryptocurrency is an innovative way to promote financial inclusion for underbanked communities – particularly communities of color. But this is a similar argument used by proponents of for-profit educational institutions and subprime mortgage lenders, both of whom disproportionately targeted communities of color. As a result, those communities saw their average student debt loads skyrocket and also bore the brunt of the financial fallout during the subprime mortgage crisis. Similarly, did the cryptocurrency crash of the past several months and the implosion of FTX disproportionately harm communities of color?

It has been widely reported that communities of color were harmed disproportionately by last year’s crypto winter and the FTX crash, due to higher rates of adoption and exposure.^{1 2 3} However, it is worth considering why the emergence of crypto has been met with such enthusiasm by communities of color. Since 2008, growing wealth inequality has continued to hurt those who historically have been most excluded from the financial system. As Black and Latino household wealth has plateaued, the wealth of white and other households has grown.⁴

Your comparison of crypto to the subprime mortgage crisis is a poignant one as these communities were most harmed by the 2008 crisis. Home ownership has long been considered a good pathway for building household wealth, yet thousands of Americans have been losing the ability to build wealth through this pathway, including a disproportionate number of people of color. Exclusion from the financial system remains a significant challenge. Data from the Federal Reserve Survey of Consumer Finances illustrates that wealthier households hold more diversified assets, making clear the impact of uneven access to the financial tools and services that accelerate wealth building, such as mortgages, business credit, and investment.⁵ However, the business models and regulations that shape the traditional financial system can often create high barriers to account entry for historically marginalized people, including banking deserts,

¹ <https://www.ft.com/content/47d338e2-3d3e-40ce-8a09-abfa25c16a7f>

² <https://www.economist.com/graphic-detail/2022/05/20/why-the-crypto-crash-hit-black-americans-hard>

³ <https://www.bloomberg.com/news/articles/2022-07-07/crypto-collapse-threatens-to-leave-black-hispanic-investors-further-behind&id=7vzkg>

⁴ <https://www.federalreserve.gov/econres/notes/feds-notes/wealth-and-income-concentration-in-the-scf-20200928.htm>

⁵ <https://www.federalreserve.gov/econres/notes/feds-notes/wealth-and-income-concentration-in-the-scf-accessible-20200928.htm#figa>

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high fees, minimum balances, and eligibility requirements.^{6 7}

Higher rates of crypto adoption over traditional financial services reflect a demand for access to financial tools in the context of this uneven system. According to research by the Federal Reserve Bank of Kansas City, Black Americans who invested in crypto were on average less likely to have other investments such as homes, stocks, or bonds.⁸ Crypto adoption rates also reflect a distrust of traditional financial services within many historically marginalized communities, fueled by events such as the subprime mortgage crisis and the historic collapse of the Freedman’s Bank. According to a survey conducted by Ariel Schwab, Black investors are more likely than white investors to have stopped investing or to have never invested due to a lack of trust in the stock market (36 percent versus 25 percent) or in financial institutions (25 percent versus 19 percent).⁹ In this context, research conducted by the Crypto Research and Design Lab (CRADL) finds that communities that have been historically excluded from and mistrust the financial system have found the decentralized nature of crypto particularly appealing.¹⁰

Blockchain technology represents not just a new financial ecosystem, but the next evolution of the internet. It is transforming how information is communicated, stored and processed, and the scope and speed of communication and computation. Blockchain-enabled software has created cryptocurrencies, beginning with bitcoin, ether, and other crypto-native tokens. However, cryptocurrencies are but one of many categories of digital assets, which also include stablecoins, NFTs, and other digital assets. Blockchain-enabled software also produces more than tokens. It powers real-time payments, database management, transparent carbon markets, gaming, and royalties for artists and musicians.¹¹ These new services encourage innovation and competition. This competition should encourage traditional financial services to be more competitive and to broaden services.

However, this broadening should be accompanied by increased education around financial literacy. Consumers of all backgrounds need to be more equipped to understand the risks and

⁶ <https://www.lisaservon.com/books>

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⁸ <https://libertystreeteconomics.newyorkfed.org/2016/03/banking-deserts-branch-closings-and-software-information/#.Vt5UhtBYG53>

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¹⁰ <https://www.kansascityfed.org/research/payments-system-research-briefings/the-cryptic-nature-of-black-consumer-cryptocurrency-ownership/>

¹¹ <https://www.schwabmoneywise.com/tools-resources/ariel-schwab-survey-2022>

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¹³ https://www.google.com/url?q=https://project-cradl.notion.site/Black-Experiences-in-Web3-154cf56e7ced406494e02cf3dbb9dd8&sa=D&source=docs&ust=1680882857095807&uag=AOrVaw2_KL-LXEH-v_Fh8YITZ-v

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¹⁵ <https://project-cradl.notion.site/Crypto-Research-and-Design-Lab-50a7127f34ed4c88ad95c7ced7fbc367p=32397c4f24d541cd9927077d4a0bebc1&pm=s>

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benefits of different financial services, including digital assets. Crypto adoption has changed the demographics of investing, with adopters being on average younger and more likely to report crypto as their first investment.¹² This presents a significant opportunity for a new generation of historically excluded communities to build a bridge to more diversified approaches to investment and financial planning through appropriate financial education.

Finally, increasing education alone is not sufficient to protect people of all socioeconomic backgrounds. Clear policy is critical to establishing industry norms that foster innovation while preventing the irresponsible behavior underpinning the FTX collapse and other predatory activities. For example, the same Ariel Schwab survey shows that white investors and Black investors are just as likely to invest in financial products that they do not understand (45 percent versus 47 percent).¹³ With white Americans on average holding more investments in products with a longer regulatory history, similar levels of financial literacy can still lead to divergent outcomes. Increasing access to a competitive array of financial tools and services that is regulated by clear rules can help to create a safer financial ecosystem for all Americans.

**RESPONSES TO WRITTEN QUESTIONS OF SENATOR LUMMIS
FROM LINDA JENG**

Committee on Banking, Housing, and Urban Affairs
“Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets.”
February 14, 2023

Questions for Professor Linda Jeng, Visiting Scholar on Financial Technology, Georgetown
Institute of International Economic Law; Adjunct Professor of Law, from Senator Cynthia
Lummis:

1. Ms. Jeng, I want to turn to you. There have been calls to sever the link between digital asset markets and the traditional financial system. I think this approach is short-sighted and actually increases systemic risk to the economy, rather than decreasing it. Mortgage backed securities and derivatives caused the 2008 financial crisis precisely because they were outside of the regulatory perimeter. We cannot allow that to happen again. That’s why we need legislation.

I have two questions for you, given your background at the Fed: (1) are digital asset markets likely to simply disappear if barriers to them are erected around the traditional financial services industry; and (2) how does pushing digital assets back into the shadows create real systemic risk?

- (1) Markets in digital assets actually arose in the early days of bitcoin - entirely outside the traditional financial sector. If barriers were erected between traditional financial markets and digital asset markets, it would be highly unlikely for digital asset markets to disappear. Permissionless blockchains use free, open source software and, thus, can be easily constructed in any jurisdiction. Instead of disappearing, digital asset markets will simply proliferate offshore in

¹²

<https://www.kansascityfed.org/research/payments-system-research-briefings/the-cryptic-nature-of-black-consumer-cryptocurrency-ownership/>

¹³ <https://www.schwabmoneywise.com/tools-resources/ariel-schwab-survey-2022>

Committee on Banking, Housing, and Urban Affairs
“Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets.”
February 14, 2023

other jurisdictions or in unregulated spaces. This proliferation in the shadows has happened even in countries that have explicitly banned their banking sector from servicing crypto asset trading, such as in China and Nigeria.

2) Sustainable and responsible crypto companies, like any company in any other industry, need access to affordable bank accounts in order to make payroll and payment obligations. Many are small businesses and, just like any other small business, they also need financing, including loans and credit lines. By not banking a specific type of small business, innovators, entrepreneurs, and engineers will seek services elsewhere - whether it's overseas or through shadow banking.

If crypto firms have difficulties accessing affordable banking services in the US, they will either go offshore or into the shadows to obtain banking services. If they go offshore, US regulators will lose the ability to monitor or regulate crypto activities. Going offshore also has national security implications. If the US does not have people trained in the latest technological developments, we may be less effective in countering emerging risks. We can see the implications today of the offshoring of the semiconductor industry many decades ago.¹⁴ In the future, we could see similar White House factsheets published on bringing crypto back to the US.

If they obtain financial services from the shadow banking sector, US prudential regulators would lose the ability to monitor and regulate crypto activities via supervised US banks. Even worse, the US financial system will bifurcate between traditional banking and crypto financial services. This would not be an ideal situation for US financial regulators, supervising only a portion of the overall financial sector. More importantly, there would be fewer regulatory and consumer protections for American consumers and investors.

2. Thank you, Ms. Jeng—regarding the Federal banking regulators’ actions to limit the digital asset activities of banks over the last few weeks, can you give me some examples of how the banking regulators have actually harmed consumer protection in the digital asset space, for example, the increased protections that higher bank capital standards and bankruptcy certainty can provide for customers?

Recently, IMF economists noted that cryptoassets and stablecoins are not yet risks to the global financial system.¹⁵ Although crypto does not yet pose systemic risk to the traditional banking sector, the recent closures of Silvergate and Signature have shown that banks, however, can pose broad risk to the crypto ecosystem.

¹⁴

<https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/21/fact-sheet-biden-harris-administration-bringing-semiconductor-manufacturing-back-to-america-2/>

¹⁵

<https://www.imf.org/en/Blogs/Articles/2023/01/18/crypto-contagion-underscores-why-global-regulators-must-act-fast-to-stem-risk>

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As I highlighted in a 2021 research paper¹⁶, most US crypto trading firms used the same handful of banks. This concentration of customer risk in a few banks occurred because there was regulatory uncertainty and, thus, supervisory uncertainty, for banks banking crypto firms. This regulatory and supervisory uncertainty led to most banks trying to decrease supervisory scrutiny by not taking on crypto customers.

Another reason why this concentration occurred is our outdated system of payment rails in the US. For example, when crypto trading desks buy and sell bitcoin, the bitcoin transaction settles within one hour, but the US dollar payment that was sent from one bank account to another bank account can take as long as 3 to 5 business days to settle. The slowness of US payment rails (ACH, CHIPS, Fedwire) drove crypto trading desks to find alternative payment solutions, such as SEN at Silvergate - which was essentially an internal ledger.

If the US had inexpensive real-time payment solutions like most other countries, crypto firms would have had less demand for a fiat payment alternative. Furthermore, narrow banks that hold reserves on a 1:1 basis - like Custodia Bank, for example - could help provide such fast payment solutions that crypto trading desks are seeking without incurring credit intermediation risks. FedNow when it is fully operational might mitigate this problem, but the Federal Reserve should explore narrow banking models to see if they can fulfill certain payment purposes.

By pressuring banks to avoid banking crypto firms, crypto firms will either go offshore to jurisdictions that are currently welcoming digital innovation (see my recent article on US migration of digital innovators¹⁷). Both would be poor outcomes where crypto activities are outside the US regulatory perimeter and, thus, outside the abilities of US regulators to monitor and regulate.

¹⁶ Carter, Nic and Jeng, Linda, DeFi Protocol Risks: The Paradox of DeFi (June 14, 2021). “Regtech, Suptech and Beyond: Innovation and Technology in Financial Services” RiskBooks – Oct. 2021., Available at SSRN: <https://ssrn.com/abstract=3866699> or <http://dx.doi.org/10.2139/ssrn.3866699>

¹⁷ <https://www.forbes.com/sites/digital-assets/2023/04/07/crypto-migration-european-and-asian-regulators-welcome-crypto-innovation-while-us-cracks-down/?sh=2c9ea99a481c>

RESPONSES TO WRITTEN QUESTIONS OF CHAIR BROWN FROM YESHA YADAV

Chairman Brown, Ranking Member Scott, Members of the Committee:

Thank you for this opportunity to respond to additional questions submitted to me in writing following the Committee's hearing on February 14, 2023. I set out my responses below. It would be my honor to be of any further assistance to the Committee as it continues its deliberations into cryptocurrency markets and how best to regulate them.

1. Banking and Cryptocurrency Exchanges in the Context of Regulations Preventing Illicit Money Flows and Money Laundering

Chairman Brown poses an essential question that speaks to the significance of protecting the integrity of the banking system: when deciding whether to offer their services to cryptocurrency exchanges, is it important for banks to consider how effectively exchanges implement controls against money laundering and illicit finance?

In short, yes: banks play a frontline role in helping to prevent money laundering, terrorist financing and illicit capital flows within the economy. Pursuant to the Bank Secrecy Act (BSA) and the Patriot Act, banks must maintain a system of recordkeeping, customer identification, surveillance, and reporting to identify suspicious transactions and actors.¹ As part of these obligations, they must implement procedures to reasonably convince themselves that they know who their customers are, and can verify a customer's representations through documentary evidence.² Broadly, customer identification and due diligence procedures utilize a "risk-based" system that seeks to be sensitive to specific facts and circumstances about a customer, both to build a picture of the customer's risk profile, and to enable the bank to effectively monitor them for suspicious behavior.³ If a bank is unable to satisfy itself of its customer's *bona fides*, the bank can decline their business.⁴ Crucially, civil and criminal penalties – as well as resulting reputational damage – await banks that fail to observe these laws, creating powerful incentives for compliance.

This means that banks must exercise careful due diligence when accepting and engaging with customers, including, of course, cryptocurrency exchanges. Several factors can make cryptocurrency exchanges a BSA compliance risk for banks: (i) exchanges are relatively new entrants to the marketplace, having grown enormously in economic significance outside of a comprehensive system of federal oversight; (ii) they typically cater to a global customer base and can offer liquidity to those looking to clean illicit funds and misbegotten crypto – in its Crime and Crypto Report 2022, for example, Chainalysis reported that, globally, centralized exchanges

¹ The Bank Secrecy Act (BSA), 31 USC 5311 et seq. For implementing regulations issued by the Office of the Comptroller of the Currency, 12 CFR 21.11 and 12 CFR 21.21.

² See e.g., 31 CFR § 1020.220.

³ 31 CFR 1020.210(a)(2)(v); Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Financial Crimes Enforcement Network, National Credit Union Administration, Office of the Comptroller of the Currency, *Joint Statement on the Risk-Based Approach to Assessing Customer Relationships and Conducting Customer Due Diligence*, Jul. 6, 2022.

⁴ *Id.*

constituted the destination for 47% of funds sent by illicit addresses in 2021;⁵ and (iii) exchanges can be susceptible to failure in setting up systems for overseeing customer entitlements, tracking funds, and their provenance. In April 2023, a report by FTX's debtors pointed to its abject lack of internal controls and documentation to track customers and their money.⁶ Other top crypto-exchanges, too, have come under scrutiny for failures to maintain proper safeguards against sanctioned money flows.⁷ In March 2023, the Commodity and Futures Trading Commission's complaint against Binance alleged failures by the exchange to implement systems that would "require its customers to provide any identity-verifying information before trading on the platform...and to implement procedures designed to prevent and detect terrorist financing and money laundering."⁸

That said, this does not mean that banks must automatically exclude all crypto-exchanges from gaining access to services on account of the BSA. As noted above, banks are tasked with applying a risk-based approach to customer identification and due diligence. As a matter of financial policy, banks have to balance the need to ensure market integrity with the importance of also providing access to banking services. Tellingly, in their July 2022 Joint Statement, five federal banking regulators stated that not every firm of a particular category automatically represents a compliance risk to banks under the BSA. In other words, the application of a risk-based approach counsels in favor of banks taking a case-by-case approach where each customer is assessed on the customer's specific merits and risk-profile. The Statement notes that banks with robust customer identification and due diligence systems are "not prohibited nor discouraged" from doing business with firms of a particular category or industry. Rather the need for policy to promote access to banking affords banks the ability to determine whom to do business with, based on a bank's assessment of a customer relationship. This suggests that, while crypto-exchanges present a compliance risk, banks can look to their experience in deploying calibrated risk-based systems to assess each venue's specific profile, relationship, and capacity for being monitored by the bank, rather than having to default to automatically exclude all crypto-exchanges from gaining access to its services.⁹

Two factors are also worth noting in determining the BSA-based risk to banks from crypto-exchanges as well as the larger risk that crypto-exchanges might pose within the financial system. First, crypto-currency exchanges are themselves typically subject to the BSA and the Patriot Act by virtue of being classified as money services businesses. This means that, alongside banks, they too have to ensure that they maintain robust customer identification and due diligence verification systems.¹⁰ If they fail, venues risk being criminally and civilly punished – as some have

⁵ Chainalysis, *Crime and Crypto Report* (2022), 11-12.

⁶ Victoria Cavaliere, *FTX Failure Rooted in 'Hubris,' 'Greed,' Debtors Report Says*, Bloomberg, Apr. 9, 2023.

⁷ See e.g., David Yaffe-Bellany, *U.S. Fines Crypto Exchange a Record \$24 Million for Breaking Sanctions*, N.Y. Times, Oct. 11, 2022.

⁸ Commodity Futures Trading Commission, *CFTC Charges Binance and Its Founder, Changpeng Zhao, with Willful Evasion of Federal Law and Operating an Illegal Digital Asset Derivatives Exchange*, Release Number 8680-23 (Mar. 27, 2023).

⁹ Board of Governors of the Federal Reserve System, Federal Deposit Insurance Corporation, Financial Crimes Enforcement Network, National Credit Union Administration, Office of the Comptroller of the Currency, *Joint Statement*, *supra* note [3].

¹⁰ See generally, Financial Crimes Enforcement Network, *Money Laundering Prevention: A Money Services Business Guide*, https://www.fincen.gov/sites/default/files/shared/prevention_guide.pdf. See e.g., Coinbase Help, *Coinbase Money Transmission and e-Money Regulatory Compliance*, <https://help.coinbase.com/en/coinbase/privacy-and-security/other/coinbase-regulatory-compliance>.

discovered.¹¹ In the United States, while cryptocurrency exchanges have grown up outside of a comprehensive system of prudential and conduct of business oversight, they have come under the purview of the BSA and the Patriot Act, and so been required to guard against illicit money flows on their platforms. In recent years, for example, their internal customer surveillance systems have been tasked with helping authorities to track cybercriminals seeking to launder their loot.¹² Seen through this lens, by themselves being subject to the BSA and the Patriot Act, crypto-exchanges can arguably help to mitigate some of the risk facing banks, where exchanges can offer credible evidence of their own compliance mechanisms.

Secondly, the general expertise and experience that U.S. banks possess in navigating the requirements of the BSA and the Patriot Act offer an important firewall to safeguard the financial system against dirty money and criminally tainted money flows. This suggests that cryptocurrency platforms that have relationships with BSA-compliant U.S. banks possess a source of expert monitoring and deterrence against wrongdoing, reducing the likelihood that banked cryptocurrency venues come to be routinely used as laundries for dirty money. A key potential danger arising from cryptocurrency exchanges becoming unattractive customers for U.S. banks, then, lies in this loss of expert everyday surveillance and deterrence. That is, crypto-firms might look to foreign banks, and/or seek to safeguard money with depository institutions that do not adhere to standards/expertise equivalent to those applied by the U.S., resulting in exchanges becoming a more appealing destination for global cybercriminals, and making it easier for would-be criminals to launder ill-gotten crypto-gains.¹³

**RESPONSES TO WRITTEN QUESTIONS OF SENATOR LUMMIS
FROM YESHA YADAV**

2. International Standard-Setting and U.S. Leadership in Digital Assets and Financial Regulation

I am grateful for Senator Lummis' question on the all-important role of the United States as a policy leader in financial markets regulation and whether delays in developing a framework for U.S. digital assets regulation – when other countries have offered proposals – creates the danger that we lose our position as power-broker and standard-setter in global financial regulation.

I strongly believe that we have ceded influence to peer nations in setting leading standards in digital assets regulation. Unfortunately, we now find ourselves on the backfoot internationally. As Senator Lummis observes, a number of countries and regions have developed sophisticated proposals for overseeing digital assets. Perhaps most ambitiously, the European Union's Markets in Crypto Assets Regulation (MiCA) sets out a detailed and systematic framework for overseeing digital assets and institutions engaged in offering services relating to them. MiCA seeks to achieve a number of objectives. First, it provides a definition of and a classification regime for digital assets

¹¹ See e.g., Yaffe-Bellany, *supra* note [7], Financial Crimes Enforcement Network, *FinCEN Announces \$100 Million Enforcement Action Against Unregistered Futures Commission Merchant BitMEX for Willful Violations of the Bank Secrecy Act*, Press Release, Aug. 10, 2021, <https://www.fincen.gov/news/news-releases/fincen-announces-100-million-enforcement-action-against-unregistered-futures>.

¹² See e.g., Richard Clark, Sarah Kreps, and Adi Rao, *Shifting Crypto Landscape Threatens Crime Investigations and Sanctions*, Brookings, Mar. 7, 2022.

¹³ See e.g., Yesha Yadav, *Regulators Need a Plan for Cryptocurrency*, Boston Globe, Mar. 16, 2023.

to identify various types of tokens (e.g., stablecoins versus utility tokens). Secondly, MiCA establishes rules of the road to govern services being provided within the industry to cover eight types, including custody, exchange, and the provision of advice. Thirdly, it leans on concepts in existing regulatory regimes (e.g., for broker-dealers under the Market in Financial Instruments Directive or MiFID II, or for electronic money under the E-money Directives) to outline regimes to govern the prudential and conduct of business requirements expected of digital asset service providers.¹⁴ By arguably being the first major region in the world to outline a detailed regime for digital assets, the E.U. has expressly positioned itself as the major standard-setter, where eventual compliance with its regime can garner access to what is reported to be the largest market in crypto-assets, not to mention the reputational credibility that follows.¹⁵ As Senator Lummis highlights, others like the United Kingdom, Singapore and Japan have come forward with their own offerings.

Despite being home to some of the largest cryptocurrency exchanges, and statistics estimating that around 15% of U.S. individuals conducted transfers into crypto-accounts by mid-2022, the United States does not have a comprehensive proposed framework for oversight.¹⁶ Indeed, we appear to be deadlocked on critical questions surrounding the definition of digital assets – whether these are securities, commodities or fall into some other category. In turn, our agencies are grappling with how to interpret the scope of their existing authority in the context of emerging crypto-related activities and firms, generating deep uncertainty for both public and private actors.

This delay in developing a framework for digital assets has, in my opinion, already extracted a price, both reputational and actual, for our historically dominant role as *the* leading voice in global financial regulation. First, it means that the U.S. has not taken the first step to outline desired regulatory standards covering such aspects as definitions, prudential requirements for firms (e.g., exchanges), and customer protection norms (e.g., for custody and recordkeeping). Our voice is largely missing within international regulatory conversations, alongside our vision for what should constitute globally acceptable standards and benchmarks in this context (e.g., the appropriate buffer of assets that a major digital assets exchange ought to keep as protection against default and insolvency, disclosure norms, or workable technical requirements for crypto-asset custody). This absence risks E.U. norms and standards (as the first real mover) becoming the global default – owing to the region's large market share as well as reputational heft. As major industry players opt into E.U. standards, where a U.S. regime is lacking, path dependencies will be created as those standards and norms become actualized into real-world compliance processes, industry conventions (e.g., contracts for services) and the lived customer experience of digital assets ecosystems (e.g., in relation to custody, or dispute resolution). These practices may well become

¹⁴ For discussion see e.g., Azad Ali Pietro Piazzì, *EU's Proposed Legislation Regulating Cryptoassets, MiCA, Herald's New Era of Regulatory Scrutiny*, Skadden, Arps, Slate, Meagher & Flom LLP, Nov. 23, 2022.

¹⁵ Kai Zhang, Philip J. Morgan, Jeremy M. McLaughlin, *MiCA – Overview of the New EU Crypto-Asset Regulatory Framework (Part 1)*, K&L Gates, Nov. 15, 2022.

¹⁶ J.P. Morgan Chase, *The Dynamics and Demographics of U.S. Household Crypto-Asset Use*, Dec. 2022. It is worth noting that we have seen some discrete rulemaking or proposed rulemaking for particular areas (e.g., custody), but we lack a broad-based systematic regime for digital assets. See e.g., Securities & Exchange Commission, *SEC Proposes Enhanced Safeguarding Rule for Registered Investment Advisers*, Press Release, Feb. 15, 2023.

hard to shift, especially where they come to be recognized as workable and reasonable, even if we do eventually develop our own detailed framework and set of norms for digital assets.

Secondly, in the absence of U.S. leadership, the international regulatory architecture for digital assets risks ending up without a set of cohesive accepted common norms, where countries accept a shared set of standards and values that are “enforced” through bodies like the International Monetary Fund or the World Bank.¹⁷ In such a scenario, countries would build their own domestic frameworks and private firms would then select into their preferred legal system. While certain frameworks could well gain ground (e.g., the E.U.’s MiCA), fragmentation would mean global digital asset regulation ultimately remains atomized across diverging national regimes.

Within a highly global, digital marketplace for products and services, this state of affairs is both undesirable from a policy standpoint as well as antithetical to the coordinated approach taken by major economies following the 2008 Financial Crisis. Briefly stated, the United States’ domestic financial regulatory apparatus, led by bodies like the Federal Reserve, the Securities and Exchange Commission or the Commodity Futures Trading Commission, has historically played a preeminent leadership role in convincing other countries and regions to negotiate and agree to common international standards.¹⁸ This dynamic has been especially influential in the wake of the 2008 Global Financial Crisis, where the U.S. has exercised leadership as part of the G-20 group of nations to contribute to the creation of more robust regulatory standards across financial services (e.g., for banking, derivatives, clearinghouses etc.). With major developed markets agreeing to adopt common standards, firms have less latitude to engage in “regulatory arbitrage” – that is, to choose to domicile in jurisdictions with low-intensity oversight, sparking a race-to-the-bottom between countries in order to win their custom and capital. Instead, a set of shared norms among countries has broadly cemented common cause among them, creating peer-pressure to conform, that has helped to reduce the ability of private firms to play one country off against another.¹⁹

Without the United States’ leadership on digital asset regulation, I worry that the global regulatory architecture will lack its critical power-player, so influential in compelling others to believe in the benefit of shared norms and coordination on matters of rulemaking, monitoring, and enforcement. With digital asset markets being quintessentially global, defined by borderless blockchains and customers based in one jurisdiction able to transact easily in another, this absence may well prove to be costly for market integrity – as well as for its capacity to foster efficiencies and certainty. Firms will likely be able to behave opportunistically in ways that leave the marketplace vulnerable to excessive risk-taking under poorly coordinated, fragmented oversight.

¹⁷ For a detailed account of the international regulatory architecture and its coercive power, see notably, Chris Brummer, *How International Law Works (and How it Doesn't)*, 99 *Georgetown Law Review* 257 (2011).

¹⁸ Howell E. Jackson, *A System of Selective Substitute Compliance*, 48 *Harvard International Law Journal* 105, 119 (2007) (“For much of the twentieth century, the Commission justly considered itself to be the world’s premier securities market regulator.”). To be sure, this role has become more attenuated as other countries have grown their capital markets and influence on the world stage. For discussion, Eric Chaffee, *The Internationalization of Securities Regulation: The United States’ Government’s Role in Regulating the Global Capital Markets*, 5 *Journal of Business & Technology Law* 187, 189-191 (2010).

¹⁹ Brummer, *supra* note [17], 267-268, 226 (on regulatory arbitrage and deleterious global competition for private capital, and the mitigation provided by international financial regulation against such practices).

3. Self-Regulation in Digital Asset Markets

Senator Lummis has raised a question that I believe is fundamental to the design of modern capital markets regulation: why does self-regulation matter for financial markets and why should it be a part of a framework for digital assets oversight?

Simply put, self-regulation is a cornerstone of capital markets regulation and I argue that it can play an essential complementary role to support public oversight of digital asset markets.²⁰ The notion of self-regulation refers to the practice of authorizing industry players – like exchanges – to exercise rulemaking, monitoring and disciplinary power. It has been a part of markets since their earliest days.²¹ Within securities markets regulation, for example, the Securities and Exchange Act 1934 looks to national exchanges to provide self-regulation, maintaining standards of fairness and equity as well as ensuring that their venues are free of fraud and manipulation.²² Crucially, in order to demonstrate that they can perform this role, the Securities and Exchange Commission must first evaluate that exchanges have the organizational ability to do so. The SEC must, therefore, closely scrutinize an exchange to ensure that it possesses (among other things) robust corporate governance, risk management, and legal expertise to act as a private provider of oversight for the market.²³ The SEC must monitor an exchange constantly and punish it if it falls short.

The nomenclature of self-regulation is therefore somewhat misleading. It might give the impression, at first glance, that under a self-regulatory model, industry is given free rein over its own governance. But this is far from the case. In financial markets, firms that perform self-regulation are typically authorized and vetted by a public regulator.²⁴ Their capacity to deliver everyday supervision and discipline is conducted under parameters established by a regulator like the SEC.²⁵ In short, it is not a free lunch for industry. Rather, it is a way for public regulation to acquire industry expertise, proximity and to harness the reputational and market power of critical private players – like exchanges – to coerce good behavior from those that use their services. Needless to say, self-regulation is not perfect. Indeed, it is rife with problems like conflicts of interest that arise because exchanges must punish the very people that are key to their business.²⁶

However, despite these shortcomings, self-regulation has much to offer digital assets regulation – and in particular, can provide a first systematic lever of control to bring order and discipline to

²⁰ Yesha Yadav, *A Public Mandate For Private Oversight in Cryptocurrency Markets* (Working Paper) (Feb. 2023).

²¹ Paul Mahoney, *The Exchange as Regulator*, 83 VA. L. REV. 1453, 1459-1462 (1997).

²² 15 U.S.C. 78f.

²³ See e.g., Sec. & Exch. Comm'n, *In the Matter of the Application of Investors' Exchange, LLC for Registration as a National Securities Exchange*, Release No. 34-78101 (Jun. 16, 2016).

²⁴ See e.g., 15 U.S.C. 78f.

²⁵ Ornu Dombalagian, *Demystologizing the Stock Exchange: Reconciling Self-Regulation and the National Market System*, 39 U. RICH. L. REV. 1069, 1077-82 (2005).

²⁶ See e.g., Jonathan Macey & Maureen O'Hara, *From Markets to Venues: Securities Regulation in an Evolving World*, 58 STAN. L. REV. 563 (2005).

cryptocurrency exchanges – arguably, the anchor players within digital asset markets. As I argue in my testimony and in my research, by mandating that exchanges gain the stature of SRO, regulation forces radical organizational and operational reform on these firms.²⁷ Exchanges that have grown up with minimal guardrails – a fact made clear by the staggering state of failure at FTX – would be forced to undergo thoroughgoing reform to prove to public regulators (like the SEC and CFTC) that they have the organizational capacity to exercise rulemaking, surveillance, and discipline. This would immediately ensure that cryptocurrency exchanges come under public oversight. It would also force them to become accountable and to pay for making their marketplace safer. Importantly, from the perspective of public regulators, it would coopt exchanges to harness their technical know-how, and their access to market participants and infrastructure (e.g., blockchains), in service of the public good, rather than just their own bottom lines. Further, as highlighted by Senator Lummis’ observation, a proposal for self-regulation in digital asset markets would also bring the crypto industry in line with practices that have long been part of, and shaped, traditional markets. This would ensure that many decades of learning in traditional markets can be used to make digital asset markets safe, stable and better focused on the needs of the customers they are meant to serve.

I would be delighted to answer any further questions that the Committee may have and to make myself available for any assistance as it continues its work.

Yesha Yadav
April 10, 2023.

²⁷ Yadav, *supra* note [20].

ADDITIONAL MATERIAL SUPPLIED FOR THE RECORD

LETTER SUBMITTED BY NAFCU



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National Association of Federally-Insured Credit Unions

February 13, 2023

The Honorable Sherrod Brown
Chairman
Committee on Banking, Housing, and Urban Affairs
United States Senate
Washington, DC 20510

The Honorable Tim Scott
Ranking Member
Committee on Banking, Housing, and Urban Affairs
United States Senate
Washington, DC 20510

Re: Tomorrow's Hearing – Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets

Dear Chairman Brown and Ranking Member Scott:

I write to you today on behalf of the National Association of Federally-Insured Credit Unions (NAFCU) to share our thoughts on issues of importance to credit unions ahead of tomorrow's hearing, "Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets." NAFCU advocates for all federally-insured not-for-profit credit unions that, in turn, serve over 135 million consumers with personal and small business financial service products. We would like to thank you for this opportunity to share some thoughts regarding digital assets and stablecoins.

Recent developments in the digital asset and stablecoin space have proven both the enormous potential of these innovations and the need for regulation. Distributed ledger technology and other technologies that support a broad ecosystem of digital assets offer an array of potential operational efficiencies. For example, the ability to facilitate payment transactions integrated with smart contracts, either through use of stablecoins or other digital assets, may help members with specific business needs and potentially reduce credit unions' operational costs. Most importantly, digital asset technologies can be designed with strong auditability features, which can enhance regulatory compliance and reduce instances of human error, fraud, and other misconduct. However, the absence of a clear regulatory environment and appropriate supervisory framework poses risks to the adoption of these otherwise promising technologies. NAFCU supports innovation with these technologies, but the absence of a clear regulatory framework that supports safety and soundness, transparency, and appropriate disclosure of risk to investors and consumers brings with it inherent risks. We urge Congress to explore ways to provide regulatory certainty and parity across the financial services system and ensure a level playing field for all with new and emerging financial technology. As you do so, we urge you to ensure the needs of credit unions are considered in any legislative approach you undertake in the future.

We thank you for the opportunity to share our thoughts and look forward to continuing to work with you on this important issue. Should you have any questions or require any additional information, please contact me or Lewis Plush, NAFCU's Senior Associate Director of Legislative Affairs, at (703) 258-4981 or lplush@nafcu.org.

Sincerely,

Brad Thaler
Vice President of Legislative Affairs

cc: Members of the U.S. Senate Committee on Banking, Housing, and Urban Affairs

STATEMENT SUBMITTED BY CHAMBER OF PROGRESS



Statement for the Record
Senate Banking, Housing, and Urban Affairs Committee Hearing
"Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets"

February 14, 2023

Chairman Brown, Ranking Member Scott, and Members of the Committee,

Thank you for the opportunity for Chamber of Progress to provide a written statement for the record for the Senate Banking, Housing, and Urban Affairs Committee Hearing entitled, "Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets."

Chamber of Progress is a tech industry coalition promoting technology's progressive future. Our organization works to ensure that all Americans benefit from technological leaps. Our corporate partners include several leading crypto and web3 companies, but our partner companies don't have a vote or veto over our positions.

After the major collapses of bad actors like FTX and Terra/Luna due to fraud, bankruptcy and improper business models, this industry needs thoughtful regulation that gives companies clear rules of the road and gives consumers more confidence. The SEC has used regulation by enforcement to sow seeds of fear and uncertainty in the digital asset industry, as companies brace to discover new interpretations of securities law via social media and television¹²³.

In light of recent enforcement actions by the SEC, we continue to call on Congress to direct the SEC and other regulatory bodies to establish clear rules and regulations for the digital asset industry. A public rulemaking process around proposed digital asset

¹ <https://www.politico.com/newsletters/digital-future-daily/2023/02/13/criptos-crisis-gets-existential-00082620>

² <https://decrypt.co/121069/sec-gary-gensler-kraken>

³ <https://www.forbes.com/sites/mariagraciasantillanalinaires/2022/06/27/sec-chairman-gary-gensler-implies-that-ether-is-a-security-and-falls-under-his-jurisdiction/?sh=6ad8ea0d7775>

regulation is a necessity to ensure that all stakeholders have the opportunity to participate in the public notice and comment period. The coordinated actions by the SEC and other agencies to choke-off⁴ digital assets from the marketplace may have the intention to protect investors, but the lack of regulatory clarity via the proper rulemaking process leaves consumers at risk of being left behind by the rest of the world. Limiting access may spur an increase in American consumers investing abroad, which will leave them with little to no protection if they trade with unregistered firms outside of the US.⁵ Furthermore, banning cryptocurrency in the United States could cause financial harm to the 34 million Americans who own it currently⁶, and the 46 million Americans who are likely to purchase it this year.⁷ An outright ban would make it difficult for Americans to transact using crypto within our borders, and may propel an increase in underbanked populations.

The 117th Congress featured a number of crypto-related bills introduced with the intention of laying a proper framework for the industry. We applaud the bipartisan efforts made by the House and Senate to advance legislation that could positively impact the future of payments and digital assets. With the 118th Congress underway, we encourage continued bicameral collaboration to develop a robust crypto regulatory structure.

We believe that Congress should pass legislation that will provide the proper financial safeguards for the digital asset industry:

- Clarification of a digital security vs. digital commodity.** Congress should designate a clear line in the sand where a token stops being a commodity. The SEC and CFTC have determined that Bitcoin⁸ and (sometimes) Ether⁹ are commodities; however, this determination has not included the conditions upon which the respective digital asset is considered a commodity or security. Contributing to the lack of clarity is a recent appeal in SEC's case against LBRY, Inc., which revealed the secondary sales of LBRY's token did not qualify as the sale of a security.¹⁰ Congress should also take into account the classification of future cryptocurrencies using other consensus algorithms other than Proof of Work (PoW), which the Bitcoin and Ethereum blockchains were built on.

⁴ <https://www.piratewires.com/p/crypto-choke-point>

⁵ <https://www.wsj.com/articles/u-s-crypto-traders-evade-offshore-exchange-bans-11627637401>

⁶ <https://www.insiderintelligence.com/insights/us-adults-cryptocurrency-ownership-stats/>

⁷ <https://www.fool.com/the-ascent/research/study-americans-cryptocurrency/>

⁸ <https://www.coindesk.com/layer2/2022/08/28/secs-gensler-reiterates-bitcoin-alone-is-a-commodity-is-he-right/>

⁹ <https://www.coindesk.com/markets/2019/10/10/cftc-chairman-confirms-ether-cryptocurrency-is-a-commodity/>

¹⁰ <https://finance.yahoo.com/news/judge-rules-secondary-sale-lbry-032057654.html>

- **Public disclosures to ensure investor confidence in the cryptocurrency markets.**
Congress should require that all crypto exchanges or companies receiving customer deposits to publicly disclose audited financial statements and documents that truthfully represent the company's health. This will help investors and consumers make informed decisions about which exchanges and platforms work best for them.
- **Preventing "bank runs."** Congress can grant jurisdiction to the SEC and CFTC to establish reserve requirements for digital asset exchanges and companies accepting customer deposits. This could avoid sudden delays from companies rushing to satisfy customer withdrawals in response to a market fluctuation. Reserve requirements can be held in an appropriately-backed stablecoin or fiat currency.

In the aftermath of the collapses in the digital asset industry, Congress must not lose sight of the opportunities the digital asset industry is bringing to the table of American innovation. Cryptocurrencies are improving the way payments are processed, cutting down the amount of time consumers wait for payments to clear from days to seconds. Due to the industry being so nascent, people of all generations are investing in digital assets, because they are looking towards a more progressive future.

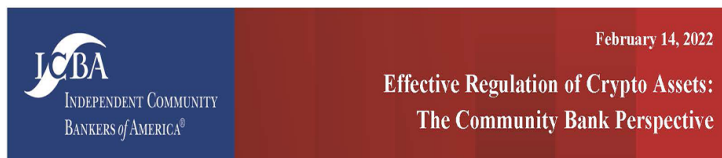
Congress must work expeditiously to stop future abuses of the digital asset industry by bad actors, and instill secure guardrails for investors to trust the markets once again.

Respectfully,



Janay Eyo
Director, Financial Policy
Chamber of Progress

STATEMENT SUBMITTED BY ICBA



The Independent Community Bankers of America, representing community banks across the nation with nearly 50,000 locations, appreciates the opportunity to provide this statement for the record for today's hearing: "Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets."

Recent, spectacular and damaging crypto crashes have focused policy makers and the public on the significant risk posed by crypto assets. While the collapse of FTX dominated headlines and raised public awareness, it must not overshadow the numerous, lower-profile crypto crashes that illustrate the ongoing danger posed by unregulated crypto. The risk is no longer theoretical. We hope this hearing will address the emerging investor and systemic risk created by a proliferation of unregulated crypto assets.

Proposals to regulate crypto assets are currently before Congress, and we urge this committee to play an active role in ensuring that regulatory solutions are effective. We appreciate the focus of this committee on the application of existing securities law to crypto assets. This is a good place to start. We must not be satisfied with incomplete measures replete with loopholes that would only delay more comprehensive efforts. The true test of any crypto regulation is its effectiveness in preventing contagion of the traditional financial system.

Rapid Expansion of Cryptocurrencies

Crypto advocates seek to expand their products from a niche investment class to function as means of payment and store of value. Limited regulation and oversight applied to the crypto asset marketplace and transactions expose consumers and investors to significant risks, including highly volatile fluctuations in value. Cryptocurrencies also present several operational risks and concerns, including flaws in smart contract programming and loss of cryptographic keys that can jeopardize users' assets.

Especially concerning are the efforts of certain crypto firms to market themselves as the equivalent of chartered and insured banks offering bank-like services without the protections offered by regulated banks. Recent events have shown that depositors may abruptly lose confidence in a crypto firm and demand their funds in what amounts to a "bank run" that shakes confidence across the crypto industry. Unlike these crypto firms, banks are subject to deposit insurance, comprehensive oversight and examination, and capital requirements, among other safeguards which are designed to ensure customer access to funds under adverse economic circumstances.

Stablecoins Among the Highest Risk Forms of Cryptocurrency

While FTX has captured headlines, we must not lose sight of the substantial threat posed by private stablecoins issued by nonbanks, including the potential to erode monetary authority and disrupt financial stability. Many stablecoins of these are anything but stable. Inadequate capitalization and hacks have caused a number of nonbank stablecoins to collapse in value beginning with UST-cum-USTC (Terra/TerraClassic), which lost its dollar peg nearly a year ago and fell to just ten cents, and USDT (Tether), the largest stablecoin by market capitalization, which also lost its dollar peg due to concerns about its opaque reserves. Terra faced a precipitous loss in value as investor confidence collapsed, which spread to Tether, the largest stablecoin by market cap, as users grew more concerned about Tether's assets. Because stablecoins are used in the exchange of other cryptocurrencies, the collapse of a stablecoin creates a ripple effect through the broader crypto market.

Decentralized Finance (DeFi) Magnifies Risks Created by Unregulated Crypto Assets

Far from a solution to the cycle of crisis, DeFi is by its nature plagued by vulnerabilities. DeFi's opaque and complex governance structures facilitate illicit transactions. In a prime example, Tornado Cash was used to launder \$450 million before being sanctioned OFAC. Further, "smart contracts," or automated programs, are vulnerable to coding flaws that can be nearly impossible to correct.



The Federal Reserve Bank of Atlanta has recognized the high degree of leverage across DeFi applications, recently warning that “a sparking event that undermines confidence in the levered positions might generate a financial crisis.”

A Caution Regarding Crypto Proponents' Diversionary Arguments

The crypto industry, facing an abrupt reversal of fortune following FTX's collapse, has begun to advance misleading and diversionary arguments in its defense. FTX, we are told, was an aberration that should not slow the industry's expansion and access to the broader traditional financial system.

Crypto advocates have argued, for example, that continued exclusion of crypto firms from Federal Reserve master accounts, will create a “bifurcated financial system.” This is a muddled argument at best. Crypto advocates have effectively *sought* bifurcation through the creation of an alternative to fiat currencies. As the risks and vulnerabilities of crypto have become too obvious to ignore, proponents now seek the legitimacy afforded to highly regulated banks without the same regulatory constraints and oversight. Integration with the traditional financial system, without addressing inherent risks, would only remove firewalls to contagion that must instead be strengthened. Our imperative must be to first safeguard the integrity of the official system on which consumers and our economy depend. These concerns are recognized and articulated in the Federal banking agencies' recent Joint Statement on Crypto-Asset Risks to Banking Organizations. ICBA appreciates the balanced and cautious approach described in the Joint Statement, seeking to ensure that any bank involvement in crypto activities is consistent with safety and soundness, consumer protection, and other important considerations.

Crypto advocates have further argued that a bifurcated system will compromise monetary policy. The opposite is more likely true. By marginalizing banks and reducing deposits, widespread adoption of crypto currencies would likely erode the Federal Reserve's ability to conduct monetary policy and interest rate control.

These are merely several examples of recent diversionary, crypto-proponent arguments that do not withstand scrutiny and must be rejected by policy makers entrusted with protection against systemic and consumer risk.

State-Chartered Non-Bank Crypto Firms

Crypto advocates have argued that state-chartered institutions should be granted powers equivalent to those currently reserved for federally insured and regulated financial institutions, including access to Federal Reserve master accounts.

ICBA supports the Federal Reserve's denial of Custodia Bank's application for a master account. Custodia, which is subject to neither comprehensive regulatory oversight nor federal deposit insurance, proposed to engage in high-risk crypto activities. Master account access would provide a direct and dangerous path to broad contagion, introducing crypto volatility into the broader, traditional banking system. The payment system must be protected to ensure financial stability and economic well-being.

Further, ICBA supports the Federal Reserve's recent policy statement that would limit state member banks to engaging as principal in only those activities that are permissible for national banks unless such activities are expressly permitted for state banks by federal statute or Federal Deposit Insurance Corporation regulations. The state charter must not be allowed to circumvent federal regulation which is needed to ensure uniformity and a level playing field. Inconsistent oversight would leave consumers vulnerable. Banks must comply with federal regulations governing all aspects of their operations, putting them at a competitive disadvantage to novel, state-qualified, non-bank issuers.

Effective Regulation of Crypto Assets

Inadequate, partial “solutions” favored by the crypto industry would act to legitimize crypto while leaving investors and the financial system vulnerable. Effective, comprehensive regulation and oversight – including more robust and transparent



capitalization, investor protection, anti-money laundering, and cyber security requirements – is needed to balance the risks and benefits of this emerging technology. Incomplete regulation would only create dangerous loopholes and leave the most vulnerable crypto assets unregulated. Effective regulation must:

- Include capital adequacy and reserves; activity restrictions; due diligence; information security and privacy; business resiliency; ownership and control of data; anti-money laundering and anti-terrorist financing; reporting and maintenance of books and records; consumer protections; safeguarding customer information; vendor and third-party management; and ongoing examination.
- Provide a coordinated regulatory approach by banking and market regulators, including the Securities and Exchange Commission and the Commodity Futures Trading Commission.
- Ensure no crypto access is granted to a Federal Reserve master account and the payment system.
- Appropriate regulation of DeFi to address the systemic and illicit finance risks it creates.
- Preserve the long-standing separation of banking and commerce which is critical to the impartial allocation of credit and the vitality of the American economy.

Closing

Thank you for convening today's hearing to highlight the significant risks created by the rise in cryptocurrencies. ICBA encourages the Senate Banking Committee to continue to play an active role in creating a comprehensive regulatory framework for crypto assets.

LETTER SUBMITTED BY PROMETHEUM

TESTIMONY BEFORE THE UNITED STATES CONGRESS
ON BEHALF OF PROMETHEUM, INC.



Prometheus

Statement for the Record of Aaron L. Kaplan and Benjamin S. Kaplan
Co-CEOs, Prometheus Inc.

Before the
**United States Senate Committee on Banking,
Housing and Urban Affairs**

[Hearing on:](#)
[Crypto Crash: Why Financial System](#)
[Safeguards are Needed for Digital Assets](#)

Tuesday, February 14, 2023

Prometheus, Inc.
120 Wall Street
New York, NY 10005

Chairman Brown, Ranking Member Scott, and members of the committee, we appreciate the opportunity to submit for the record this testimony for the Senate Banking, Housing, and Urban Affairs Committee hearing entitled, “Crypto Crash: Why Financial System Safeguards are Needed for Digital Assets.”

Our names are Aaron L. Kaplan and Benjamin S. Kaplan and we serve as the co-CEOs of Prometheus, Inc. (“Prometheus”). Since its inception in 2017, Prometheus has believed the Federal Securities Laws (“FSLs”) are the best framework under which to regulate digital assets/crypto. Prometheus is building a public market (trading venue) and custodial infrastructure for digital asset securities¹ (i.e. crypto) that is compliant with the FSLs. Prometheus ATS is registered with the Securities and Exchange Commission (“SEC”) and is a member of Financial Industry Regulatory Authority (“FINRA”) as an alternative trading system, a/k/a/ a marketplace, for the trading of digital asset securities pursuant to the three step process² (“Three Step”). Prometheus Capital is registered with the SEC and is long into the process of becoming a member of FINRA as a special purpose broker-dealer³ (“SPBD”) which would allow Prometheus Capital to clear, settle, and custody digital asset securities.

Introduction

Recent events have shown the need for stringent regulation of crypto and crypto financial service providers (i.e. virtual currency exchanges, custodians, staking services, lending platforms, etc.) in order to protect the investing public. Regulation requires two elements to work, tested regulatory frameworks and the ability to enforce such frameworks on an ongoing basis.

The FSLs have been tried and tested for almost 90 years, and have allowed the United States to create and maintain the most advanced financial markets in the world. The FSLs already have frameworks in place for the issuance, trading, clearing, settlement, and custody of digital assets. The SEC is by far the largest and most capable regulatory agency in the world when it comes to financial markets. The SEC relies on FINRA, a self-regulatory organization (“SRO”), to regulate securities matters. FINRA has established itself as the SRO to ensure compliance by members with the FSLs and FINRA Rules.

The regulatory frameworks and enforcement structure needed for digital assets already exist.

Operating compliantly under the FSLs’ established regulatory frameworks – and compliantly through properly licensed entities that are overseen by the SEC and FINRA – ensures that Americans participating in the crypto/Web3 space are properly protected by the investor protections of the FSLs and SRO Rules, that crypto trading is fair and orderly, and that customer assets are properly segregated, secured and custodied.

Why the Federal Securities Laws?

¹The SEC defines a “digital asset security” to mean “a digital asset that meets the definition of a “security” under the federal securities laws.” The SEC further defines a “digital asset” as “an asset that is issued and/or transferred using distributed ledger or blockchain technology (“distributed ledger technology”), including, but not limited to, so-called “virtual currencies,” “coins,” and “tokens.”” <https://www.sec.gov/rules/policy/2020/34-90788.pdf>

²<https://www.sec.gov/divisions/marketregr/mr-noaction/2020/finra-ats-role-in-settlement-of-digital-asset-security-trades-09252020.pdf>

³<https://www.sec.gov/rules/policy/2020/34-90788.pdf>

Crypto has always been a regulated financial instrument, and financial service providers (e.g., crypto exchanges, custodians, etc.) are required to be regulated based on the services they provide under securities and/or banking laws. Properly regulating crypto trading and clearing, settlement, and custody under the securities laws provides a proven mechanism through which to allow and encourage responsible participation and ensure investors are protected.

While there has been a lot of discussion as of late about the need for greater regulatory clarity for digital assets, the essential point at hand is not about more or less regulation, or even new regulation, but rather the application of the appropriate securities regulatory frameworks to digital assets. Such regulation currently exists – the FSLs – and has been discussed at length by SEC Chairman Gensler.

As early as July 2017, the SEC put the industry on notice in the DAO Report,⁴ that digital assets and related financial services could (and likely did) implicate the FSLs. The SEC followed this up with releases on how to compliantly trade and custody digital assets. Furthermore, the SEC’s SPBD Release was adopted into the Federal Register as law on April 27th, 2021.⁵ The route to compliance is clearly laid out. Those who argue for new laws based on a lack of regulatory clarity are best served by the creation of new laws, because they have not and cannot comply with existing applicable securities laws and regulations.

Some argue that the SEC has taken a “regulation by enforcement” approach, but that argument is irrelevant to the fact that the FSLs are being appropriately applied to digital assets to protect investors and to ensure fair and orderly markets.

The SEC’s long-standing three-part mission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.⁶ As part of this mission, the SEC has released regulations on how to compliantly trade and custody digital assets securities (i.e., crypto) with the Three Step and SPBD releases, and has therefore laid out how compliance with the FSLs is achieved.

Conclusion

Despite claims to the contrary, there is no need to reinvent the wheel. The FSLs are meant to protect investors, particularly the investing retail public, make sure that trading venues follow established rules that protect markets, and ensure that customer assets are properly segregated, secured, and protected.

Clearly identifying digital assets/crypto as securities, and thereby requiring oversight by the SEC, will ensure that Americans have properly licensed and regulated venues through which they can responsibly participate in the digital asset space and allow the United States to maintain its lead as the preeminent financial market in the world.

⁴ <https://www.sec.gov/litigation/investreport/34-81207.pdf>

⁵ <https://www.federalregister.gov/documents/2021/02/26/2020-28847/custody-of-digital-asset-securities-by-special-purpose-broker-dealers>

⁶ <https://www.sec.gov/our-goals>

Draft of February 10, 2023

We Must Protect Investors and Our Banking System from the Crypto Industry

(GWU Legal Studies Research Paper No. 2023-7, <http://ssrn.com/abstract=4360175>)

Arthur E. Wilmarth, Jr.*

Abstract

The crypto boom and crash of 2020-22 demonstrated that (i) cryptocurrencies with fluctuating values are extremely risky and highly volatile assets, and (ii) cryptocurrencies known as “stablecoins” are vulnerable to systemic runs whenever there are serious doubts about the adequacy of reserves backing those stablecoins. Crypto firms amplified the crypto boom with aggressive and deceptive marketing campaigns that targeted unsophisticated retail investors. Scandalous failures of prominent crypto firms accelerated the crypto crash by inflicting devastating losses on investors and undermining public confidence in crypto-assets.

Federal and state regulators have allowed banks to become significantly involved in crypto-related activities. Several FDIC-insured banks that provided financial services to crypto firms suffered substantial losses and incurred extensive legal, operational, and reputational risks during the crypto crash. Meanwhile, stablecoins issued by nonbanks and uninsured depository institutions threaten to become a new form of “shadow deposits” that could undermine the integrity of our banking system and require costly future bailouts.

This article presents a three-part plan for responding to the risks posed by fluctuating-value cryptocurrencies and stablecoins. First, policymakers must protect investors by recognizing the Securities and Exchange Commission (SEC) as the primary federal regulator of most fluctuating-value cryptocurrencies. Federal securities laws provide a superior regime for regulating such cryptocurrencies. In particular, the SEC has broader powers (including a more robust investor protection mandate) and a stronger enforcement record than the Commodity Futures Trading Commission (CFTC).

Second, federal bank regulators must protect the banking system by prohibiting all FDIC-insured banks and their affiliates from investing and trading in fluctuating-value cryptocurrencies, either on their own behalf or on behalf of others. In addition, federal bank regulators should bar FDIC-insured banks and their affiliates from providing financial services to crypto firms unless those firms are registered with and regulated by the SEC and/or the CFTC.

Third, Congress should mandate that all issuers and distributors of stablecoins must be FDIC-insured banks. That mandate would ensure that all providers of stablecoins must comply with the regulatory safeguards governing FDIC-insured banks and their parent companies and affiliates. Those safeguards provide crucial protections for our banking system, our economy, and our society.

Introduction

An enormous speculative boom occurred in markets for crypto-assets¹ between April 2020 and November 2021, followed by a catastrophic bust that continued through the end of 2022. The crypto crash inflicted huge losses on investors and created serious concerns about the dangers that crypto-assets pose to our financial system. Moreover, crypto-assets have not produced any significant benefits for our financial system or our economy. In view of the extreme risks of crypto-assets and their lack of economic benefits, Congress and federal regulators must take decisive measures to protect investors and our banking system from the crypto industry.

During the crypto boom, the total market capitalization of crypto-assets soared from about \$200 billion in April 2020 to almost \$3 trillion in November 2021.² Prices for the two largest cryptocurrencies—Bitcoin and Ethereum³—rose dramatically during the same period.⁴ In the autumn of 2021, “Bitcoin and Ether ranked among the world’s top 20 traded assets, competing with the market capitalization of some of the world’s largest companies.”⁵

⁰Professor Emeritus of Law, George Washington University Law School, Washington, DC. [Insert acknowledgments]. Unless otherwise indicated, this article includes developments through January 31, 2023.

¹ The Financial Stability Oversight Council (FSOC) has defined “crypto-assets” as “private sector digital assets that depend primarily on cryptography and distributed ledger or similar technology,” including digital “assets commonly referred to as ‘coins’ or ‘tokens’ by market participants.” Financial Stability Oversight Council, *Report on Digital Asset Financial Stability Risks and Regulation 2022*, at 7 [hereinafter FSOC Digital Assets Report], <https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf>.

² *Id.* at 9, 9 (figure 1).

³ CoinMarketCap, “Major Cryptoassets by Total Market Capitalization (Bitcoin Dominance Chart)” (visited Jan. 31, 2023) (showing that Bitcoin and Ethereum have been the two largest cryptocurrencies since February 2016) [hereinafter Major Cryptoassets Chart], <https://coinmarketcap.com/charts/>.

⁴ The Block, “BTC Price” and “ETH Price” graphs (visited Jan. 31, 2023) (showing that the price of Bitcoin increased from \$6,400 on Mar. 31, 2020, to \$67,100 on Nov. 9, 2021, while the price of Ethereum rose from \$130 to \$4,740 during the same period) [hereinafter Bitcoin and Ethereum Price Graphs], <https://www.theblock.co/data/crypto-markets/prices>.

⁵ Tara Iyer, “Cryptic Connections: Spillovers between Crypto and Equity Markets,” at 2 (Int’l Monetary Fund Global Financial Stability Note 2022/1, Jan. 2022), <https://www.imf.org/en/Publications/global-financial-stability-notes/Issues/2022/01/10/Cryptic-Connections-511776>.

The crypto crash began in late 2021 and became a prolonged “crypto winter,” as the total market capitalization of cryptocurrencies fell by over \$2 trillion between November 2021 and the end of 2022.⁶ Prices for Bitcoin and Ethereum declined by more than 70% during that period.⁷ A staff study issued by the Bank for International Settlements (BIS) estimated that about three-quarters of individual investors who purchased Bitcoin between 2015 and 2022 suffered losses on their investments.⁸ The magnitude of the crypto crash generated significant concerns among U.S. and international officials about the risks that crypto-assets pose to the banking system and financial markets.⁹

The most widely-used crypto-assets are cryptocurrencies. The term “cryptocurrencies,” as used in this article, refers to digital assets that are created on blockchains or other privately-created networks using distributed ledger technology.¹⁰ Most cryptocurrencies

⁶ CoinMarketCap, “Total Cryptocurrency Market Cap” graph (visited Jan. 31, 2023), <https://coinmarket.com/charts/> (showing that the total market capitalization for global cryptocurrencies declined from \$2.9 trillion on Nov. 9, 2021, to \$800 billion on Dec. 30, 2022); see also Kurt Woock, “After a Fall, Crypto Winter Sets In,” *Nerdwallet* (Nov. 14, 2022) (describing the “crypto winter” that occurred in cryptocurrency markets during 2022), <https://www.nerdwallet.com/article/investing/crypto-winter>.

⁷ Bitcoin and Ethereum Price Graphs, *supra* note 4 (showing that the price of Bitcoin fell from \$67,100 on Nov. 9, 2021 to \$16,600 on Dec. 30, 2022, while the price of Ethereum fell from \$4,740 to \$1,200 during the same period).

⁸ Raphael Auer et al., “Crypto trading and Bitcoin prices: Evidence from a new database for retail adoption,” at 3, 20 (BIS Working Paper No. 1049, Nov. 2022) [hereinafter Auer et al., “Crypto trading”], <https://www.bis.org/publ/work1049.pdf>.

⁹ Bank for International Settlements, *Annual Economic Report* 87-89 (June 2022) [hereinafter BIS 2022 Annual Report], <https://www.bis.org/publ/arpdf/ar2022e.pdf>; FSO Digital Assets Report, *supra* note 1, at 4-5, 9-10, 14-25.

¹⁰ U.S. Dept. of the Treasury, *Crypto-Assets: Implications for Consumers, Investors, and Businesses* 5 n.4 (Sept. 2022) (stating that a “cryptocurrency” is “a digital asset, which may be a medium of exchange, for which generation or ownership records are supported through a distributed ledger technology that relies on cryptography, such as a blockchain”) [hereinafter Treasury Crypto-Assets Report], https://home.treasury.gov/system/files/136/CryptoAsset_EOS.pdf.

This article does not consider another category of privately-issued digital assets known as “non-fungible tokens” (NFTs). NFTs are digital representations of works of art and other real-world images. NFTs are frequently marketed as “digital collectibles,” and they are widely viewed as “highly speculative investments.” *Id.* at 5, 23-25 (quotes at 23). NFTs are “tradeable [but] not interchangeable” because “each token is unique and distinguishable from any other.” *Id.* at 5, 23. Accordingly, NFTs are not designed to function as “fungible” payment tokens, and their current uses are mainly “non-financial in nature.” *Id.* The creation of new NFTs declined sharply in 2022, and trading in NFTs “plummeted” during the year. Cristina Criddle & Joshua Gabert-Doyon, “NFT creators diversify into real-world assets to diversify revenues,” *Financial Times* (Dec. 27, 2022), <https://www.ft.com/content/69da37d1-11de-430f-8a86-ea51bd2ae82b>.

fall into two general categories: (i) cryptocurrencies with fluctuating values, like Bitcoin and Ethereum, and (ii) “stablecoins” that seek to maintain parity with a designated fiat currency or other referenced asset or group of assets.¹¹ The term “cryptocurrencies,” as used here, does not include digital (“tokenized”) representations of traditional financial assets such as stocks, bonds, bank deposits, and fiat currencies.¹²

In December 2022, the Basel Committee on Banking Supervision (Basel Committee) issued prudential standards for bank exposures to crypto-assets. As further discussed below, the Basel Committee’s standards distinguish between (1) “Group 1” crypto-assets, which include tokenized traditional financial assets and stablecoins that satisfy prescribed standards, and (2) “Group 2” crypto-assets that do not meet “Group 1” criteria, such as cryptocurrencies with fluctuating values.¹³ This article, like the Basel Committee’s standards, excludes tokenized traditional financial assets from treatment as cryptocurrencies and also contends that “Group 1” stablecoins should be regulated differently from “Group 2” cryptocurrencies with fluctuating values.

Part I of this article provides an overview of the crypto boom and crash. As described in Part I.A, the crypto boom and crash demonstrated that cryptocurrencies with fluctuating values are extremely risky and highly volatile assets and are strongly correlated with each other.

¹¹ BIS 2022 Annual Report, *supra* note 9, at 81; FSOC Digital Assets Report, *supra* note 1, at 7.

¹² See Lydia Beyoud, “Gary Gensler Says Crypto Investors Should Embrace SEC Regulation,” *Bloomberg Law* (Dec. 1, 2022) (quoting SEC Chair Gary Gensler’s distinction between “cryptocurrencies” and “digitalization of [traditional] financial assets” such as “Treasury bonds [and] regular equity securities”); Steve Cocheo, “Why ‘Tokenized Deposits’ Are Not Stablecoins (& Why It Matters to Banks),” *The Financial Brand* (Aug. 11, 2022) (explaining that “tokenized deposits” are not stablecoins and instead are digital representations of “existing bank deposit[s]”), <https://thefinancialbrand.com/news/cryptocurrency-banking/why-tokenized-deposits-are-not-stablecoins-why-it-matters-to-banks-150700/>.

¹³ Basel Committee on Banking Supervision, *Prudential treatment of cryptoasset exposures* 1-2, 6-11 (Dec. 2022) [hereinafter Basel Committee Cryptoasset Exposure Standards], <https://www.bis.org/bcbss/publ/d545.pdf>; see also Cravath, “Basel Committee Finalizes Prudential Standard for Cryptoasset Exposures” (Jan. 3, 2023) (discussing the Basel Committee’s standards), <https://www.cravath.com/a/web/ffx33BGUR3V4c6Dfimg6xS/basel-committee-finalizes-prudential-standard-for-cryptoasset-exposures.pdf>; *infra* notes 244-46, 268-70, 279-80 and accompanying text (same).

Fluctuating-value cryptocurrencies rose in tandem during the boom and collapsed together during the bust. Those cryptocurrencies did not provide hedging or diversification benefits and inflicted very severe losses on investors. In addition, fluctuating-value cryptocurrencies have not produced any meaningful benefits for our financial system or the broader economy.

As discussed in Part I.B, stablecoins play a central role in the crypto ecosystem because they are the most widely-used form of payment for investing and trading in cryptocurrencies and are also used as collateral for borrowing and lending cryptocurrencies. Stablecoins are the primary link between traditional financial markets and cryptocurrency markets because investors convert fiat currencies into stablecoins before engaging in cryptocurrency transactions. The crypto crash revealed that, despite their promise of stability, stablecoins are vulnerable to investor runs during crises in crypto markets.

As explained in Part I.C, the crypto boom was fueled by the unprecedented responses of governments to the Covid-19 crisis, including huge fiscal stimulus programs and expansive monetary policies. Crypto firms amplified the boom with aggressive and deceptive marketing campaigns that targeted unsophisticated retail investors. The crypto crash began when governments reduced their fiscal stimulus programs and central banks tightened their monetary policies to combat rising inflation rates in late 2021. A series of failures among leading crypto firms intensified the crypto crash. Those failures revealed pervasive misconduct by crypto insiders, including fraud, conflicts of interest, market manipulation, self-dealing, and misappropriation of customer funds.

Part II of this article examines the growing presence of banks in the crypto ecosystem, a development that has occurred with the approval or acquiescence of federal and state regulators. As discussed in Part II.A, regulators have allowed uninsured special-purpose depository

institutions, trust companies, and FDIC-insured banks to issue and distribute stablecoins and provide deposit, credit, custodial, and payment services to crypto firms. At least two FDIC-insured banks offer crypto trading services to their customers directly or indirectly through an affiliate. Several FDIC-insured banks experienced serious problems during the crypto crash, raising questions about the potential long-term impact of the crypto crash on our banking system.

Part II.B describes several stablecoin projects undertaken by FDIC-insured banks as well as initiatives exploring the creation of digital payment networks that would connect banks with central banks. Those programs are experimenting with the use of stablecoins, tokenized deposits, and central bank digital currencies. In view of those ongoing initiatives, policymakers must regulate the issuance and distribution of stablecoins and tokenized deposits to protect the banking system and prevent the emergence of new and dangerous forms of shadow banking.

Part III presents a three-part plan for responding to the risks posed by fluctuating-value cryptocurrencies and stablecoins. First, policymakers must protect investors by recognizing the Securities and Exchange Commission (SEC) as the primary federal regulator of most fluctuating-value cryptocurrencies. Federal securities laws provide a superior regime for regulating such cryptocurrencies as well as the exchanges on which they are traded and the broker-dealers that conduct transactions in those instruments. In particular, the SEC has broader powers (including a more robust investor protection mandate) and a stronger enforcement record than the Commodity Futures Trading Commission (CFTC).

Second, federal bank regulators must protect the banking system by prohibiting all FDIC-insured banks and their affiliates from investing and trading in fluctuating-value cryptocurrencies, either on their own behalf or on behalf of others. In view of the extreme risks created by fluctuating-value cryptocurrencies, federal bank regulators should determine that

investing and trading in such cryptocurrencies (as either principal or agent) are unsafe and unsound practices that are forbidden to FDIC-insured banks and their affiliates. In addition, federal bank regulators should bar FDIC-insured banks and their affiliates from providing credit, custodial, deposit, payment, or other financial services to issuers, broker-dealers, exchanges, or lending platforms dealing in fluctuating-value cryptocurrencies unless those entities (and their ultimate parent companies) are registered with and regulated by the SEC and/or the CFTC.

Third, Congress must protect the banking system, and prevent the rise of a hazardous new form of shadow banking, by requiring that all issuers and distributors of stablecoins and tokenized deposits must be FDIC-insured banks. That requirement would ensure that all providers of stablecoins and tokenized deposits must comply with the regulatory regime governing FDIC-insured banks and their parent companies and affiliates. That regime provides crucial safeguards for our banking system, our economy, and the general public. Congress should reject alternative proposals that would allow nonbanks or uninsured depository institutions to issue or distribute stablecoins or tokenized deposits. Allowing nonbanks or uninsured depository institutions to issue or distribute such financial instruments would jeopardize the safety and stability of our banking and payments systems and pose great risks to investors who entrust their funds to those institutions.

The foregoing three-part plan would protect investors in cryptocurrencies, shield our banking system from crypto-related hazards, and greatly reduce the risk that future disruptions in crypto markets could undermine the safety and stability of our banking system and financial markets. The second and third reforms are urgently needed to establish strong prudential boundaries between our banking system and the crypto industry.

I. The Crypto Crash Demonstrated that Fluctuating-Value Cryptocurrencies and Stablecoins Pose Severe Risks to Investors and Our Banking System.

A. Fluctuating-Value Cryptocurrencies Inflicted Huge Losses on Investors during the Crypto Crash and Have Not Produced any Meaningful Benefits.

Crypto advocates have argued that Bitcoin, Ethereum and other fluctuating-value cryptocurrencies protect investors against inflation and help investors to diversify their portfolios against the risks of traditional financial assets.¹⁴ However, Bitcoin and Ethereum did not provide effective hedges against rising inflation rates during late 2021 and 2022.¹⁵ In addition, Bitcoin, Ethereum, and other fluctuating-value cryptocurrencies did not produce diversification benefits for investors during the crypto crash.¹⁶

Prices for cryptocurrencies were highly correlated with each other during the crypto boom and crash in 2020-22, as they were during a similar boom-and-bust episode in 2017-2018. FSOC concluded that “crypto-asset prices have tended to be widely correlated with each other,

¹⁴ For discussions of claims that fluctuating-value cryptocurrencies serve as hedges against inflation and provide other diversification benefits, see Yael Bizuati-Kennedy, “Bitcoin Bulls Argue for Crypto as a Hedge Against Soaring Inflation,” *GoBankingRates* (Dec. 13, 2021), <https://www.gobankingrates.com/investing/crypto/bitcoin-bulls-crypto-hedge-against-soaring-inflation/>; Derek Horstmyer et al., “Digital Gold or Fool’s Gold? Is Crypto Really a Hedge Against Equity Risk?” (CFA Institute, July 12, 2022), <https://blogs.cfainstitute.org/investor/2022/07/12/digital-gold-or-fools-gold-is-crypto-really-a-hedge-against-equity-risk/>; PGIM, *Megatrends: Cryptocurrency Investing: Powerful Diversifier or Portfolio Kryptonite?* 1, 9, 16-24 (Summer 2022) [hereinafter PGIM Cryptocurrency Investing Report], <https://insights.pgim.com/pdf/PGIM-Megatrends-Cryptocurrency-Investing-Whitepaper-English-0622.pdf>; Ron Shevlin, “Bitcoin or Ethereum: Which Cryptocurrency Is the Best Hedge Against Inflation?”, *Forbes* (Dec. 28, 2021), <https://www.forbes.com/sites/ronshevlin/2021/12/28/bitcoin-or-ethereum-which-cryptocurrency-is-the-best-hedge-against-inflation/?sh=729934fc1d22>.

¹⁵ Jon Cunliffe, “Some lessons from the Crypto Winter” (July 12, 2022) (speech by the Deputy Governor of the Bank of England for Financial Stability), <https://www.bankofengland.co.uk/speech/2022/jon-cunliffe-speech-on-crypto-market-developments-at-the-british-high-commission-singapore>; PGIM Cryptocurrency Investing Report, *supra* note 14, at 16-17; see also CryptoCompare, *Q4 Outlook Report: In the Midst of Winter* 4, 6 (Nov. 2022) (stating that cryptocurrencies “failed to act as an inflation hedge” in 2022 because their values dropped as inflation accelerated), <https://www.cryptocompare.com/media/43717878/2022-outlook-report-q4.pdf>.

¹⁶ Cunliffe, *supra* note 15; FSOC Digital Assets Report, *supra* note 1, at 22-25; PGIM Cryptocurrency Investing Report, *supra* note 14, at 1, 16-24; see also Horstmyer, *supra* note 14 (“In times of panic, the correlation between crypto and the stock market actually increases. . . . [During] market downturns, crypto has served as more of an anti-hedge, with its correlation with the S&P 500 rising as stocks plunge.”).

exposing crypto-asset market participants to largely non-diversifiable risk inside the crypto-asset ecosystem.”¹⁷ Similarly, a Federal Reserve Bank of Chicago staff study found that most price movements for fluctuating-value cryptocurrencies between 2018 and 2021 were caused by “linkages” with price movements for other cryptocurrencies.¹⁸ That study determined that “only a small fraction [of price movements] can be ascribed to the idiosyncratic characteristics of individual digital currencies,” and most price changes reflected “aggregate or common shocks influencing the market as a whole.”¹⁹

In addition to strong correlations among prices for crypto-assets, FSOC found evidence of increased correlations during the crypto boom and crash between price swings for crypto-assets and price movements for “risky traditional assets such as broad equity indexes.”²⁰ From 2020 to 2022, changes in the prices of Bitcoin and other fluctuating-value cryptocurrencies followed—but with much greater extremes—price trends in U.S. and global equity markets.²¹ As indicated above, the total market capitalization of cryptocurrencies increased by almost 1500% between April 2020 and November 2021 and then dropped by more than 70% by

¹⁷ FSOC Digital Assets Report, *supra* note 1, at 22-25 (quote at 25); *see also* Ralph Auer et al., “Banking in the Shadow of Bitcoin? Institutional adoption of cryptocurrencies” 5 (BIS Working Paper No. 1013, May 2022) (discussing the crypto boom-and-bust cycles of 2017-18 and 2020-22) [hereinafter Auer et al., “Banking and Bitcoin”], <https://www.bis.org/publ/work1013.pdf>.

¹⁸ Filippo Ferroni, “How Interconnected Are Cryptocurrencies and What Does This Mean for Risk Measurement?” (Chicago Fed Letter, No. 466, Fed. Res. Bank of Chicago, May 2022), <https://www.chicagofed.org/publications/chicago-fed-letter/2022/466>.

¹⁹ *Id.*

²⁰ FSOC Digital Assets Report, *supra* note 1, at 22-23; *see also* Kevin Zhao, “Risk Spotlight: OFR Identifies Three Ways DeFi Growth Could Threaten Financial Stability,” *OFR Blog* (Off. Fin. Res., Feb. 7, 2023) (stating that “the 30-day rolling correlation between the returns on Bitcoin and the S&P 500 has increased noticeably since the beginning of 2021”), <https://www.financialresearch.gov/the-ofr-blog/2023/02/07/ofr-identifies-three-ways-defi-growth-could-threaten-financial-stability/>.

²¹ Tobias Adrian et al., “Crypto Prices Move More in Sync With Stocks, Posing New Risks” (Jan. 11, 2022), <https://www.imf.org/en/Blogs/Articles/2022/01/11/crypto-prices-move-more-in-sync-with-stocks-posing-new-risks>; FSOC Digital Assets Report, *supra* note 1, at 22-25; Iyer, *supra* note 5, at 1-5; Benjamin Purvis & Tatania Darie, “Tech and Crypto in Peril as Fed Ends Liquidity Binge, Survey Shows,” *Bloomberg* (June 5, 2022), <https://www.bloomberg.com/news/articles/2022-06-05/tech-and-crypto-in-peril-as-fed-ends-liquidity-binge-m-liv-pulse>; Arthur E. Wilmarth, Jr., “Comment Letter to the U.S. Treasury Department regarding the Risks of Stablecoins,” at 2, 2n.6 (Geo. Wash. U. L. Sch. Legal Stud. Res. Paper No. 2022-49, Aug. 8, 2022) [hereinafter Wilmarth, “Treasury Comment Letter”], available at <http://ssrn.com/abstract=4205062>.

December 2022.²² The total market capitalization of stocks included in the S&P 500 index followed a similar but less extreme pattern, almost doubling between March 2020 and December 2021 and then declining by 20% by December 2022.²³ A widely-used index for global stocks followed the same pattern—nearly doubling between March 2020 and December 2021 and then declining by 20% by December 2022.²⁴

Like FSOC’s review, an International Monetary Fund (IMF) staff study determined that correlations in investment returns and volatility between crypto markets and U.S. and global equity markets “increased notably” during 2020 and 2021.²⁵ The IMF staff study found that “interconnectedness” and “spillovers” between crypto markets and equity markets increased significantly during the same period.²⁶ The study warned that “crypto assets . . . could potentially pose financial stability risks due to their extreme price volatility.”²⁷ Three other studies concluded that, between 2018 and 2022, prices for fluctuating-value cryptocurrencies were highly correlated with each other, were much more volatile than prices for U.S. stocks, and did not provide diversification benefits to investors.²⁸

²² See *supra* notes 2-7 and accompanying text (describing the magnitude of the crypto boom and crash).

²³ YCharts, “S&P 500 Market Cap” (showing that the total market capitalization of stocks included in the S&P 500 index rose from \$21.4 trillion on Mar. 31, 2020 to \$40.4 trillion on Dec. 31, 2021, and then declined to \$32.1 trillion on Dec. 31, 2022) (visited Jan. 31, 2023), https://ycharts.com/indicators/sp_500_market_cap.

²⁴ MSCI, “MSCI ACWI Index Daily Performance” graph (showing that the MSCI ACWI Index rose from 384 on Mar. 23, 2020, to 755 on Dec. 31, 2021, and then declined to 605 on Dec. 30, 2022) (visited Jan. 31, 2023), <https://www.msci.com/our-solutions/indexes/acwi>.

²⁵ Iyer, *supra* note 5, at 2-3, 10.

²⁶ *Id.* at 3 (quote), 10.

²⁷ *Id.* at 3; see also Adrian et al., *supra* note 21 (“The increased and sizeable co-movement and spillovers between crypto and equity markets indicate a growing interconnectedness between the two asset classes that permits the transmission of shocks that can destabilize financial markets . . . [and] pose risks to financial stability especially in countries with widespread crypto adoption.”); Zhao, *supra* note 20 (stating that “future price declines in or disruptions of the digital-assets market could have spillover effects in traditional financial markets and the real economy”).

²⁸ Cristina Polizu, “A Deep Dive into Crypto Valuation,” *S&P Global* (Nov. 10, 2022), <https://www.spglobal.com/en/research-insights/featured/special-editorial/understanding-crypto-valuation>; PGIM Cryptocurrency Investing Report, *supra* note 14, at 1, 16-24; Vikram Rai, “Cryptocurrency: Not a Safe Haven in 2022” (Aug. 31, 2022), <https://economics.td.com/us-cryptocurrency-not-safe-haven>.

The foregoing evidence shows that fluctuating-value cryptocurrencies are extremely risky and highly volatile assets that create serious dangers for investors, do not provide diversification benefits, and pose significant potential risks to financial stability. The hazardous characteristics of cryptocurrencies are aggravated by two major factors. First, cryptocurrencies have not demonstrated any “fundamental current economic uses” for lawful purposes other than speculative investing, trading and lending.²⁹ A group of 1500 technology experts recently stated that, after thirteen years of development, the blockchain technology used by cryptocurrencies “has severe limitations and design flaws that preclude almost all applications that deal with public customer data and regulated financial transactions and are not an improvement on existing non-blockchain solutions.”³⁰ A leading financial journal reported that “a number of high-profile blockchain experiments in banking and finance have ended in failure [during 2022], undermining the case for the technology’s future in financial services.”³¹ Private or public permissioned ledgers could conceivably improve the reliability, speed, and efficiency of wholesale payments, but the permissionless blockchain technology used by Bitcoin and other cryptocurrencies has not shown any ability to outperform existing payment technologies.³²

²⁹ FSOC Digital Assets Report, *supra* note 1, at 4, 7-9, 23-28 (quote at 23); *see also infra* notes 237-38, 242-43 and accompanying text (contending that investing and trading in fluctuating-value cryptocurrencies are highly speculative activities that are functionally equivalent to gambling); Cunliffe, *supra* note 15 (stating that Bitcoin and similar cryptocurrencies have “no real economy assets backing them and no means of generating revenue” and are “only worth what the next buyer will pay”; consequently, they are “very speculative, risky” assets that are “inherently volatile, very vulnerable to sentiment and prone to collapse”); Treasury Crypto-Assets Report, *supra* note 10, at 1 (“[C]rypto-asset products are primarily used to trade, lend, and borrow other crypto-assets.”), https://home.treasury.gov/system/files/136/CryptoAsset_EO5.pdf.

³⁰ “Letter in Support of Responsible Fintech Policy,” from 1500 computer scientists, software engineers, and technologists (June 1, 2002), <https://concerned.tech/>.

³¹ Martha Muir, “Case for blockchain in financial services dented by failures,” *Financial Times* (Dec. 30, 2022), <https://www.ft.com/content/cb606604-a89c-4746-9524-e1833cd4973e>; *see also* Treasury Crypto-Assets Report, *supra* note 10, at 1 (“[T]he potential for blockchain technology to transform the provision of financial services, as espoused by developers and proponents, has yet to materialize.”).

³² *See infra* notes 197-201 and accompanying text.

Second, fluctuating-value cryptocurrencies are either unregulated or subject to very weak and fragmented forms of regulation. As a result of weak or nonexistent regulation, investors in cryptocurrencies have suffered major losses due to fraud, theft, market manipulation, conflicts of interest, misappropriation of customer funds, malicious hacks, and operational failures.³³ The absence of adequate regulation has also allowed cryptocurrencies to be used for criminal purposes such as extortion, money laundering, tax evasion, avoidance of sanctions on terrorist organizations, and illegal gambling.³⁴

For example, Binance is largely unregulated even though it operates the world's largest cryptocurrency exchange and controls a majority of global trading in cryptocurrencies.³⁵ Binance's parent company is incorporated in the Cayman Islands, but that company has not disclosed the location of its corporate headquarters.³⁶ Binance "remains mostly hidden from public view" and "has actively avoided oversight" of its parent company by establishing

³³ FSOC Digital Assets Report, *supra* note 1, at 29-45, 68-74, 97-103, 114-16; Treasury Crypto-Assets Report, *supra* note 10, at 2-3, 6-12, 25-42, 48.

³⁴ U.S. Dept. of Justice, *The Role of Law Enforcement in Detecting, Investigating, and Prosecuting Criminal Activity Related to Digital Assets* 4-10, 18-25, 30 (Sept. 6, 2022), [https://www.justice.gov/media/1245466/dl?inline="](https://www.justice.gov/media/1245466/dl?inline=); U.S. Dept. of the Treasury, *Action Plan to Address Illicit Financing Risks of Digital Assets* 1-7 (Sept. 2022) [hereinafter Treasury Action Plan], <https://home.treasury.gov/system/files/136/Digital-Asset-Action-Plan.pdf>; Samuel Hoy Brown VII, "Gambling on the Blockchain: How the Unlawful Internet Gambling Enforcement Act Has Opened the Door for Offshore Crypto Casinos," 24 *Vanderbilt Journal of Entertainment & Technology Law* 535, 536-38, 541-50 (2022); *see also* Scott Chipolina, "Coinbase and Binance diverge in outlook for 2023," *Financial Times* (Jan. 13, 2023) (reporting that "the amount of crypto sent to wallet addresses associated with illicit behaviour hit an all-time high" of \$20 billion in 2022), <https://www.ft.com/content/6817fceb-01e9-4531-9965-2a43b42216be>.

³⁵ Omar Farooq, "5 Biggest Crypto Exchanges in the World," *Insider Monkey* (Nov. 24, 2022) (reporting that Binance is by far the world's largest cryptocurrency exchange), <https://www.insidermonkey.com/blog/5-biggest-cryptocurrency-exchanges-in-the-world-1089996/?singlepage=1>; Angus Berwick & Tom Wilson, "Crypto giant Binance kept weak money laundering checks even as it promised tougher compliance, documents show," *Reuters* (Jan. 21, 2022) ("Binance swallows the market" graph, stating that Binance "dominates spot and derivatives trading [in cryptocurrencies], with a share of over 50% in November 2021"; and "Binance – a crypto behemoth" graph, stating that "Binance is the world's biggest crypto exchange"), <https://www.reuters.com/investigates/special-report/finance-crypto-currency-binance/>; Tom Wilson, Angus Berwick & Elizabeth Howcroft, "Special Report–Binance's books are a black box, filings show, as crypto giant tries to rally confidence," *Reuters* (Dec. 19, 2022) (reporting that Binance "accounts for over half of all trading volume" in cryptocurrencies worldwide), <https://www.reuters.com/technology/binances-books-are-black-box-filings-show-crypto-giant-tries-rally-confidence-2022-12-19/>.

³⁶ Adam Samson & Brooke Masters, "Binance crackdown: regulators tussle with the 'wild west' of crypto," *Financial Times* (July 2, 2021), <https://www.ft.com/content/a10c297f-c8dd-48b1-9744-09d4ff2e89ca>.

numerous subsidiaries that operate in various jurisdictions.³⁷ In addition, Binance's financial statements are a "black box" because they are not publicly audited.³⁸ A recent study determined that about half of the crypto trades conducted on Binance's exchange in 2019 were "wash trades"—*i.e.*, simultaneous purchases and sales of cryptocurrencies that were likely to inflate reported trading volumes and distort prices on Binance's exchange.³⁹

B. Stablecoins Promise Stable Values but Are Highly Vulnerable to Investor Runs.

Unlike cryptocurrencies with fluctuating values, stablecoins are ostensibly designed to maintain parity with a designated fiat currency or another referenced asset or group of assets.⁴⁰ Most stablecoins are either (1) fiat-linked stablecoins, which maintain financial reserves and seek to maintain parity with a designated fiat currency, or (2) algorithmic stablecoins, whose value depends on a trading or collateral relationship with one or more crypto-assets.⁴¹ More than 90% of outstanding stablecoins are fiat-linked stablecoins, and over 99% of fiat-linked stablecoins attempt to maintain parity with the U.S. dollar.⁴²

Stablecoins have established a major presence in crypto markets during the past three

³⁷ Wilson, Berwick & Howcroft, *supra* note 35; *see also* Samson & Masters, *supra* note 36; Tom Wilson & Angus Berwick, "How Binance CEO and aides plotted to dodge regulators in US and UK," *Reuters* (Oct. 17, 2022), <https://www.reuters.com/investigates/special-report/fintech-crypto-binance-zhao/>.

³⁸ Wilson, Berwick & Howcroft, *supra* note 35.

³⁹ Lin William Cong et al., *Crypto Wash Trading* 1-9, 9 n.16, 45 (Table 6, Panel B), 72 (Appendix E) (Nat'l Bureau of Economic Research Working Paper 30783, Dec. 2022), <https://www.nber.org/papers/w30783>.

⁴⁰ Mitsu Adachi et al., "Stablecoins' role in crypto and beyond: functions, risks and policy," § 1, *Macroeprudential Bulletin* No. 18 (European Central Bank, July 11, 2022), https://www.ecb.europa.eu/pub/financial-stability/macroeprudential-bulletin/html/ecb.mpbu202207_2-836f682ed7.en.html; FSOC Digital Assets Report, *supra* note 1, at 7, 45; Igor Markhov & Antoinette Schoar, "Cryptocurrencies and Decentralized Finance (DeFi)" (April 24, 2022), at 20-21, <https://ssrn.com/abstract=4104550>; Treasury Crypto-Assets Report, *supra* note 10, at 5, 21.

⁴¹ Adachi et al., *supra* note 40, § 1; BIS 2022 Annual Report, *supra* note 9, at 81; Markhov & Schoar, *supra* note 40, at 20-21; Megan DeMatteo, "What's the Point of Stablecoins? Understanding Why They Exist," *CoinDesk* (Sept. 16, 2022), <https://www.coindesk.com/learn/whats-the-point-of-stablecoins-understanding-why-they-exist/>; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 1.

⁴² Mike Antolin, "Fiat-Backed Stablecoins: What You Need to Know About Tether, USD Coin and Others," *CoinDesk* (Oct. 17, 2022), <https://www.coindesk.com/learn/fiat-backed-stablecoins-what-you-need-to-know-about-tether-usd-coin-and-others/>; The Block, "Stablecoins: Share of Fiat Stablecoin Supply (in USD) by Currency" graph (visited Jan. 31, 2023), <https://www.theblock.co/data/decentralized-finance/stablecoins>; "Wilmarth, Treasury Comment Letter," *supra* note 21, at 1-2.

years. The total volume of outstanding stablecoins rose from less than \$5 billion in January 2020 to \$183 billion in April 2022, before declining to \$139 billion in December 2022.⁴³ The three largest stablecoins increased their combined share of the total cryptocurrency market from 2.4% in January 2020 to 16% in December 2022. During the same period, the combined market share held by Bitcoin and Ethereum dropped from 75.6% to 58.5%.⁴⁴

Stablecoins are the most widely-accepted form of payment for investing and trading in cryptocurrencies and the most frequently-used collateral for borrowing and lending cryptocurrencies. Stablecoins provide the primary link between traditional financial markets and cryptocurrency markets because participants typically convert their fiat money into stablecoins before engaging in cryptocurrency transactions.⁴⁵ In September 2021, “around 75% of all trading on crypto trading platforms involved a stablecoin.”⁴⁶ Thus, stablecoins “play a key role in facilitating transactions across the plethora of cryptocurrencies that have mushroomed in recent years.”⁴⁷

The stablecoin market is highly concentrated. The three largest stablecoins – Tether, USD Coin (USDC), and Binance USD Coin (BUSD) – collectively accounted for over 90% of

⁴³ Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 2 (providing figures for Jan. 2020 and April 2022); CoinGecko, “Stablecoin Tokens by Market Capitalization” Graph (visited Jan. 3, 2023) (providing figure for Dec. 31, 2022) [hereinafter Top Stablecoins], <https://www.coingecko.com/en/categories/stablecoins>.

⁴⁴ Major Cryptoassets Chart, *supra* note 3 (showing the respective market shares of Bitcoin, Ethereum, Tether, USD Coin, and Binance USD Coin (BUSD) as of Jan. 4, 2020, and Dec. 31, 2022).

⁴⁵ Adachi et al., *supra* note 39, § 2; Financial Stability Board, *Assessment of Risks to Financial Stability from Crypto-assets* (Feb. 16, 2022), at 13-14 [hereinafter FSB Report on Risks of Crypto-assets], <https://www.fsb.org/wp-content/uploads/P160222.pdf>; Treasury Crypto-Assets Report, *supra* note 10, at 16; Wilmarth “Treasury Comment Letter,” *supra* note 21, at 2, *see also* Scott Chipolina, “Crypto group Circle ends \$9bn deal to go public through Bob Diamond’s Spac,” *Financial Times* (Dec. 5, 2022) (“Stablecoins play a key role in connecting traditional and crypto markets. . . . Crypto traders use them like cash between making bets.”), <https://www.ft.com/content/c414257e-a917-4e2b-a022-572268d77515>; FSOC Digital Assets Report, *supra* note 1, at 45 (“Stablecoins provide a key operational service supporting speculative trading, lending and borrowing among platforms, and protocols.”); Gary Gorton et al., “Leverage and Stablecoin Pegs” 2 (Dec. 13, 2022) (“The advantage of stablecoins over fiat currencies is that stablecoins live on the blockchain and face lower transaction costs of using them as a store of value between trades and allow for faster trading.”), <https://papers.ssrn.com/abstract=4304954>.

⁴⁶ FSB Report on Risks of Crypto-assets,” *supra* note 45, at 13.

⁴⁷ BIS 2022 Annual Report, *supra* note 9, at 78.

outstanding stablecoins in December 2022.⁴⁸ All three of those stablecoins are closely connected to leading cryptocurrency exchanges that provide trading, borrowing, and lending services to customers. BUSD, the third-largest stablecoin, is cosponsored by Binance and Paxos Trust, and Binance operates the world's largest cryptocurrency exchange by trading volume. USDC, the second-largest stablecoin, is issued by Centre, a consortium jointly owned by Circle and Coinbase. Coinbase operates the world's second-largest cryptocurrency exchange. Tether, the largest stablecoin, is controlled by a small group of shareholders who also control Bitfinex, the world's twelfth-largest cryptocurrency exchange.⁴⁹

Despite their promises of stable values, stablecoins have often failed to maintain adequate reserves to ensure parity with their referenced fiat currency. In June 2021, the Iron stablecoin lost its \$1 peg and collapsed after investors ran on its affiliated Titan token, which accounted for a quarter of Iron's reserves.⁵⁰ Binance recently acknowledged that one of its stablecoins had repeated and undisclosed shortfalls in its reserves during 2020 and 2021. An investor run did not occur because investors did not know about those deficits.⁵¹ In May and November 2022, Tether

⁴⁸ Top Stablecoins, *supra* note 43 (showing that, on Dec. 31, 2022, Tether, USD and BUSD together issued \$127.3 billion, or 91.3%, of the \$139.3 billion of total outstanding stablecoins); *see also* Oluwapelumi Adejumo & Ryan James, "BUSD Supply Crosses \$20B, Cuts Into USD Market Share" (Oct. 23, 2022), <https://beincrypto.com/busd-supply-crosses-20b-cuts-into-usdc-market-share/> (reporting that Tether, USD and BUSD had a combined 91% market share of the stablecoin market in Oct. 2022); Wilmarth, "Treasury Comment Letter," *supra* note 21, at 3 (stating that Tether, USD and BUSD accounted for 90.5% of outstanding stablecoins in July 2022).

⁴⁹ Ben Foldy et al., "Tether's Managers Are Atypical Group," *Wall Street Journal* (Feb. 3, 2023), B1; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 3; *see also* Farooq, *supra* note 35 (identifying Binance and Coinbase as the world's two largest cryptocurrency exchanges); Omar Farooq, "15 Biggest Crypto Exchanges in the World," *Yahoo* (Nov. 24, 2022) (naming Bitfinex as the world's twelfth-largest cryptocurrency exchange); *see also infra* note 139 and accompanying text (explaining that Binance and Paxos Trust are the cosponsors of Binance USD); *see also* Top Stablecoins, *supra* note 43 (showing that Tether had \$66.2 billion of outstanding stablecoins on December 31, 2022, compared with \$44.5 billion for USDC and \$16.6 billion for BUSD).

⁵⁰ David Z. Morris, "Paying the IRON Price: Fractional Reserve Banking on a Blockchain," *CoinDesk* (updated Sept. 14, 2021), <https://www.coindesk.com/policy/2021/06/17/paying-the-iron-price-fractional-reserve-banking-on-a-blockchain/>; *see also* FSOC Digital Assets Report, *supra* note 1, at 47 (discussing Iron's collapse).

⁵¹ Emily Nicolle & Muyao Shen, "Binance Acknowledges Past Flaws in Maintaining Stablecoin Backing," *Bloomberg* (Jan. 10, 2023) (describing persistent shortfalls in Binance's reserves for its Binance-peg BUSD stablecoin during 2020 and 2021, and noting that those shortfalls exceeded \$1 billion on three occasions), <https://www.bloomberg.com/news/articles/2023-01-10/binance-bnb-acknowledges-past-flaws-in-managing-busd-peg-stablecoin-reserves>.

temporarily lost its peg to the U.S. dollar following the collapses of TerraUSD and FTX/Alameda.⁵²

As shown by the failures of Iron and TerraUSD, stablecoins are vulnerable to catastrophic runs whenever there are widely-shared concerns about the adequacy of their reserves.⁵³ Even stablecoins with significant reserves are likely to experience large redemptions when significant disruptions occur in cryptocurrency markets. Since 2019, the three leading stablecoins (Tether, USDC, and BUSD) have each experienced single-day redemptions exceeding 4% of their market capitalizations. Those redemption levels are “economically large compared to the traditional banking system.”⁵⁴

C. Aggressive Marketing Campaigns Intensified Crypto’s Boom, While Failures and Scandals Accelerated Its Crash.

Dramatic changes in global fiscal and monetary policies played major roles in igniting the crypto boom and triggering its subsequent crash. Crypto firms amplified the crypto boom by launching deceptive, high-powered marketing campaigns directed at unsophisticated retail investors. Failures of leading crypto firms and associated scandals intensified the crypto crash by undermining investor confidence in crypto-assets.

1. Crypto Firms Magnified the Crypto Boom by Targeting Retail Investors.

Following the outbreak of the COVID-19 pandemic in early 2020, governments around the world established huge fiscal stimulus programs, and many central banks adopted ambitious monetary easing policies to support their economies and stabilize their financial systems.

⁵² Foldy et al., *supra* note 49; FSOC Digital Assets Report, *supra* note 1, at 15-16, 45-53; *see also infra* notes 81-85 and accompanying text (discussing the collapse of TerraUSD and Luna and Tether’s loss of parity with the U.S. dollar in May 2022).

⁵³ FSOC Digital Assets Report, *supra* note 1, at 46-52, 75; Gorton et al., *supra* note 45, at 2-3, 26-27.

⁵⁴ Gorton et al., *supra* note 45, at 24 (quote), 26-27, 39 (Table 4).

Congress approved \$5.2 trillion of fiscal stimulus programs between March 2020 and March 2021—a response that was four times as large as Congress’s stimulus measures during the Great Recession of 2007-09.⁵⁵ On a worldwide basis, the U.S. and other nations approved \$16 trillion of fiscal stimulus programs between March 2020 and March 2021.⁵⁶ Fiscal stimulus measures during 2020 and 2021 exceeded 25% of national GDP in the U.S., United Kingdom (U.K.), Germany, and Italy.⁵⁷

The Federal Reserve System (Fed) and other central banks responded to the pandemic by establishing comprehensive lending and guarantee programs to support their financial institutions and financial markets. The U.S. and some other countries provided fiscal backstops to ensure the success of their central banks’ lending and guarantee programs. Central banks also aggressively cut interest rates—in many cases, to zero or below—and implemented quantitative easing (QE) programs that included massive purchases of government bonds, mortgage-backed securities, corporate securities, and other financial assets. Central bank stabilization programs, ultralow interest rate policies, and QE purchases significantly reduced the costs of borrowing and servicing debts for private-sector and public-sector borrowers.⁵⁸ Those rescue programs

⁵⁵ Arthur E. Wilmarth, Jr., “The Pandemic Crisis Shows that the World Remains Trapped in a ‘Global Doom Loop’ of Financial Instability, Rising Debt Levels, and Escalating Bailouts,” 40 *Banking & Financial Services Policy Report* No. 8, at 4-5 (Aug. 2021) [hereinafter Wilmarth, “Pandemic Crisis”], available at <http://ssrn.com/abstract=3901967>; see also Christina D. Romer, “Lessons from Fiscal Policy in the Pandemic: The ODE Distinguished Economist Award Lecture,” 67:2 *American Economist* 164-82 (2022).

⁵⁶ Wilmarth, “Pandemic Crisis,” *supra* note 55, at 5; see also Kristalina Georgieva, “Giving People a Fair Shot – Policies to Secure the Recovery” (speech by the IMF Managing Director on Mar. 30, 2021) (stating that “governments took exceptional measures [in response to the pandemic]—including about \$16 trillion in fiscal action and a massive liquidity injection by central banks”), <https://www.imf.org/en/News/Articles/2021/03/25/sp033021-SMs2021-Curtain-Raiser>.

⁵⁷ Hans Degryse & Cédric Huytebroek, “Preventing a banking crisis: fiscal support and loan loss provisions during the COVID-19 pandemic” (Oct. 4, 2022), at 10-11, 12 (Figure 1), <http://ssrn.com/abstract=4032747>.

⁵⁸ Wilmarth, “Pandemic Crisis,” *supra* note 55, at 5; see also Lev Menand, *The Fed Unbound: Central Banking in a Time of Crisis* 20-21, 34-60 (2022) (analyzing the Fed’s response to the pandemic); June Rhee et al., “Market Support Programs: COVID-19 Crisis,” 4:2 *Journal of Financial Crises* 179-219 (2022) (providing an overview of financial market support measures provided by central banks in the U.S., U.K., Canada, Japan, the Eurozone, and four other nations during the pandemic), <https://elischolar.library.yale.edu/journal-of-financial-crises/vol4/iss2/4/>.

surpassed—in both scale and scope—comparable measures established by central banks during the Great Recession.⁵⁹

The Fed's purchases of financial assets during the pandemic more than doubled the size of its balance sheet from \$4.17 trillion in January 2020 to \$8.76 trillion in December 2021.⁶⁰

The Fed, the European Central Bank (ECB), the Bank of Japan (BOJ), and the Bank of England (BOE) expanded their combined balance sheets from \$15.5 trillion in December 2019 to \$26.1 trillion in December 2021.⁶¹ In the U.S., the broad (M2) money supply grew by over 40% from December 2019 to December 2021.⁶² Money supply aggregates also recorded double-digit annual growth rates in Australia, Canada, China, the Eurozone, Japan, and the U.K.⁶³

The fiscal stimulus, market stabilization, and QE programs of governments and central banks encouraged vast amounts of new investments by businesses, institutional investors, and households during 2020 and 2021. The ultra-low interest rate policies of central banks depressed low-risk investments and spurred investors to buy more risky, higher-yielding assets like technology stocks, high-yield (junk) bonds, leveraged corporate loans, residential and commercial real estate, and crypto-assets.⁶⁴ Trading by retail and institutional investors in

⁵⁹ Menand, *supra* note 58, at 17-21, 34-60; Rhee et al., *supra* note 58, at 181-85, 197-204, 208-09.

⁶⁰ Board of Governors of the Federal Reserve System, "Assets: Total Assets," retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/WALCL>, Jan. 26, 2023 (showing the size of the Fed's balance sheet on Jan. 1, 2020 and Dec. 29, 2021).

⁶¹ Atlantic Council, *Global QE Tracker* ("The Big 4 Central Banks: Total Balance Sheet Assets" graph), <https://www.atlanticcouncil.org/global-qe-tracker/> (visited Jan. 31, 2023); *see also* Kate Martin & Colby Smith, "The mystery of how quantitative tightening will affect markets," *Financial Times* (July 10, 2022) ("The balance sheets of central banks are set to shrink" graph), <https://www.ft.com/content/435a5e35-bf30-4518-a4fc-a6d5c2d66076>.

⁶² Board of Governors of the Federal Reserve System, "M2 [WM2NS]," retrieved from FRED, Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/WM2NS>, December 27, 2022 (showing that the M2 money supply in the U.S. increased from \$15.45 trillion on Dec. 30, 2019 to \$21.75 trillion on Dec. 27, 2021).

⁶³ Yardeni Research, Inc., *Global Economic Briefing: Global Money Aggregates* (May 17, 2022) [hereinafter Yardeni Report], <https://www.yardeni.com/pub/gms.pdf>.

⁶⁴ Martin Arnold, "ECB warns of 'exuberance' in housing, junk bonds and crypto assets," *Financial Times* (Nov. 17, 2021), <https://www.ft.com/content/f540be9b-24a9-4f0e-a3bb-ce0846388b43>; Wayne Duggan, "The History of Bitcoin, the First Cryptocurrency," *U.S. News* (Aug. 31, 2022), <https://money.usnews.com/investing/articles/the-history-of-bitcoin>; Alex Hern & Dan Milmo, "Crypto crisis: how digital currencies went from boom to collapse," *Guardian* (June 29, 2022), <https://www.theguardian.com/technology/2022/jun/29/crypto-crisis-digital-currencies->

crypto-assets increased dramatically during the crypto boom, and prices for Bitcoin and other cryptocurrencies rose at rates that were significantly faster than price increases for other risky assets.⁶⁵

Crypto firms amplified the crypto boom with deceptive, high-powered marketing campaigns that targeted unsophisticated retail investors. Advertisements by crypto firms featured endorsements by well-known actors, athletes, and other celebrities and touted crypto-assets as safer, more rewarding, and more inclusive than traditional financial products.⁶⁶ FTX “cultivat[ed] its brand” by hiring Stephen Curry, Tom Brady, Gisele Bündchen and Larry David as “brand ambassadors.”⁶⁷

⁶⁵ boom-collapse-bitcoin-terra; Greg Ip, “The Great Cash Splash—Stocks are in a frenzy. Cryptocurrencies now equal the value of U.S. dollars in circulation. Real estate is booming. And the Federal Reserve is still pumping stimulus into the economy,” *Wall Street Journal* (May 8, 2021), B1; Christopher Leonard, *The Lords of Easy Money: How the Federal Reserve Broke the American Economy* 176-94, 211-16, 258-59, 303-04 (2022); Menand, *supra* note 58, at 59-66; Amrith Ramkumar, “Investors Bet on ‘Everything Rally’—Expectations are high that vaccines and stimulus will keep markets surging,” *Wall Street Journal* (Jan. 4, 2021), B1; Robin Wigglesworth et al., “The Fomo rally: ‘fear of missing out’ helps fuel soaring markets,” *Financial Times* (Nov. 12, 2021), <https://www.ft.com/content/637b2a59-f64d-46b6-a8a8-0072e3a936d2>; Wilmarth, “Pandemic Crisis,” *supra* note 55, at 3, 5-6, 13-15.

⁶⁶ FSO Digital Assets Report, *supra* note 1, at 9-10, 19-21, 28; Hern & Milmo, *supra* note 64; Steve Johnson, “Bitcoin securities trading surges as investors seek crypto exposure,” *Financial Times* (Jan. 15, 2021), <https://www.ft.com/content/b8ac343-6574-4aa0-8f47-c2e9e9d57541>; Sirin Kale, “‘I put my life savings into crypto’: how a generation of amateur investors got hooked on high-risk trading,” *Guardian* (June 19, 2021), <https://www.theguardian.com/lifeandstyle/2021/jun/19/life-savings-in-crypto-generation-of-amateurs-hooked-on-high-risk-trading>; Eva Szalay, “Crypto’s evolution adds new risks to potential rewards,” *Financial Times* (May 6, 2022), <https://www.ft.com/content/85b492b3-d333-4738-9ff3-bf05ef2286f6>.

⁶⁷ Treasury Crypto-Assets Report, *supra* note 10, at 2-3, 29-33, 41-50; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 5, 5n.20; *see also* Nikou Asgari, “‘Nightmare’: collapse of leading crypto lender traps investors,” *Financial Times* (Jan. 20, 2023) (reporting that Gemini led customers to believe that its “regulated” crypto lending program was similar to a “high-yield savings account”), <https://www.ft.com/content/64648e10-cc09-4304-a274-87b66d37d3bc>; Matthew Goldstein, “‘It Just Angers Me.’ Crypto Crisis Drains Small Investors’ Savings,” *New York Times* (Dec. 6, 2022), A1 (reporting that BlockFi “marketed [its cryptocurrency lending] account as risk free, yielding 6.5 percent”); Alexander Osipovich & Caitlin Ostroff, “TerraUSD Left Trail of Broken Dreams,” *Wall Street Journal* (May 28, 2022), A1 (reporting that the TerraUSD stablecoin “was pitched as a harbor from volatility” and offered investors “the opportunity to make money in Anchor Protocol, [which] offered annual yields of nearly 20% on deposits of the coin”); Kadhim Shubber & Joshua Oliver, “Inside Celsius: how one of crypto’s biggest lenders ground to a halt,” *Financial Times* (July 13, 2022) (reporting that Celsius CEO Alex Mashinsky “claimed to be delivering financial freedom to his [investor] community” and publicly stated, “We are actually safer than most banks”), <https://www.ft.com/content/4fa06516-119b-4722-946b-944e38b02f45>.

⁶⁸ Goldstein, *supra* note 66; *see also* Corinne Ramey et al., “Celebrity Crypto Endorsers Face Suits,” *Wall Street Journal* (Jan. 31, 2023), A1 (describing lawsuits filed by crypto investors against celebrities who endorsed crypto firms and their products, and reporting that “[t]he use of celebrity promoters heated up in 2021 during the massive bull run in crypto”).

In February 2022, Coinbase, FTX, and other crypto firms paid millions of dollars to advertise their crypto products during Super Bowl LVI, a game watched by 96 million people. Super Bowl LVI became known as the “Crypto Bowl” because the game’s broadcast included numerous ads by crypto firms urging retail investors to be “bold” in buying crypto assets.⁶⁸ The crypto industry’s advertising blitz during Super Bowl LVI bore a disturbing resemblance to the mass marketing of high-risk “dotcom” stocks during Super Bowl XXXIV in 2000. Super Bowl XXXIV was called the “Dot Com Bowl” after more than a dozen technology firms purchased advertisements touting their speculative stocks. Several of those firms subsequently failed during the stock market’s “dotcom crash” that began in March 2000.⁶⁹

Many retail investors in the U.S. and other countries purchased crypto-assets because of their “fear of missing out” on the outsized price gains reported by Bitcoin, Ethereum, and other cryptocurrencies during the crypto boom.⁷⁰ Crypto trading appealed strongly to men (especially younger men) and attracted large numbers of investors from minority communities and low- and moderate-income households.⁷¹ Crypto firms assured Black investors that cryptocurrencies

⁶⁸ Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 5-6; *see also* Ramey et al., *supra* note 67 (reporting that, in 2022 “celebrity crypto ads filled prominent slots in the Super Bowl, the largest marketing event of the year.”).

⁶⁹ Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 6.

⁷⁰ Wigglesworth et al., *supra* note 64; *see also* Paul Delfabbro et al., “The psychology of cryptocurrency trading: Risk and protective factors,” 10:2 *Journal of Behavioral Addictions* 201, 204 (2021) (“One of the strongest psychological factors that appears to influence crypto-trading is the fear of missing out (FOMO).”), doi: 10.1556/2006.2021.00037; Hannah M. Liu, “Why Do People Invest in Initial Coin Offerings (ICOs)?” 25 (May 2019) (reporting results of a study finding that individuals were motivated to invest in initial coin offerings by “overconfidence as well as the herd behavior & fear of missing out bias”).

https://repository.upenn.edu/cgi/viewcontent.cgi?article=1073&context=joseph_wharton_scholars; VISA, *The Crypto Phenomenon: Consumer Attitudes & Usage* 6, 16 (2021) (stating that a study of crypto owners in eight developed and emerging economies showed that 28% of crypto owners had a “fear of missing out on cryptocurrency’s momentum”) [hereinafter VISA 2021 Crypto Study]; <https://usa.visa.com/content/dam/VCOM/regional/na/us/Solutions/documents/the-crypto-phenomenon-technical-paper.pdf>.

⁷¹ Auer et al., “Crypto trading,” *supra* note 8, at 2-14, 19-20 (finding that (i) two-thirds of individual investors in crypto assets in 95 countries were men, (ii) 40% of those investors were men younger than 35, and (iii) significant increases in Bitcoin’s price stimulated greater usage of crypto trading apps by individuals); J.P. Morgan Chase & Co., *The Dynamics and Demographics of U.S. Household Crypto-Asset Use* (Dec. 2022) [hereinafter JPMC 2022 Crypto Study] (“[C]ompared with investors in traditional investment accounts, the median crypto user is more likely to come from lower rungs of the income ladder and is more likely to be young and male.”).

provided an “antidote to racial inequality” by offering them an easy way to “bypass [the] traditional financial system” and build wealth quickly.⁷²

Retail investors exhibited “herd-like behavior” by expanding their trading in crypto-assets as Bitcoin and other cryptocurrencies reported large price increases.⁷³ Most retail investors in crypto-assets incurred large losses during the crypto crash, and well-informed insiders often cashed out their crypto investments before retail investors did.⁷⁴ Many Black

<https://www.jpmorganchase.com/institute/research/financial-markets/dynamics-demographics-us-household-crypto-asset-cryptocurrency-use>; VISA 2021 Crypto Study, *supra* note 70, at 13 (“Almost two in three consumers who transact with cryptocurrency are men [N]on-white Americans account for 44% of those who own cryptocurrency.”); *see also* Paul Krugman, “How cryptocurrencies became the new subprime,” *New York Times* (Jan. 30, 2022) (“According to a survey by the research organization NORC, 44% of crypto investors are nonwhite, and 55% don’t have a college degree. This matches up with anecdotal evidence that crypto investing has become remarkably popular among minority groups and the working class.”); <https://www.nytimes.com/2022/01/27/opinion/cryptocurrency-subprimevulnerable.html>; Rob Lenihan, “Is Crypto the New Subprime?”, *TheStreet.com* (Jan. 30, 2022) (discussing survey results showing that “[t]wo-fifths of crypto traders are not white,” and “the average cryptocurrency trader is under 40 and does not have a college degree, . . . and over one-third have household incomes under \$60,000 per year”); <https://www.thestreet.com/investing/cryptocurrency/is-crypto-the-new-subprime-crash-hits-mainstream-investorshard>; Lynn Parramore, “How the Crypto Hustle Carries on America’s Shameful History of Racial Inequality,” *Institute for New Economic Thinking* (Jan. 24, 2023) (citing a survey showing that “25% of Black investors owned cryptocurrency [in 2022], compared with 15% of white investors”), <https://www.ineteconomics.org/perspectives/blog/how-the-crypto-hustle-carries-on-americas-shameful-history-of-racial-inequality>.

⁷² Parramore, *supra* note 71; *see also* Taylor Nicole Rogers, “Crypto collapse reverberates widely among black American investors,” *Financial Times* (July 5, 2022) (reporting that many Black investors bought cryptocurrencies in response to “celebrity endorsements, sponsorships, and advertising” that emphasized the “promise of cryptocurrencies as a wealth builder”), <https://www.ft.com/content/47d338e2-3d3c-40ce-8a09-abfa25c16a7f>.

⁷³ Auer et al., “Crypto trading,” *supra* note 8, at 2-14, 19-20 (finding that significant increases in Bitcoin’s price stimulated higher usage of crypto trading apps by individuals); JPMC 2022 Crypto Study, *supra* note 71 (discussing the “herd-like behavior” of U.S. retail investors, who “transferred money into crypto accounts when those assets were trading near their highest levels”), <https://www.jpmorganchase.com/institute/research/financial-markets/dynamics-demographics-us-household-crypto-asset-cryptocurrency-use>; *see also* FSOC Digital Assets Report, *supra* note 1, at 27 (stating that “crypto-asset prices appear to be driven in large part by sentiment and future expectations” of additional price increases).

⁷⁴ Auer et al., “Crypto trading,” *supra* note 8, at 3, 20 (estimating that about three-quarters of individuals who invested in crypto-assets in 95 countries had lost money by Nov. 2022); JPMC 2022 Crypto Study, *supra* note 71 (“The majority of U.S. households [investing in crypto-assets] were likely facing significant losses . . . in late-2022.”); *see also* Rachel Louise Ensign & Angel Au-Yeung, “Many Investors Missed Risks Before ‘Crypto Banks’ Crash,” *Wall Street Journal* (July 25, 2022) (describing individuals who suffered significant losses after investing in crypto-assets); Goldstein, *supra* note 66 (same); Osipovich & Ostroff, *supra* note 66 (same); MacKenzie Sigalos, “Homeless, suicidal, down to last \$1,000: Celsius investors beg bankruptcy judge for help,” *CNBC.com* (Aug. 3, 2022) (same), <https://www.cnbc.com/2022/08/02/celsius-investors-owed-4point7-billion-beg-judge-to-recover-life-savings.html>. For examples of insiders who liquidated their investments in crypto firms before the firms failed, see Nikou Asgari, “FTX allowed trading affiliate Alameda to borrow unlimited funds,” *Financial Times* (Dec. 12, 2022) (reporting that “FTX insiders received loans and payments of more than \$1bn from the company”); Eliot Brown et al., “Bankman-Fried Sold \$300 Million Piece of His Stake in FTX,” *Wall Street Journal* (Nov. 19, 2022), B1; *infra*

investors suffered particularly severe losses because their crypto investments represented a larger share of their total financial assets.⁷⁵

2. Scandalous Failures of Leading Crypto Firms Aggravated the Crypto Crash.

From the fourth quarter of 2021 through the end of 2022, many governments ended or reduced their pandemic stimulus programs in response to rising inflation rates and growing sovereign debt burdens. In addition, most central banks tightened their monetary policies by hiking interest rates and shrinking their asset purchase programs.⁷⁶ The shift by most governments toward tighter fiscal and monetary policies sharply reduced the growth of monetary aggregates in the U.S. and other leading economies during 2022.⁷⁷ Consequently, the price bubbles that occurred during 2020 and 2021 rapidly deflated for many risky assets, including technology stocks, commercial and residential real estate, and crypto-assets.⁷⁸ The total market

note 96 and accompanying text (describing Celsius' purchases of almost \$80 million of digital tokens from the company's co-founders before Celsius failed).

⁷⁵ Panamora, *supra* note 71; Rogers, *supra* note 72.

⁷⁶ Int'l Monetary Fund, *Global Financial Stability Report: Navigating the High Inflation Environment* 1-21 (Oct. 2022) [hereinafter 2022 IMF-GFSR], <https://www.imf.org/en/Publications/GFSR/Issues/2022/10/11/global-financial-stability-report-october-2022>; Int'l Monetary Fund, *World Economic Outlook: Countering the Cost-of-Living Crisis* 1-6, 13-25, 61 (Oct. 2022), <https://www.imf.org/en/Publications/WEO/Issues/2022/10/11/world-economic-outlook-october-2022>.

⁷⁷ Ryan McMaken, "Money Supply Growth in October Fell to 39-Month Low: A Recession Is Now Almost Guaranteed – Analysis," *Eurasia Review* (Dec. 1, 2022), <https://www.eurasiareview.com/01122022-money-supply-growth-in-october-fell-to-39-month-low-a-recession-is-now-almost-guaranteed-analysis/>; Yardeni Report, *supra* note 66.

⁷⁸ 2022 IMF-GFSR, *supra* note 76, at 1-7, 10-11, 26-30; Gunjan Banerji, "Tech's Dominant Decade In Market Fades—Sector has worst start to a year since '02, as investors see echoes of the dot-com crash," *Wall Street Journal* (June 9, 2022), A1; Joshua Chaffin, "New York's 'zombie' towers teeter as interest rates rise," *Financial Times* (Dec. 3, 2022), <https://www.ft.com/content/a970a7f3-e493-43fd-ac11-a4e40a73bb7>; Duggan, *supra* note 64; George Hammond, "Commercial property values fall as spooked lenders retreat," *Financial Times* (Nov. 23, 2022), <https://www.ft.com/content/e0baea21-158d-402f-8ddc-70a7216f01e0>; Hern & Milmo, *supra* note 64; Kate Martin & Harriet Agnew, "A year of pain: investors struggle in a new era of higher rates," *Financial Times* (Nov. 30, 2022), <https://www.ft.com/content/c93f3660-821f-458b-ae0f-23ae05b8f03f>; "House prices: the coming crunch," *Economist* (Nov. 26, 2022), 69; Paul Vigna, "Expected Fed Tightening Weighs on Crypto Market," *Wall Street Journal* (Jan. 20, 2022), A1.

capitalization of all cryptocurrencies and the values of the two largest coins—Bitcoin and Ethereum—dropped by more than 70% between November 2021 and December 2022.⁷⁹

The crypto crash accelerated as failures of prominent crypto firms revealed extensive conflicts of interest, fraud, misappropriation of customer funds, market manipulation, self-dealing, and other misconduct by insiders. Those failures and the associated scandals inflicted devastating losses on crypto investors and undermined public confidence in crypto-assets and crypto markets.⁸⁰

In May 2022, the TerraUSD algorithmic stablecoin (Terra) collapsed along with Luna, Terra's affiliated "governance token." Prior to its failure, Terra was the largest algorithmic stablecoin and the third-largest stablecoin.⁸¹ Terraform Labs, the issuer of Terra and Luna, told investors that Terra would maintain a stable value of \$1 per coin through an algorithmic trading relationship with Luna. Terraform established the Luna Foundation, which purportedly held adequate reserves of crypto-assets to support the trading relationship between Terra and Luna. Terraform also created the Anchor Protocol, which paid interest rates up to 20% to holders who loaned their Terra coins to Anchor. By May 2022, Terraform had issued about \$18 billion of

⁷⁹ See *supra* notes 6-7, 22 and accompanying text.

⁸⁰ Nikou Asgari, "Investors withdraw record levels of coins from crypto exchanges," *Financial Times* (Dec. 12, 2022), <https://www.ft.com/content/168f2074-716c-48ef-8564-cdf740d23e4b>; Stephen Cecchetti & Kim Schoenholtz, "Let crypto burn," *Financial Times* (Nov. 17, 2022), <https://www.ft.com/content/ac058ede-80cb-4aa6-8394-941443ee7e3>; Scott Chipolina, "FTX charges leave industry's image in tatters," *Financial Times* (Dec. 16, 2022), <https://www.ft.com/content/9cf4c881-252b-4296-b132-c84706fb6d46>; "Crypto's downfall: Is this the end of crypto?", *Economist* (Nov. 17, 2022) (editorial), <https://www.economist.com/leaders/2022/11/17/is-this-the-end-of-crypto>; David Z. Morris, "The Four Horsemen of the Cryptocalypse," *CoinDesk* (Dec. 5, 2022), <https://www.coindesk.com/consensus-magazine/2022/12/05/do-kwon-su-zhu-alex-mashinsky-stephen-ehrlich-most-influential-2022/>; Hyun Song Shin, "The great crypto crisis is upon us," *Financial Times* (Dec. 16, 2022), <https://www.ft.com/content/76234c49-cb11-4c2a-9a80-49da4f0ad7dd>.

⁸¹ FSOC Digital Assets Report, *supra* note 1, at 47 (Figure 11), 48; Muyao Shen, "How \$60 Billion in Terra Coins Went Up in Algorithmic Smoke," *Bloomberg* (May 21, 2022), <https://www.bloomberg.com/graphics/2022-crypto-luna-terra-stablecoin-explainer/>.

Terra coins—with over 70% of those coins loaned to Anchor—while Luna coins had a declared market value of about \$40 billion.⁸²

The values of Terra and Luna plummeted after press reports raised troubling questions about the viability of Terraform’s algorithmic trading strategy and the adequacy of Luna Foundation’s reserves.⁸³ The sudden collapse of Terra and Luna shocked cryptocurrency markets and caused the price of Tether, the largest stablecoin, to fall temporarily below its \$1 peg. The joint failures of Terra and Luna had a devastating impact on crypto investors, exchanges, and lending platforms.⁸⁴ South Korean authorities subsequently filed criminal charges against Do Kwon, Terraform’s co-founder, and he remained a fugitive from justice in January 2023.⁸⁵

Three Arrows Capital (3AC), a crypto hedge fund, was the first major casualty of Terra’s and Luna’s collapse. 3AC held large investment stakes in Luna, Greyscale Bitcoin Trust (GBTC), and other crypto ventures.⁸⁶ 3AC leveraged those investments by borrowing large amounts from investors, to whom it paid interest rates of 10% or more. The failures of Terra and Luna and steep declines in the values of GBTC and 3AC’s other crypto investments forced 3AC

⁸² FSOC Digital Assets Report, *supra* note 1, at 48-49; Liam J. Kelly, “We Need to Talk About Terra’s Anchor,” *DeCrypt* (April 23, 2022), <https://decrypt.co/98482/we-need-to-talk-about-terras-anchor>; Irina Leonova, “Digital Assets: 360 Degree View” (slide 25) (Fed. Deposit Ins. Corp., 2022 Accounting & Auditing Conf., Oct. 12, 2022), <https://www.fdic.gov/conference/presentations/digital-assets-360-degree-view.pdf> (conference link available at <https://www.fdic.gov/conference/conference-agenda1.pdf>); Morris, *supra* note 80; Osipovich & Ostroff, *supra* note 66; Shen, *supra* note 81; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 3-4.

⁸³ FSOC Digital Assets Report, *supra* note 1, at 49-50; Kelly, *supra* note 82; David Z. Morris, “‘Built to Fail’?: Why TerraUSD’s Growth Is Giving Finance Experts Nightmares,” *CoinDesk* (April 22, 2022), <https://www.coindesk.com/layer2/2022/04/22/built-to-fail-why-terrausds-growth-is-giving-finance-experts-nightmares/>.

⁸⁴ FSOC Digital Asset Reports, *supra* note 1, at 37-40, 47-54; Morris, *supra* note 80; Shen, *supra* note 81; Wilmarth “Treasury Comment Letter,” *supra* note 21, at 4-5.

⁸⁵ Sangmi Cha, “The Hunt for Crypto Fugitive Do Kwon Led South Korean Officials to Serbia Last Week,” *Bloomberg* (Feb. 7, 2023), <https://www.bloomberg.com/news/articles/2023-02-07/hunt-for-crypto-fugitive-do-kwon-led-south-korean-officials-to-serbia-last-week#xj4y7vzkg>; Song Jung-a, “South Korea’s hunt for crypto fugitive Do Kwon leads to Serbia,” *Financial Times* (Dec. 12, 2022), <https://www.ft.com/content/4b0a1d1f-f6f2-4879-a9a3-e45174a63f27>; Song Jung-a, “South Korean prosecutors ask Interpol to issue red notice for Do Kwon,” *Financial Times* (Sept. 19, 2022), <https://www.ft.com/content/7e9f6182-f545-4e53-9cef-1ae4f6e3bd9f>.

⁸⁶ Leonova, *supra* note 82 (slide 28); Morris, *supra* note 80.

into bankruptcy on July 1, 2022. 3AC's bankruptcy filing revealed that 3AC had commingled its funds with customer funds and used customer funds to pay creditors before it collapsed.⁸⁷

3AC's demise led to the failures of several crypto trading and lending platforms, including Voyager Digital and Celsius. Voyager and Celsius filed for bankruptcy after the values of their crypto investments plummeted and 3AC failed to repay a large debt it owed to Voyager.⁸⁸

Like Terra, Celsius and Voyager offered to pay interest rates as high as 20% on loans they obtained from investors. Celsius agreed to pay investors its top interest rate if they accepted their interest payments in CEL, a token created by Celsius. Celsius was the biggest owner of CEL tokens, and Celsius bought CEL tokens on the market to boost their price. Like 3AC, Voyager and Celsius commingled customer funds with their own funds and used customer funds to pay their operating expenses and debts.⁸⁹ Both firms falsely represented that the funds they held for customers would be as safe as deposits in federally-insured banks.⁹⁰ According to claims filed by individual investors in Celsius' bankruptcy proceeding, "many investors were duped into believing that certain crypto services were safe and reliable places to earn a return."⁹¹

⁸⁷ FSOCDigital Assets Report, *supra* note 1, at 37-40; Morris, *supra* note 80; David Z. Morris, "Satoshi Wept: How Crypto Replayed the 2008 Financial Crisis," *CoinDesk* (July 14, 2022), <https://www.coindesk.com/layer2/2022/07/12/satoshi-wept-how-crypto-replayed-the-2008-financial-crisis/>; Jen Weiczner, "How Two Wall Street Washouts With a Can't-Lose Crypto Hedge Fund Vaporized a Trillion Dollars: The Crash of Su Zhu, Kyle Davies, and Three Arrows Capital," *New York Magazine* (Aug. 15, 2022), <https://nymag.com/intelligencer/article/three-arrows-capital-kyle-davies-su-zhu-crash.html>.

⁸⁸ Joshua Oliver, "Voyager Digital files for bankruptcy protection as digital crisis deepens," *Financial Times* (July 6, 2022), <https://www.ft.com/content/0b5b68d9-85f1-47ce-a9f7-34252e4fe2ce>; Morris, *supra* note 80; Morris, *supra* note 87; Shubber & Oliver, *supra* note 66.

⁸⁹ FSOCDigital Assets Report, *supra* note 1, at 35-36, 38, 47-48; Leonova, *supra* note 82 (slides 26-27); Morris, *supra* note 80; Shubber & Oliver, *supra* note 66; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 4-5.

⁹⁰ Joint Letter from Fed. Deposit Ins. Corp. and Bd. of Governors of Fed. Res. Sys. to Voyager Digital, LLC (July 28, 2022), <https://www.fdic.gov/news/press-releases/2022/pr22056a.pdf>; Sigalos, *supra* note 74 (describing Celsius' marketing materials, which stated that customers would receive a "high yield, low risk savings account," as well as public assurances from Celsius CEO Alex Mashinsky that Celsius was "safer than banks"); Claire Williams, "FDIC, Fed order Voyager to take down 'false and misleading' claims of deposit insurance," *American Banker* (July 28, 2022), 2022 WLNR 23666845; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 5, 5 n.19.

⁹¹ Written testimony of Hilary J. Allen at the Hearing on "Crypto Crash: Why the FTX Bubble Burst and the Harm to Consumers" before the Senate Committee on Banking, Housing, and Urban Affairs (Dec. 14, 2022), at 14.

After Celsius filed for bankruptcy, the Vermont Department of Financial Regulation alleged that (i) Celsius made “false and misleading claims to investors” about Celsius’ financial health and compliance with securities laws,⁹² and (ii) Celsius “increased and propped up the market price of CEL, thereby artificially inflating” the value of CEL tokens recorded on Celsius’ financial statements.⁹³ In January 2023, New York Attorney General Letitia James filed civil fraud charges against former Celsius CEO Alex Mashinsky, alleging that he “promised to lead investors to financial freedom but led them down a path of financial ruin.”⁹⁴

Celsius’ court-appointed bankruptcy examiner subsequently reported that Celsius used investor and customer funds to purchase over \$550 million of CEL tokens on the market. That “scheme inflated Celsius’s balance sheet by more than \$1.5bn at its peak because the company held CEL on the balance sheet at market prices.”⁹⁵ In addition, Celsius bought almost \$70 million of CEL tokens held by Mashinsky, even though company insiders acknowledged that the tokens were “very Ponzi like” and “worthless.”⁹⁶

The most spectacular flameout occurred in November 2022, when FTX collapsed along with its affiliated hedge fund, Alameda Research. At the time of its failure, FTX was the world’s

[hereinafter Allen Testimony], <https://www.banking.senate.gov/imo/media/doc/Allen%20Testimony%2012-14-22.pdf>.

⁹² Nikhilesh De, “Celsius Resembled Ponzi Scheme at Times, Vermont Regulator Says,” *CoinDesk* (Sept. 7, 2022) (quoting bankruptcy court filing by the Vermont Dept. of Financial Regulation on Sept. 7, 2022), <https://www.coindesk.com/policy/2022/09/07/celsius-misled-investors-about-financial-health-vermont-regulator-alleges/>.

⁹³ *Id.* (same); Bryce Elder, “Crypto lender Celsius looked a lot like a Ponzi, says state regulator,” *Financial Times* (Sept. 7, 2022) (same), <https://www.ft.com/content/7380ac24-76b1-4a3e-a2df-688ff4b6d0b1>.

⁹⁴ Joe Miller et al., “Celsius founder Mashinsky sued for fraud by New York attorney general,” *Financial Times* (Jan. 5, 2023), <https://www.ft.com/content/73f60c89-a876-46c0-a2fb-ce7f0b605b19>; Corinne Ramey & James Fanelli, “Celsius Co-Founder Is Sued by New York,” *Wall Street Journal* (Jan. 6, 2023), B10.

⁹⁵ Joshua Oliver & Kadhim Shubber, “Crypto lender Celsius misused customer funds for years, examiner finds,” *Financial Times* (Jan. 31, 2023), <https://www.ft.com/content/0f2c97de-9c71-4e0c-8848-b8d25eb96599>.

⁹⁶ *Id.*; see also Olga Kharif & Joanna Ossinger, “Celsius Examiner Rips into Crypto Lender in Final Report (1),” *Bloomberg* (Jan. 31, 2023) (describing Celsius’ purchases of Mashinsky’s tokens, and stating that Celsius also bought almost \$10 million of CEL tokens held by S. Daniel Leon, Celsius’ co-founder), <https://www.bloomberg.com/news/articles/2023-01-31/celsius-examiner-rips-into-crypto-lender-in-her-final-report>.

fifth-largest cryptocurrency exchange by trading volume.⁹⁷ A quarter of Alameda's \$14.6 billion of assets consisted of FTT tokens, which were created and issued by FTX. Alameda also held substantial amounts of Serum and Solana tokens, which were created or promoted by FTX and Alameda and their founder, Sam Bankman-Fried.⁹⁸ As Hilary Allen pointed out, "there were no constraints" on FTX's ability to create "unlimited supplies" of FTT tokens, and a majority of Alameda's net equity value was "created out of thin air by FTX or FTX-related entities."⁹⁹

FTX and Alameda controlled almost 90% of the outstanding FTT tokens. Alameda offered discounted fees and other rewards to customers who purchased those tokens. FTX boosted the reported value of FTT tokens by buying them on the market. FTX and Alameda pledged many of their FTT tokens as collateral for loans that both firms used to finance investments and meet operating expenses, especially after the failures of Terra, Luna, and 3AC.¹⁰⁰ In December 2022, the SEC alleged that top executives of FTX and Alameda defrauded FTX's investors by (i) "purchasing large quantities [of FTT] on the open market to prop up its

⁹⁷ "Factbox: Top crypto exchanges by volume," *Reuters* (Nov. 9, 2022),

<https://www.reuters.com/markets/currencies/top-crypto-exchanges-by-volume-2022-11-09/>.

⁹⁸ Ian Allison, "Divisions in Sam Bankman-Fried's Crypto Empire Blur on His Trading Titan Alameda's Balance Sheet," *CoinDesk* (Nov. 2, 2022), <https://www.coindesk.com/business/2022/11/02/divisions-in-sam-bankman-frieds-crypto-empire-blur-on-his-trading-titan-alamedas-balance-sheet/>; Angus Berwick & Tom Wilson, "Exclusive: Behind FTX's fall, battling billionaires and a failed bid to save crypto," *Reuters* (Nov. 10, 2022), <https://www.reuters.com/technology/exclusive-behind-ftxs-fall-battling-billionaires-failed-bid-save-crypto-2022-11-10/>; Angus Berwick et al., "Special Report: FTX's Bankman-Fried begged for a rescue even as he revealed huge holes in firm's books," *Reuters* (Nov. 16, 2022), <https://www.reuters.com/technology/ftxs-bankman-fried-begged-rescue-even-he-revealed-huge-holes-firms-books-2022-11-16/>; Alexander Osipovich et al., "FTX Fall Was Years in the Making," *Wall Street Journal* (Nov. 19, 2022), A1.

⁹⁹ Allen Testimony, *supra* note 91, at 16, 4; *see also* Allison, *supra* note 98 ("[T]he majority of the net equity in the Alameda business is actually FTX's own centrally controlled and printed-out-of-thin-air token.") (quoting Cory Klippsten).

¹⁰⁰ Allison, *supra* note 98; Berwick et al., *supra* note 98; Yong Li Khoo et al., "Blockchain Analysis: The Collapse of FTX and Alameda," *Nansen* (Nov. 17, 2022), <https://www.nansen.ai/research/blockchain-analysis-the-collapse-of-alameda-and-ftx>; Osipovich et al., *supra* note 98; Philip Stafford & Nikou Asgari, "'Black box': Sam Bankman-Fried's trading firm posed big risks to FTX," *Financial Times* (Nov. 11, 2022), <https://www.ft.com/content/2875e3c2-f908-46d2-a645-1c33a9b9ce8a>; Robin Wigglesworth, "The Alameda-FTX death spiral," *Financial Times* (Nov. 18, 2022), <https://www.ft.com/content/7a55d057-357d-4bf6-92c4-4fc4ef772db>.

price,” and (ii) providing FTT tokens as collateral for FTX’s undisclosed loans of its customers’ assets to Alameda, thereby misleading investors about FTX’s actual risk exposures.¹⁰¹

FTX experienced a “run on the bank”¹⁰² after a news story revealed Alameda’s massive holdings of FTT. Binance—the world’s largest cryptocurrency exchange and FTX’s biggest rival—publicly announced that it would sell all of its FTT tokens, which were then valued at over \$500 million. Binance’s announcement triggered a generalized run by FTX’s customers, and FTT’s price dropped by 80% in two days. FTX could not raise additional funds from investors, and Binance refused to rescue FTX with an emergency buyout. FTX and Alameda filed for bankruptcy on November 11, 2022.¹⁰³

FTX’s terms of service stated that its customers’ assets would be segregated from FTX’s assets and would not be transferred or loaned to FTX. In violation of those terms, FTX loaned over \$8 billion of its customers’ funds to Alameda before both firms failed.¹⁰⁴ FTX also gave Alameda an unlimited line of credit and other preferential trading privileges on FTX’s exchange.¹⁰⁵ The SEC subsequently charged that Bankman-Fried and his senior colleagues

¹⁰¹ SEC Press Release No. 2022-234, “SEC Charges Caroline Ellison and Gary Wang with Defrauding Investors in Crypto Asset Trading Platform FTX” (Dec. 21, 2022) [hereinafter SEC Press Release 2022-234], <https://www.sec.gov/news/press-release/2022-234>.

¹⁰² Tabby Kinder, “Sam Bankman-Fried ran FTX as personal fiefdom, court hears,” *Financial Times* (Nov. 22, 2022) (quoting James Bromley, FTX’s bankruptcy counsel), <https://www.ft.com/content/470ce8e8-0e5d-4fe4-8b62-08eb0749da9c>.

¹⁰³ Allison, *supra* note 98; Berwick & Wilson, *supra* note 98; Berwick et al., *supra* note 98; Kinder, *supra* note 102; Osipovich et al., *supra* note 91.

¹⁰⁴ Sandall Handagama, “FTX Violated Its Own Terms of Service and Misused User Funds, Lawyers Say,” *CoinDesk* (Nov. 11, 2022), <https://www.coindesk.com/policy/2022/11/10/ftx-violated-its-own-terms-of-service-and-misused-user-funds-lawyers-say/>; Caitlin McCabe & Rachel Louise Ensign, “FTX Clients Seethe, Fearing Money Gone,” *Wall Street Journal* (Nov. 22, 2022), A1; Alexander Osipovich, “FTX Founder Can’t Explain Lost Billions,” *Wall Street Journal* (Dec. 5, 2022), A1; Osipovich et al., *supra* note 98; *see also* Complaint, *SEC v. Caroline Ellison*, Civil Action No. 22-cv-10794 (S.D.N.Y. Dec. 21, 2022), ¶¶ 38-41, 47-54, 95-102 (quoting FTX’s terms of service in ¶¶ 52 and 53) [hereinafter SEC Ellison Complaint], <https://www.sec.gov/litigation/complaints/2022/comp-pr2022-234.pdf>.

¹⁰⁵ Asgari, *supra* note 74; Stefania Palma et al., “Sam Bankman-Fried charged in one of ‘biggest financial frauds’ in US history,” *Financial Times* (Dec. 13, 2022), <https://www.ft.com/content/b62a2e86-ee61-4c4e-8cc3-418ae216d8a7>; Corinne Ramey et al., “FTX Founder Is Charged with Fraud,” *Wall Street Journal* (Dec. 15, 2022), A1.

“diverted FTX customer funds to Alameda and then used those funds . . . to make undisclosed private venture investments, political contributions, and real estate purchases,” and “repay [Alameda’s] third-party loan obligations.”¹⁰⁶

In December 2022, the U.S. Department of Justice (DOJ) filed criminal charges against Sam Bankman-Fried, alleging fraud, money laundering, and campaign finance violations. DOJ charged Bankman-Fried with misappropriating FTX’s customer funds to pay for personal expenses, political contributions, and investments as well as loans that benefited FTX and Alameda. DOJ also alleged that Bankman-Fried defrauded Alameda’s lenders and FTX’s equity investors by concealing FTX’s misuse of customer funds.¹⁰⁷ Caroline Ellison, Alameda’s CEO, and Zixiao “Gary” Wang, FTX’s former chief technology officer, pleaded guilty to similar charges and agreed to cooperate with DOJ and other federal agencies.¹⁰⁸

The SEC filed civil charges against Bankman-Fried, Ellison, and Wang for violating federal securities laws by defrauding investors who purchased FTX’s equity securities and FTT tokens.¹⁰⁹ The CFTC filed civil charges against Bankman-Fried, Ellison, Wang, FTX, and Alameda for violating the Commodity Exchange Act by fraudulently selling digital asset commodities and derivatives and misappropriating over \$8 billion of customer funds.¹¹⁰

¹⁰⁶ SEC Ellison Complaint, *supra* note 104, ¶¶ 30, 48.

¹⁰⁷ U.S. Dept. of Justice, Press Release, “FTX Founder Indicted for Fraud, Money Laundering, and Campaign Finance Violations” (Dec. 13, 2022), <https://www.justice.gov/opa/pr/ftx-founder-indicted-fraud-money-laundering-and-campaign-finance-offenses>; *see also* Palma et al., *supra* note 105 (discussing DOJ’s charges); Ramey et al., *supra* note 105 (same).

¹⁰⁸ Joe Miller & Joshua Oliver, “FTX founder Sam Bankman-Fried’s top associates plead guilty to US charges,” *Financial Times* (Dec. 22, 2022), <https://www.ft.com/content/15669bd0-7b9f-4ca2-af19-038230b718ab>; Corinne Ramey & James Fanelli, “Executives Knew FTX Moves Illegal,” *Wall Street Journal* (Dec. 24, 2022), A1.

¹⁰⁹ SEC Release No. 2022-219, “SEC Charges Samuel Bankman-Fried with Defrauding Investors in Crypto Asset Trading Platform FTX” (Dec. 13, 2022), <https://www.sec.gov/news/press-release/2022-219> (summarizing the SEC’s charges against Bankman-Fried); Palma et al., *supra* note 105 (same); SEC Press Release 2022-234, *supra* note 101 (summarizing the SEC’s civil charges against Caroline Ellison and Gary Wang); Miller & Oliver, *supra* note 108 (same).

¹¹⁰ CFTC Release No. 8638-22 (Dec. 13, 2022), <https://www.cftc.gov/PressRoom/PressReleases/8638-22> (summarizing the CFTC’s charges against Bankman-Fried); *see also* Ramey et al., *supra* note 105 (same); CFTC Press Release No. 8644-22, “CFTC Charges Alameda CEO and Alameda and FTX Co-Founder with Fraud in

The collapse of FTX and Alameda led to the failure of crypto lender Genesis Global Capital (Genesis) in January 2023. Beginning in 2018, Genesis borrowed crypto-assets from investors, loaned the same crypto-assets to other investors at higher interest rates, and earned profits on the spread. In February 2021, Genesis agreed to offer its crypto lending program to retail customers of Gemini Trust (Gemini), a New York limited-purpose trust company. Genesis and Gemini created the “Gemini Earn” program, which paid interest rates as high as 8% to Gemini’s retail customers who loaned their crypto-assets to Genesis. In November 2022, some 340,000 Gemini retail customers had about \$900 million of outstanding loans to Genesis.¹¹¹

Genesis claimed to be “the world’s largest digital asset lender” and assured investors that it was “a regulated and trusted counterparty.”¹¹² Similarly, Gemini advertised itself as a reliable and “regulated place to buy, sell, and store crypto.”¹¹³ Genesis lost over \$1 billion when 3AC failed and subsequently lost more than \$200 million when FTX and Alameda failed.¹¹⁴ Genesis suspended withdrawals from the Gemini Earn program in November 2022, after receiving a large number of redemption requests, and Genesis filed for bankruptcy in January 2023.¹¹⁵

The cascade of failures among leading crypto firms in 2022 and early 2023 confirmed that the crypto industry is “very interconnected, and failures in one part inevitably have reverberations for the rest of the industry.”¹¹⁶ As described above, those failures were

Action Against Sam Bankman-Fried and His Companies” (Dec. 21, 2022) (summarizing charges against Ellison and Wang), <https://www.cftc.gov/PressRoom/PressReleases/8644-22>; Miller & Oliver, *supra* note 108 (same).

¹¹¹ Complaint in *SEC v. Genesis Global Capital, LLC*, No. 23-cv-287 (S.D.N.Y., Jan. 12, 2023), ¶¶ 1-8, 16-17, 23-31, 38-39 [hereinafter SEC Genesis-Gemini Complaint], <https://www.sec.gov/litigation/complaints/2023/comp-pr2023-7.pdf>.

¹¹² *Id.*, ¶ 63.

¹¹³ Asgari, *supra* note 66.

¹¹⁴ Stephanie Findlay et al., “Crypto broker Genesis puts lending unit into bankruptcy,” *Financial Times* (Jan. 20, 2023), <https://www.ft.com/content/g040bc6c-08be-48dd-8af9-3b11b8b67c99>.

¹¹⁵ *Id.*; Stephen Alpher & Danny Nelson, “Genesis’ Crypto Lending Businesses File for Bankruptcy Protection,” *CoinDesk* (Jan. 19, 2023), <https://www.coindesk.com/business/2023/01/20/genesis-global-files-for-bankruptcy-protection/>.

¹¹⁶ Allen Testimony, *supra* note 91, at 6.

accompanied by revelations of scandalous misconduct by insiders, including (i) deceiving customers and investors; (ii) creating speculative digital tokens and inflating their value through manipulative trading; (iii) offering inflated tokens as collateral for loans from investors and other creditors; (iv) misappropriating customer funds; and (iv) exploiting conflicts of interest in crypto enterprises that performed multiple functions such as buying, selling, borrowing, lending, and clearing cryptocurrencies.¹¹⁷ Moreover, the “mystique” and “technological complexity” associated with crypto firms helped insiders to “disguise what was going on behind the scenes” and avoid effective oversight by investors and regulators.¹¹⁸

The crypto boom and crash and the accompanying scandals resemble ill-fated bubbles of the past, including the fraudulent marketing of risky stocks and bonds to poorly-informed investors during the 1920s,¹¹⁹ the widespread hype and deception that characterized public offerings of speculative dotcom and telecom stocks in the late 1990s,¹²⁰ and the recklessness and fraud surrounding the underwriting of toxic subprime mortgage-backed securities and related derivatives (including credit default swaps and collateralized debt obligations) during the

¹¹⁷ *Id.* at 3-4, 6-8, 19.

¹¹⁸ *Id.* at 8.

¹¹⁹ FSOC Digital Assets Report, *supra* note 1, at 23-28, 105-08; Todd Phillips, *The SEC’s Regulatory Role in the Digital Asset Markets* (Center for American Progress, Oct. 4, 2021), <https://www.americanprogress.org/article/secs-regulatory-role-digital-asset-markets/>; Arthur E. Wilmarth, Jr., *Taming the Megabanks: Why We Need a New Glass-Steagall Act* 1-2, 31-77, 124-26, 130-32, 140-42 (2020) [hereinafter Wilmarth, *Taming the Megabanks*].

¹²⁰ *Id.*, *supra* note 64; Benjamin Pinmentel, “The dot-com crash has lessons for crypto, if only we can remember them,” *Protocol* (July 10, 2022), <https://www.protocol.com/fintech/dot-com-bubble-crypto-crash/>; Richard Waters, “Pandemic tech bubbles echo those of the dotcom era,” *Financial Times* (Jan. 7, 2021), <https://www.ft.com/content/20a4f647-5db3-40e6-a38c-ec4ddcbdb8820>; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 197-203.

2000s.¹²¹ Congress responded to those episodes by adopting regulatory reforms that addressed serious abuses occurring during each bubble.¹²²

II. Federal and State Regulators Have Allowed Banks to Engage in a Wide Range of Activities Related to Fluctuating-Value Cryptocurrencies and Stablecoins.

A. Banks Have Established a Substantial Presence in Crypto Markets with the Approval or Acquiescence of Federal and State Regulators

During the past few years, federal and state regulators have permitted banks to become significantly involved in crypto markets. The Office of the Comptroller of the Currency (OCC) issued four interpretive letters in 2020 and 2021, which authorize national banks to engage in a variety of crypto-related activities. The OCC's first letter permits national banks to provide custodial and safekeeping services for cryptocurrencies.¹²³ The second letter allows national banks to hold deposits as "reserves" for stablecoins issued by other entities if the issuers promise to maintain a 1:1 parity between their stablecoins and a single fiat currency.¹²⁴

The OCC's third letter authorizes national banks to issue fiat-backed stablecoins, to exchange those stablecoins for fiat currencies, and to provide payment services that use distributed ledgers and other "independent node verification networks."¹²⁵ The fourth letter

¹²¹ FSOC Digital Assets Report, *supra* note 1, at 23-28, 105, 108; Senator Sherrod Brown (D-OH), Press Release: "Brown on FTX: Crypto Puts Consumers and Our National Security at Risk" (Dec. 14, 2022) (noting "the similarities that cryptocurrencies share with risky mortgage bonds and over-the-counter derivatives during the lead up to the [2008] financial crisis"), <https://www.banking.senate.gov/newsroom/record/brown-ftx-crypto-consumers-national-security-risk>; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 3-4, 196-97, 208-21, 228-51.

¹²² Wilmarth, *Taming the Megabanks*, *supra* note 119, at 129-42 (discussing the enactment of the Securities Act of 1933, the Glass-Steagall Act of 1933, and the Securities Exchange Act of 1934); *id.* at 202 (referring to the Sarbanes-Oxley Act of 2002); *id.* at 300-03 (describing key provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010).

¹²³ OCC Interpretive Letter No. 1170 (July 22, 2020), <https://www.occ.gov/topics/charters-and-licensing/interpretations-and-actions/2020/intl1170.pdf>.

¹²⁴ OCC Interpretive Letter No. 1172 (Sept. 21, 2020), <https://www.occ.gov/topics/charters-and-licensing/interpretations-and-actions/2020/intl1172.pdf>.

¹²⁵ OCC Interpretive Letter No. 1174 (Jan. 4, 2021), <https://www.occ.gov/news-issuances/news-releases/2021/nr-occ-2021-2a.pdf>.

requires national banks to notify the OCC and receive the OCC's non-objection before they engage in cryptocurrency activities authorized by the OCC's letters. National banks must demonstrate their capacity to conduct permitted activities in a safe and sound manner with appropriate risk management controls.¹²⁶

In 2022, the FDIC and the Fed issued similar letters addressing crypto-related activities by banking organizations for which they are the primary federal regulators.¹²⁷ Under those letters, a banking organization must notify the primary federal regulator before engaging in crypto-asset activities and must be capable of conducting those activities in a lawful, safe and sound manner.¹²⁸ Unlike the OCC's interpretive letters, the letters issued by the FDIC and the Fed in 2022 did not address the legality of particular crypto-asset activities under federal and state laws, and they also did not require banks to obtain a notice of non-objection from the FDIC or the Fed before engaging in such activities.¹²⁹ As further discussed below, the federal banking agencies expressed a more demanding and skeptical attitude toward crypto-related activities when they issued additional guidance to banking organizations in January 2023.¹³⁰

A few states have actively encouraged the involvement of state-chartered financial institutions in crypto-related businesses. In 2019 and 2020, Wyoming and Nebraska passed laws

¹²⁶ OCC Interpretive Letter No. 1179 (Nov. 18, 2021), <https://www.occ.gov/topics/charters-and-licensing/interpretations-and-actions/2021/intl1179.pdf>.

¹²⁷ The FDIC is the primary federal regulator for FDIC-insured state banks that are not members of the Fed, while the Fed is the primary federal regulator for state member banks and bank holding companies. Michael S. Barr, Howell E. Jackson & Margaret E. Tahyar, *Financial Regulation: Law & Policy* 175-76, 719 (3d ed. 2021).

¹²⁸ Fed. Deposit Ins. Corp., Financial Institution Letter No. FIL-16-2022 (April 7, 2022) [hereinafter FDIC FIL-16-2022], <https://www.fdic.gov/news/financial-institution-letters/2022/fil2016.htm#letter>; Bd. of Governors of Fed. Res. Sys., Supervisory & Regulation Letter SR 22-6 (Aug. 16, 2022) [hereinafter Fed SR 22-6], <https://www.federalreserve.gov/supervisionreg/srletters/SR2206.htm>.

¹²⁹ FDIC FIL-16-2022, *supra* note 128, nn.1, 4; Fed SR 22-6, *supra* note 128, nn.4-9; *see also* Katie S. Cox, Fed's crypto rules invite dangerous experimentation, *American Banker* (Dec. 7, 2022), 2022 WLNR 39494356 (stating that the Fed's 2022 letter "leaves it up to the bank to analyze whether [a proposed crypto-related] activity is permissible").

¹³⁰ *See infra* notes 246-57 and accompanying text (discussing actions taken by federal bank regulators issued in January 2023).

authorizing the chartering of special purpose depository institutions (SPDIs) to engage in a wide variety of crypto-asset activities.¹³¹ Wyoming's Division of Banking has chartered four SPDIs since 2019 based on the understanding that (i) SPDIs are not required to obtain deposit insurance from the FDIC, and (ii) SPDIs "will likely focus on digital assets, such as virtual currencies, digital securities and digital consumer assets."¹³²

Kraken Bank—the first SPDI chartered by Wyoming—is a subsidiary of Kraken, the world's sixth-largest cryptocurrency exchange by trading volume.¹³³ Kraken Bank intends to offer both traditional and crypto banking products, including deposit accounts, accounts for holding crypto assets, payments services, and custodial services for institutional clients. Kraken's deposits will not be insured by the FDIC.¹³⁴ Kraken Bank's "vision" is to "become the world's trusted bridge between the crypto economy of the future and today's existing financial ecosystem."¹³⁵ Custodia Bank, another Wyoming SPDI, currently offers custody and settlement services to institutional investors in digital assets.¹³⁶ Like Kraken, Custodia intends to offer a

¹³¹ Arthur E. Wilmarth, Jr., "It's Time to Regulate Stablecoins as Deposits and Require Their Issuers to Be FDIC-Insured Banks," 41 *Banking & Financial Services Policy Report* No. 2, at 1, 10, 19 n.70 (Feb. 2022) [hereinafter Wilmarth, "Stablecoins"], available at <https://ssrn.com/abstract=4000795>; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 14.

¹³² Wyoming Division of Banking, "Special Purpose Depository Institutions," <https://wyomingbankingdivision.wyo.gov/banks-and-trust-companies/special-purpose-depository-institutions> (visited Jan. 31, 2023).

¹³³ Penny Crosman, "Crypto exchange Kraken receives Wyoming bank charter," *American Banker* (Sept. 17, 2020), 2020 WLNR 26195307; Farooq, *supra* note 49 (reporting that Kraken is the world's sixth-largest cryptocurrency exchange); *see also* Kraken, "Buy bitcoin and crypto," <https://www.kraken.com/> (stating that "Kraken is a crypto exchange for everyone" with over 9 million "clients") (visited Jan. 31, 2023).

¹³⁴ *See* Kraken, "Kraken Bank," <https://www.kraken.com/bank> (visited Jan. 31, 2023); Crosman, *supra* note 133.

¹³⁵ KrakenFX, "Kraken Wins Bank Charter Approval" (Sept. 16, 2022) (Kraken blog post), <https://blog.kraken.com/post/6241/kraken-wyoming-first-digital-asset-bank/>; *see also* Kraken, "Kraken Bank," <https://www.kraken.com/bank> (stating that Kraken Bank will provide "a more seamless integration between crypto and the traditional financial system") (visited Jan. 31, 2023).

¹³⁶ Davis Polk, "Insights: Crypto bank sues Federal Reserve over delay in master account application" (June 16, 2022), <https://www.davispolk.com/insights/client-update/crypto-bank-sues-federal-reserve-over-delay-master-account-application>.

“full suite of banking and financial services” that will connect “digital assets and the traditional financial system.”¹³⁷

The New York Department of Financial Services has chartered nine nondepository, limited-purpose trust companies that are authorized to engage in “virtual currency” activities. The authorized activities include (1) receiving and transmitting virtual currency; (2) providing custodial services for virtual currency owned by others; (3) buying and selling virtual currency for customers; (4) performing exchange services for customers, and (5) administering or issuing a virtual currency.¹³⁸ One of those limited-purpose trust companies is Paxos Trust Company, which provides crypto brokerage, custodial, exchange, and payments services to institutional clients. Paxos also issues its own stablecoin, Pax Dollar (USDP), as well as the BUSD stablecoin that it cosponsors with Binance.¹³⁹ Gemini Trust is another of those trust companies.¹⁴⁰

The foregoing state-chartered, crypto-focused institutions are not insured by the FDIC. Several FDIC-insured banks have also engaged in crypto-related activities. In October 2022, BNY Mellon, the eleventh-largest U.S. bank, launched a “digital assets platform” that provides custodial and transfer services to holders of Bitcoin and other cryptocurrencies.¹⁴¹ BNY Mellon

¹³⁷ Custodia Bank, “Digital asset banking, custody, and payments solutions,” <https://custodiabank.com/> (visited Jan. 31, 2023).

¹³⁸ FSOC Digital Assets Report, *supra* note 1, at 82-83; N.Y. Dept. of Fin. Serv.’s, “Industry Letter: Prior Approval for Covered Institutions’ Virtual Currency Related Activity” (Dec. 15, 2022), https://www.dfs.ny.gov/system/files/documents/2022/12/120221215_prior_approval.pdf.

¹³⁹ Binance Academy, “What Is BUSD?” (updated Dec. 28, 2022) (“BUSD is a stablecoin founded by Binance and Paxos”), <https://academy.binance.com/en/articles/what-is-busd>; “Paxos: Products: BUSD” (visited Jan. 12, 2023) (describing BUSD as a “Binance branded stablecoin issued by Paxos Trust Company”), <https://paxos.com/BUSD/>; see also “Paxos: Building the Open Financial System” (describing the services offered by Paxos Trust Co.) (visited Jan. 12, 2023), <https://paxos.com/company/>; Emma Avon, “DAI Alternatives: Stablecoins Similar to DAI,” *CoinCodex* (Feb. 10, 2020), 2020 WLNR 4023091; Gertrude Chavez-Dreyfuss, “Paxos gets US regulator nod for gold-backed token, dollar-backed stablecoin,” *Business Report* (South Africa) (Sept. 6, 2019), 2019 WLNR 27167765.

¹⁴⁰ See *supra* notes 66, 111-15, *infra* notes 218-20 and accompanying text (discussing Gemini Trust).

¹⁴¹ Benjamin Bain, “U.S. Bank Watchdogs Issue Joint Warning on Crypto Activities,” *Bloomberg* (Jan. 3, 2023) (quote), [https://www.bloomberg.com/news/articles/2023-01-03/top-us-bank-watchdogs-issue-joint-warning-on-](https://www.bloomberg.com/news/articles/2023-01-03/top-us-bank-watchdogs-issue-joint-warning-on)

also serves as custodian for reserves held by Circle's USDC stablecoin and provides accounting and administration services for Grayscale's GBTC.¹⁴²

Other FDIC-insured banks have become more deeply involved with the crypto industry. Signature Bank and Silvergate Bank have provided extensive deposit and payment services to crypto exchanges and other crypto firms. Both banks operate real-time payment networks that enable crypto firms and other customers to make payments to each other and exchange cryptocurrencies for dollars.¹⁴³

Signature, a New York state-chartered bank, held over \$100 billion of deposits in the autumn of 2022, with almost a quarter of those deposits made by crypto firms.¹⁴⁴ In September 2022, Silvergate, a California state-chartered bank and a Fed member bank, held \$13 billion of deposits, of which about 90% were made by crypto firms.¹⁴⁵ Both banks provided deposit,

crypto-activities; Kyle Campbell, "Custodia cries foul over regulators giving BNY Mellon green light for crypto," *American Banker* (Oct. 13, 2022), 2022 WLNR 32748950; Catherine Leffert, "Custody battle: How legacy financial institutions are entering crypto," *American Banker* (Oct. 17, 2022), <https://www.americanbanker.com/news/custody-battle-how-legacy-financial-institutions-are-entering-crypto>; see also Federal Reserve Statistical Release, "Large Commercial Banks" (as of Sept. 30, 2022) (showing that BNY Mellon was the eleventh-largest U.S. bank with \$345 billion of assets), <https://www.federalreserve.gov/releases/lcr/current/>; Lee Reiners & Sangita Gazi, "Wanted: A Prudential Framework for Crypto-Assets," *Arkansas Law Review* (forthcoming) (draft of Jan. 17, 2023, available at <http://ssrn.com/abstract=4327091>), at 7-8 (discussing the custodial services provided by BNY Mellon and U.S. Bank to crypto firms and describing the risks associated with those services).

¹⁴² Hannah Lang, "BNY Mellon chosen as custodian for Circle's stablecoin reserves," *Reuters* (Mar. 31, 2022), <https://www.reuters.com/business/finance/bny-mellon-chosen-custodian-circles-stablecoin-reserves-2022-03-31/>.

¹⁴³ David Benoit & Rachel Louise Ensign, "Deposits Gyrate at Crypto-Tied Banks," *Wall Street Journal* (Aug. 16, 2022), B1; see also Penny Crosman, "Why New York Community Bank is minting stablecoins," *American Banker* (Nov. 30, 2021), 2021 WLNR 39013939 (describing the "blockchain-based" networks offered by Silvergate and Signature to crypto firms and investors); Tabby Kinder, "Silvergate: from tiny local lender to bank behind the crypto boom," *Financial Times* (Dec. 9, 2022) (stating that the Silvergate Exchange Network allows "crypto investors to transfer U.S. dollars from their bank accounts on to a crypto exchange instantly and 24/7 as long as both the exchange and investor banked with Silvergate"), <https://www.ft.com/content/5c960a79-ccbe-4805-a137-7e5241251c4e>; Simona Ram, "Signature Bank Limits Crypto Deposits. Is That a Big Deal?", *DailyCoin* (Jan. 26, 2023), 2023 WLNR 3192958 (describing "Signet, [Signature Bank's] blockchain-based digital payments platform. This allows bank business clients to fund and settle their accounts on crypto exchanges 24/7.").

¹⁴⁴ Dan McCrum & Joshua Franklin, "Signature Bank bet big on crypto—and must now reckon with the crash," *Financial Times* (July 28, 2022), <https://www.ft.com/content/34d0a7d-c0ea-41ee-b36e-1a5802c8360b>; see also Joshua Franklin, "Signature says it is 'not just a crypto bank' as it sheds deposits," *Financial Times* (Dec. 6, 2022) ("About 23 per cent of Signature's \$103bn in customer deposits were related to the crypto industry as of the middle of November"), <https://www.ft.com/content/616a6900-43bc-4fa7-bde1-543ae799adfb>.

¹⁴⁵ Benoit & Ensign, *supra* note 143; Kinder, *supra* note 143; Corinne Kim, "Silvergate ditches mortgage warehouse lending, cuts 20% of staff," *Housing Wire* (Jan. 5, 2023),

custodial, and payment services to Celsius, FTX, and Alameda, and both became involved in the bankruptcy proceedings for those firms.¹⁴⁶

In response to the crypto crash, Signature decided to make a significant reduction in its exposures to crypto firms. Signature's deposits declined by 17% during 2022, and the bank bolstered its liquidity by obtaining almost \$10 billion of advances from the Federal Home Loan Bank of New York during the fourth quarter.¹⁴⁷ Despite the substantial decline in its deposits, Signature reported a record net profit during 2022.¹⁴⁸

Silvergate experienced much more severe problems during the crypto crash. During the fourth quarter of 2022, Silvergate incurred a \$1 billion net loss, lost over two-thirds of its crypto-related deposits, and laid off 40% of its staff.¹⁴⁹ Silvergate "shored up its liquidity" by obtaining

<https://www.housingwire.com/articles/silvergate-ditches-mortgage-warehouse-lending-cuts-20-of-workforce/>; Hannah Levitt, "Minibubbles in US Banking Are Popping with Costs in the Billions," *Bloomberg* (Jan. 12, 2023), <https://www.bloomberg.com/news/articles/2023-01-12/minibubbles-in-us-banking-are-popping-with-costs-in-the-billions>; Joshua Oliver, "US bank Silvergate defends ties to Sam Bankman-Fried's crypto groups," *Financial Times* (Dec. 6, 2022), <https://www.ft.com/content/38ac9101-4642-4acf-92ba-3f7580987deb>; David Thomas, Silvergate, Provident Bancorp and Signature Bank Got Burned Playing with Crypto," *BeInCrypto* (Nov. 22, 2022), 2022 WLNR 37614457.

¹⁴⁶ David Benoit, "Lawmakers Want Answers from Silvergate About FTX Transfers," *Wall Street Journal* (Dec. 7, 2022), B2; Kinder, *supra* note 143; McCrum & Franklin, *supra* note 144; Max Reyes, "An obscure bank found its way to success. Then FTX collapsed," *Washingtonpost.com* (Dec. 12, 2022), https://www.washingtonpost.com/business/on-small-business/an-obscure-bank-found-its-key-to-success-then-ftx-collapsed/2022/12/09/bc428e96-77c5-11ed-a199-927b334b939f_story.html; Thomas, *supra* note 145; *see also* Bain, *supra* note 141 (reporting that FTX's bankruptcy filings listed Silvergate and Signature "as places where [FTX] or related entities had accounts"); Oliver, *supra* note 145 (reporting that Silvergate maintained "at least eight [deposit] accounts" for Alameda, and Silvergate processed "wire transfers for individuals and companies who traded with Alameda").

¹⁴⁷ Kate Berry, "Signature Bank taps Home Loan Bank advances in crypto pullback," *American Banker* (Jan. 17, 2023), 2023 WLNR 1890511; Franklin, *supra* note 144; Levitt, *supra* note 145; McCrum & Franklin, *supra* note 144; John Reosti, "Signature Bank's deposits plummet as it scales back crypto exposure," *American Banker* (Jan. 17, 2023), 2023 WLNR 1945696.

¹⁴⁸ Signature Bank, "Press Release: 'Signature Bank Reports 2022 Fourth Quarter and Year-End Results'" (Jan. 17, 2023) (reporting record net income of \$1.34 billion for 2022), <https://investor.signatureny.com/pme/press-releases/news-details/2023/Signature-Bank-Reports-2022-Fourth-Quarter-and-Year-End-Results/default.aspx>.

¹⁴⁹ Nikou Asgari, US bank Silvergate sinks to \$1bn loss as crypto crisis takes a toll, *Financial Times* (Jan. 16, 2023) (reporting that Silvergate "sold \$5.7bn in assets in the final three months of 2022 at a loss of \$751mn as it raced to meet [deposit] withdrawals"), <https://www.ft.com/content/8c372d9c-6e87-4068-953f-cdfb460edf41>; David Benoit, "Crypto Bank Takes Hit to Cover Withdrawals," *Wall Street Journal* (Jan. 6, 2023), A1 (reporting that Silvergate's loss during the fourth quarter of 2022 "exceeds the bank's total profit since at least 2013"); Yueqi Yang & Hannah Levitt, "Crypto Panic at Silvergate Spawns a New Breed of Bank Run," *Bloomberg* (Jan. 5, 2023) (stating that Silvergate lost almost 70% of its \$11.9 billion of crypto-related deposits during the fourth quarter of

\$4.3 billion of advances from the Federal Home Loan Bank of San Francisco (FHLB-SF), and Silvergate's parent company suspended dividend payments on its preferred stock "to preserve capital."¹⁵⁰

The FHLB-SF's advances were secured loans and would have priority over the FDIC's claims as deposit insurer if Silvergate failed. The FHLB-SF's advances therefore created a significant potential risk of loss for the Deposit Insurance Fund.¹⁵¹ Senators John Kennedy (R-LA), Roger Marshall (R-KS), and Elizabeth Warren (D-MA) warned that "[b]y using the FHLB as its functional 'lender of last resort,' Silvergate has further introduced crypto market risk into the traditional banking system."¹⁵²

In spite of Silvergate Bank's crypto-related losses, its parent company publicly affirmed in January 2023 that "Silvergate's mission has not changed; it remains committed to crypto."¹⁵³ In contrast, Metropolitan Commercial Bank, an FDIC-insured New York bank, announced during the same month that it was terminating its deposit and payment services for crypto firms. Metropolitan decided to stop serving crypto firms after losing half of its crypto-related deposits and becoming entangled in Voyager Digital's bankruptcy during 2022.¹⁵⁴ Similarly, Provident

2022), <https://www.bloomberg.com/news/articles/2023-01-06/crypto-panic-at-silvergate-spawns-a-new-breed-of-bank-run>.

¹⁵⁰ Kate Berry, "Silvergate loaded up on \$4.3 billion of Home Loan Bank advances," *American Banker* (Jan. 10, 2023) (first quote), <https://www.americanbanker.com/news/silvergate-bank-loaded-up-on-4-3-billion-in-fhlb-advances>; Daniel Taub, "Silvergate Suspends Preferred Dividends to Preserve Capital (2)," *Bloomberg Law* (Jan. 27, 2023) (second quote).

¹⁵¹ Berry, *supra* note 150; John Heltman, "Silvergate's Home Loan Bank advances are further evidence of crypto contagion," *American Banker* (Jan. 10, 2023), 2023 WLNR 1075769; U.S. Senator Elizabeth Warren, Press Release, "Senators Warren, Marshall, Kennedy, Release New Information, Renew Push for Information from Silvergate Bank over Role in FTX Collapse" (Jan. 31, 2023) [hereinafter Warren-Marshall-Kennedy Press Release on Silvergate], <https://www.warren.senate.gov/oversight/letters/senators-warren-marshall-kennedy-release-new-information-renew-push-for-answers-from-silvergate-bank-over-role-in-ftx-collapse>.

¹⁵² Warren-Marshall-Kennedy Press Release on Silvergate, *supra* note 151.

¹⁵³ Kim, *supra* note 145; see also Eric Wallerstein, "U.S. Home Loan Banks Help Crypto Lenders Stem Outflows," *Wall Street Journal* (Jan. 23, 2023), B2 (reporting that Silvergate CEO Alan Lane "emphasiz[ed] [Silvergate's] commitment to the crypto industry despite the turmoil").

¹⁵⁴ Alex Graf, "Metropolitan Bank looking to other funding sources after crypto exit," *SNL Bank & Thrift Daily* (Jan. 23, 2023), 2023 WLNR 3029676; David Thomas, "Metropolitan Calls It Quits on Crypto Following Silvergate

Bancorp, a Massachusetts bank holding company, decided to stop making loans to crypto miners after suffering significant losses on those loans and reporting a net loss for 2022.¹⁵⁵

Silverage held about \$1 billion of deposits from FTX and Alameda (and their affiliates) when those companies collapsed.¹⁵⁶ In December 2022, Senators Kennedy, Marshall, and Warren demanded that Silverage explain its role in FTX's and Alameda's transfers of customer funds.¹⁵⁷ DOJ launched a criminal investigation into Silverage's involvement in those transfers.¹⁵⁸ Silverage was named as a defendant in four class action lawsuits, one of which alleged that Silverage knowingly or negligently allowed FTX to divert its customers' funds to Alameda.¹⁵⁹ All of the other banks that did business with FTX and Alameda—including Bank of America, JPMorgan Chase (JPMC), and Wells Fargo—are potentially subject to private claims and government investigations for failing to identify the pervasive insider misconduct that occurred at both companies.¹⁶⁰

Scare," *BelCrypto* (Jan. 9, 2023), 2023 WLNR 920133; Thomas, *supra* note 145; Claire Williams, "Voyager is the tip of the iceberg," *American Banker* (July 20, 2022), 2022 WLNR 22701994.

¹⁵⁵ Jim Dobbs, "Provident in Massachusetts pushing past crypto woes," *American Banker* (Feb. 1, 2023), 2023 WLNR 4061481; Jim Dobbs, "Provident Bancorp in Massachusetts stung by cryptocurrency weakness," *American Banker* (Nov. 17, 2022), 2022 WLNR 37007950; Thomas, *supra* note 145.

¹⁵⁶ Benoit, *supra* note 146; *see also* Kinder, *supra* note 143 (discussing deposit accounts that FTX and "related entities" established at Silverage); Oliver, *supra* note 145 (describing deposit accounts maintained by Alameda at Silverage).

¹⁵⁷ Benoit, *supra* note 146 (discussing letter sent to Silverage by Senators Kennedy, Marshall, and Warren). The three Senators renewed their demands in January 2023 after receiving a response from Silverage that they considered "largely evasive" and "unsatisfactory." Warren-Marshall-Kennedy Press Release on Silverage, *supra* note 151.

¹⁵⁸ Tom Schoenberg, "Silverage Faces US Fraud Probe Over FTX and Alameda Dealings," *Bloomberg* (Feb. 2, 2023), <https://www.bloomberg.com/news/articles/2023-02-02/silvergate-faces-doj-fraud-probe-over-ftx-and-alameda-dealings>.

¹⁵⁹ Pam Martens & Russ Martens, "Federally-Insured, Crypto-Focused Silverage Bank Loses 43 Percent of Its Market Value Yesterday as Depositors Flee," *Wall Street on Parade* (Jan. 6, 2023), <https://wallstreetonparade.com/2023/01/federally-insured-crypto-focused-silvergate-bank-loses-43-percent-of-its-market-value-yesterday-as-depositors-flee/>.

¹⁶⁰ Penny Crosman, "What the indictments against FTX's Sam Bankman-Fried mean for banks," *American Banker* (Dec. 28, 2022), 2022 WLNR 42122006; *see also* Schoenberg, *supra* note 157 (stating that "one of the biggest outstanding questions surrounding the FTX debacle [is]: What did banks and intermediaries working with Bankman-Fried's firms know about . . . a years-long scheme to defraud investors and customers?").

At least two FDIC-insured banks provide crypto trading services to retail customers either directly or through an affiliate. With the OCC's permission, Vast Bank, N.A.—a national bank located in Tulsa, Oklahoma—offers crypto banking accounts that allow its customers to buy, sell, and hold cryptocurrencies and to deposit the proceeds of cryptocurrency sales in their checking accounts.¹⁶¹ SoFi Technologies, Inc. (SoFi) provides crypto trading services to its customers through a subsidiary, SoFi Digital Services (SoFi Digital), a state-licensed money transmitter. In February 2022, SoFi acquired a California national bank with \$5.3 billion of assets, which it renamed SoFi Bank, N.A. (SoFi Bank).¹⁶²

SoFi Bank agreed not to engage in crypto-related activities without first obtaining a notice of non-objection from the OCC. The Fed determined that SoFi Digital's crypto trading services were not permissible for SoFi after it acquired SoFi Bank and became a bank holding company (BHC). However, based on a transitional exemption in the Bank Holding Company Act (BHC Act),¹⁶³ the Fed allowed SoFi Digital to continue offering crypto trading services for up to five years.¹⁶⁴

In November 2022, Senator Sherrod Brown (D-OH) and three other Senators expressed their concerns to federal bank regulators about the “significant risks to both individual investors

¹⁶¹ Penny Crosman, “Community bank enlists Coinbase, SAP to offer crypto,” *American Banker* (Feb. 3, 2021), 2021 WLNR 3621265 (reporting that Vast Bank formed a partnership with Coinbase enabling its customers to “buy cryptocurrency from their bank accounts” after “working with the OCC’s Office of Innovation on its crypto initiative”); Penny Crosman, “Crypto-friendly banks stay the course despite bitcoin volatility,” *American Banker* (June 27, 2022), 2022 WLNR 20050671 (reporting that Vast Bank “lets customers buy 13 different digital currencies through its website and mobile banking app”); *see also* Vast Bank, “Vast Crypto Banking” (stating that “Vast Bank is the first nationally chartered U.S. bank that allows you to buy, sell, and hold cryptocurrency assets through your mobile banking app.”), <https://www.vast.bank/crypto-banking> (visited Jan. 31, 2023).

¹⁶² SoFi Technologies, Inc., Form 10-K Annual Report dated Mar. 1, 2022 [hereinafter SoFi 10-K Report], at 2, 4-5, 9-10, 12, 16-17, 29-30, 53-56, 160-61, <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001818874/2533ab52-232a-47de-869b-8d771622cdee.pdf>.

¹⁶³ 12 U.S.C. §§ 1841-52.

¹⁶⁴ SoFi 10-K Report, *supra* note 162, at 9-10, 53-54. Section 4(a)(2) of the BHC Act, 12 U.S.C. § 1843(a)(2), allows SoFi to engage in activities that are not permitted for BHCs for a period of two years after it became a BHC in February 2022. In addition, the Fed may extend that transitional exemption period for three additional years. *See* Wilmarth, *Taming the Megabanks*, *supra* note 119, at 181-82.

and safety and soundness” created by SoFi’s acquisition of SoFi Bank. The Senators pointed out that SoFi Digital described one of the cryptocurrencies it offered for sale to retail investors as a high-risk “crypto pump-and-dump” scheme.” In addition, SoFi launched a new service in March 2022, which enables SoFi Bank’s depositors to use a portion of their direct deposits to fund purchases of cryptocurrencies offered by SoFi Digital.¹⁶⁵

The Federal Reserve Bank of San Francisco (San Francisco Fed) approved SoFi’s acquisition of SoFi Bank without a public hearing or a published opinion.¹⁶⁶ SoFi’s control of SoFi Bank threatens to erode the legal boundaries that separate FDIC-insured banks from crypto trading, just as the Fed’s approval of Travelers’ acquisition of Citicorp in 1998 severely undermined then-existing legal barriers that separated U.S. banks from the capital markets.¹⁶⁷ The Fed should not have approved SoFi’s acquisition of SoFi Bank without holding a public hearing and allowing members of Congress and the public to express their views about the potential problems that deal created for our banking system and our financial regulatory policies.

Another very troubling transaction occurred in March 2022, when FTX’s affiliate Alameda invested \$11.5 million and obtained a voting interest of slightly less than 10% (along with a majority equity interest) in FBH Corp. (FBH). FBH is the parent holding company of

¹⁶⁵ U.S. Senate Committee on Banking, Housing, and Urban Affairs, Press Release, “Brown, Colleagues Call on Bank Regulators to Review SoFi’s Crypto Activities” (Nov. 21, 2022) (summarizing letters sent to federal bank regulators by Senators Brown, Chris Van Hollen (D-MD), Jack Reed (D-RI), and Tina Smith (D-MN)), <https://www.banking.senate.gov/newsroom/majority/brown-colleagues-bank-regulators-review-sofis-crypto-activities>; see also SoFi Technologies, Inc., Press Release, “SoFi Launches No-Fee Cryptocurrency Purchases for Direct Deposit Members,” (Mar. 22, 2022), <https://investors.sofi.com/news/news-details/2022/SoFi-Launches-No-Fee-Cryptocurrency-Purchases-for-Direct-Deposit-Members/default.aspx> (describing SoFi’s new service for SoFi Bank’s depositors as “the latest expansion of SoFi’s offerings to make it simpler to get started with cryptocurrency investing”).

¹⁶⁶ Federal Reserve Release H.2, “Actions of the Board, Its Staff, and Federal Reserve Banks; Applications and Reports Received” (No. 4, Week Ending Jan. 22, 2022) (“Actions under delegated authority—January 16, 2022 to January 22, 2022: Bank Holding Companies”), <https://www.federalreserve.gov/Releases/H2/20220122/h2.pdf>.

¹⁶⁷ Pam Martens & Russ Martens, “With Crypto Bank, SoFi, the Fed Is Setting the Stage for the Same Disastrous Decision It Made with Citigroup in 1999,” *Wall Street on Parade* (Nov. 29, 2022), <https://wallstreetonparade.com/2022/11/with-crypto-bank-sofi-the-fed-is-setting-the-stage-for-the-same-disastrous-decision-it-made-with-citigroup-in-1999/>.

Farmington State Bank (FSB), an FDIC-insured bank in Bellevue, Washington. FSB adopted the trade name “Moonstone Bank” for its online banking operations shortly before Alameda made its investment.¹⁶⁸ In March 2022, FBH and FSB stated that FSB would become a “top provider of innovative financial services to fast-growing industries such as blockchain, cryptocurrencies and cannabis.”¹⁶⁹ A leading financial journal reported that “the primary motivation” for Alameda’s investment in FSB was to allow FTX to “offer crypto-yield programs in a way that would bypass [SEC] regulations” by exploiting regulatory exemptions for banking products.¹⁷⁰ FTX never achieved that goal, but FSB held about \$50 million of deposits from FTX when FTX filed for bankruptcy.¹⁷¹

FBH’s chairman, Jean Chalopin, is also the chairman of Deltec Bank & Trust. Deltec is a Bahamian bank that provided banking services to FTX as well as Tether, the issuer of the world’s largest stablecoin (and one of FTX’s major trading partners). Despite FBH’s connections with leading crypto firms, the Fed approved FBH’s acquisition of FSB in September 2020, and the San Francisco Fed approved FSB’s application to become a Fed member bank in

¹⁶⁸ Thomas Clouse, “Moonstone: State Charter for Tiny Bank Could Have Built a Financial Empire,” *Spokesman-Review* (Spokane, WA) (Dec. 4, 2022), 2022 WLNR 40291150; Cox, *supra* note 129; Penny Crosman, “Surviving FTX: Fintechs and banks untangle themselves,” *American Banker* (Nov. 30, 2022), 2022 WLNR 38627476; “The curious case of FTX and Farmington State Bank, aka Moonstone,” *Protos* (Nov. 24, 2022) [hereinafter “Curious Moonstone Case”], <https://protos.com/the-curious-case-of-ftx-and-farmington-state-bank-aka-moonstone/>; Claire Williams, “FDIC ‘looking closely’ at Farmington State Bank in FTX fiasco,” *American Banker* (Dec. 1, 2022), 2022 WLNR 38769642; *see also* Moonstone Bank, “Our Story,” <https://www.moonstonebank.com/our-story> (stating that Moonstone Bank has a “strong team of experts building the bank of tomorrow” with “deep roots in finance and technology”) (visited Jan. 31, 2023).

¹⁶⁹ John Heltman, “The crypto contagion may not be that contained,” *American Banker* (Nov. 29, 2022), 2022 WLNR 38474047 (quoting joint press release issued by FBH and FSB). In January 2023, FSB announced that it would stop using the trade name “Moonstone Bank” and return to FSB’s “original mission as a community bank” because the bank had “decided not to continue with the digital Moonstone Bank that we were starting to build.” Thomas Clouse, “Feds Seize \$50M from Farmington State Bank Tied to Bankman-Fried,” *Spokesman-Review* (Spokane, WA) (Jan. 25, 2023), 2023 WLNR 3202709 (quoting FSB’s press release and FSB executive Josey Booth).

¹⁷⁰ Peter Rudegeair et al., “Tiny Farming-Town Bank Got Tangled Up with FTX,” *Wall Street Journal* (Feb. 1, 2023), B1.

¹⁷¹ *Id.* (reporting that DOJ seized those deposits in January 2023).

June 2021.¹⁷² Those approvals gave FSB a Fed master account and access to the Fed's discount window.¹⁷³ FBH's acquisition of FSB, FSB's status as a Fed member bank, and Alameda's ownership stake in FSB raised very serious policy issues, given the likelihood that FSB would be "repurposed as a crypto foothold in the banking system."¹⁷⁴

In December 2022, Senators Elizabeth Warren (D-MA) and Tina Smith (D-MN) stated that "crypto firms may have closer ties to the banking system than previously understood."¹⁷⁵ They warned that the involvement of crypto enterprises with FSB, Silvergate, and other FDIC-insured banks raised "questions about the safety and soundness of our banking system" as well as "potential loopholes that crypto firms may try to exploit to gain further access" to that system.¹⁷⁶ The numerous connections described above between crypto firms and FDIC-insured banks indicate that federal regulators allowed banks to become more deeply involved with the crypto industry than their public statements in 2022 suggested.¹⁷⁷

¹⁷² Clouse, *supra* note 168; Cox, *supra* note 129; "Curious Moonstone Case," *supra* note 168; Stephen Gandel, "Bank Stake by Exchange Draws Scrutiny," *New York Times* (Nov. 24, 2022), B3; Rudegeair et al., *supra* note 169; see also Crosman, *supra* note 160 (reporting that "FTX's use of Deltec Bank in the Bahamas obscured U.S. banks' view of FTX's transactions, some say").

¹⁷³ "Curious Moonstone Case," *supra* note 168; Heltman, *supra* note 169; see also *infra* note 307 and accompanying text (describing the benefits provided by Fed master accounts).

¹⁷⁴ Heltman, *supra* note 169; see also Clouse, *supra* note 168 (stating that FSB's bank charter "provided a foot in the door to open the legitimacy of the banking industry to the world of cryptocurrency").

¹⁷⁵ Senator Elizabeth Warren, Press Release, "Warren, Smith Ask Banking Regulators About Banking System's Exposure to Crypto Risks after FTX Crash" (Dec. 8, 2022), <https://www.warren.senate.gov/oversight/letters/warren-smith-ask-key-regulators-about-banking-systems-exposure-to-crypto-risks-after-ftx-crash>; Chelsey Cox, "U.S. lawmakers press federal banking regulators on the industry's exposure to crypto after Alameda's stake in bank comes to light," *CNBC* (Dec. 8, 2022), <https://www.cnbc.com/2022/12/08/crypto-us-lawmakers-press-federal-banking-regulators-on-industrys-exposure-after-ftx-collapse.html>.

¹⁷⁶ *Id.*; see also *supra* notes 149-60, 168-77 and accompanying text (discussing problems encountered by crypto-focused, FDIC-insured banks).

¹⁷⁷ See, e.g., FSOC Digital Assets Report, *supra* note 1, at 16 ("Overall, the level of involvement by the banking system in crypto-asset activities remains relatively low."); *id.* at 18 ("Current interconnections are unlikely to cause banks to bear losses in response to a shock in the crypto-asset ecosystem."); Financial Stability Oversight Council, 2022 Annual Report at 33 ("The current regulatory framework, and the limited overall scale of crypto-asset activities, have helped largely insulate traditional financial institutions from the acute instability seen in the crypto-asset ecosystem."), <https://home.treasury.gov/system/files/261/FSOC2022AnnualReport.pdf>.

More than sixty large U.S. and foreign banks have invested in crypto-related enterprises.¹⁷⁸ In 2022, eight big foreign banks (Barclays, BNP Paribas, BBVA, ING, MUFG, Nomura, Standard Chartered, and UBS) and five major U.S. banks (BNY Mellon, Citigroup, Goldman Sachs, JPMC, and Morgan Stanley) each held investments of more than \$100 million in crypto ventures. All five of those U.S. banks held over \$200 million of crypto-related investments, and BNY Mellon's investments topped \$300 million, equal to more than 1.5% of its Core Tier 1 capital.¹⁷⁹ Large global banks have additional exposures to crypto firms arising out of the trading, clearing, underwriting, and custodial services they provide to those firms.¹⁸⁰ Notwithstanding the crypto crash, leading domestic and foreign banks have expressed a strong desire to expand their involvement with crypto-related businesses.¹⁸¹

On February 1, 2023, LevelField Financial, which “offers trading and custody services to digital asset holders,” announced its agreement to acquire Burling Bank, an FDIC-insured state bank headquartered in Chicago.¹⁸² Following the proposed acquisition, Burling Bank will “focus on retail digital-asset holders” who desire to “monetize their [digital] assets” by taking out loans collateralized by those assets.¹⁸³ In addition, LevelField and Burling Bank will “market a turnkey service to [other] banks [enabling] them to offer trading, custody and other digital

¹⁷⁸ Team Blockdata, “Top Banks Investing in Crypto and Blockdata May 2022 Update” (June 14, 2022) (reporting that 61 large U.S. and foreign banks had made investments in crypto firms and blockchain development companies), <https://www.blockdata.tech/blog/general/top-banks-investing-in-crypto-and-blockchain-may-2022-update>.

¹⁷⁹ BIS 2022 Annual Report, *supra* note 9, at 88, 89 (Graph 6.B).

¹⁸⁰ Auer et al., “Bitcoin and Banking,” *supra* note 17, at 7-9.

¹⁸¹ Anna Irrera et al., “Wall Street Giants Spy Opportunities Rising from FTX Ashes,” *Bloomberg* (Jan. 30, 2023) (“Despite all that’s gone wrong in the [crypto] industry, with trillions in losses, spectacular bankruptcies, the arrest of Sam Bankman-Fried — the world’s largest custodian bank and other financial giants are hoping to expand in crypto — not shrink.”), <https://www.bloomberg.com/news/articles/2023-01-30/wall-street-giants-spy-opportunities-rising-from-ftx-ashes>.

¹⁸² John Reosti, “With eye on crypto, Houston firm buying Chicago community bank,” *American Banker* (Feb. 1, 2023), 2023 WLNR 4061975; see also Fed. Deposit Ins. Corp., “CRA Examination Schedule: FDIC Examinations Scheduled for Third Quarter 2021 – Chicago Region” (Feb. 24, 2021) (listing Burling Bank as an FDIC-insured and FDIC-supervised state nonmember bank (FDIC Certificate No. 27556) headquartered in Chicago, IL), <https://www.fdic.gov/resources/bankers/community-reinvestment-act/examination-schedule/chi21cra3.html>.

¹⁸³ Reosti, *supra* note 182.

services to their customers.”¹⁸⁴ Thus, LevelField’s proposed business plan for Burling Bank closely resembles the digital asset trading services that Vast Bank and SoFi Bank currently offer to their customers.¹⁸⁵

**B. FDIC-Insured Banks Are Developing New Payments Systems That Use
Stablecoins and Tokenized Deposits.**

Several FDIC-insured banks have sought to develop new payments systems that use stablecoins and tokenized deposits. In February 2022, Silvergate Bank purchased the Diem stablecoin project from Facebook (Meta). Silvergate stated that it intended to issue stablecoins that would be accepted as “tokenized dollars” by retail sellers of goods and services.¹⁸⁶ Silvergate suspended its work on its stablecoin project in January 2023, after experiencing serious financial problems after the collapse of FTX and Alameda.¹⁸⁷

New York Community Bank (NYCB) and eight other FDIC-insured banks have established a consortium to issue the USDF stablecoin. The USDF stablecoin would operate on the Provenance blockchain created by Figure Technologies. USDF stablecoins would function as “tokenized deposits” and would be used to settle transactions among the participating banks and their customers.¹⁸⁸ As indicated above, tokenized deposits are digital assets that represent existing bank deposits.¹⁸⁹

¹⁸⁴ *Id.*

¹⁸⁵ See *supra* notes 161-67 and accompanying text (discussing Vast Bank and SoFi Bank).

¹⁸⁶ John Adams, “What’s still missing from crypto payments,” *American Banker* (Sept. 15, 2022) (quote), 2022 WLNR 29406802; Penny Crosman, “The road ahead for Meta’s Diem under Silvergate Bank’s ownership,” *American Banker* (Feb. 8, 2022), 2022 WLNR 3864929.

¹⁸⁷ Nikou Asgari & Joshua Franklin, “Silvergate shares tumble as crypto bank reveals \$8.1bn fall in deposits,” *Financial Times* (Jan. 5, 2023), <https://www.ft.com/content/69ed8629-278d-4cd5-a3e7-96d2f6c85f34>; see also *supra* notes 149-59 and accompanying text (discussing Silvergate’s crypto-related problems as well as its continued commitment to a crypto-focused business plan).

¹⁸⁸ Crosman, *supra* note 143; Penny Crosman, “Bank stablecoin consortium USDF gets a CEO, grows to 9 members,” *American Banker* (July 6, 2022), 2022 WLNR 21111190; see also Cocheo, *supra* note 12 (explaining that USDF’s stablecoins are “tokenized deposits”).

¹⁸⁹ See *supra* note 12 and accompanying text; Rod Garratt et al., “The Future of Payments Is Not Stablecoins,” *Liberty Street Economics* (Fed. Res. Bank of NY, Feb. 7, 2022) (explaining that “tokenized deposits” are “digital

JPMC has created a proprietary stablecoin called JPM Coin. Like the USDF stablecoin, JPM Coin operates on a proprietary digital ledger network (permissioned blockchain), which currently provides services to JPMC's institutional clients and could potentially be expanded to include other banks and their customers.¹⁹⁰ The JPM Coin represents tokenized deposits that participating institutional clients hold in JPMC.¹⁹¹

It is not yet clear whether the foregoing bank stablecoin projects will be successful in producing large-scale payment networks. When the OCC approved NYCB's acquisition of Flagstar Bank in October 2022, NYCB agreed that it will apply for the OCC's permission to retain its ownership stake in the USDF stablecoin consortium and will divest that stake within two years if the OCC does not grant such permission.¹⁹² Circle, which issues the USDC stablecoin, has not achieved its goal of obtaining a national bank charter from the OCC.¹⁹³ In December 2022, Circle abandoned its planned public offering of stock (via a merger with a special-purpose acquisition company) after the SEC did not allow its offering prospectus to become effective.¹⁹⁴ The OCC's and SEC's actions regarding NYCB and Circle indicate that

assets" representing bank deposits that can "circulate on a [distributed ledger technology] platform"), <https://libertystreeteconomics.newyorkfed.org/2022/02/the-future-of-payments-is-not-stablecoins/>.

¹⁹⁰ Penny Crosman, "Can JPMorgan Chase's JPM Coin knock off Ripple and Swift?", *American Banker* (Feb. 14, 2019), 2019 WLNR 4847299.

¹⁹¹ Eddie Mitchell, "What Is JPM Coin and How Do You Buy It?", *Bitcoin Market Journal* (Jan. 10, 2021), <https://www.bitcoinmarketjournal.com/jpm-coin/>; Onyx by JPMorgan, "About Coin Systems," <https://www.jpmorgan.com/onyx/coin-system.htm> (visited Jan. 31, 2023) (quote).

¹⁹² Yizhu Wang, "OCC hands down conditions linked to crypto-assets in NYCB-Flagstar deal approval," *SNL Bank & Thrift Daily* (Nov. 3, 2022), 2022 WLNR 35440861; see also Allissa Kline, "One approval down, one to go for New York Community-Flagstar deal," *American Banker* (Oct. 28, 2022), 2022 WLNR 34618229 (discussing the OCC's approval of the Flagstar acquisition).

¹⁹³ Circle Internet Finance Public Limited Company, Amendment No. 7 to Form S-4 Registration Statement (Nov. 14, 2022), at 48 (stating that Circle was seeking "to obtain a national bank charter," but "[g]iven the unique nature of our core business of issuing and operating Circle stablecoins and related blockchain-based transaction services, we anticipate the bank charter pursuit will require extensive effort and time, and may ultimately be unsuccessful.") [hereinafter Circle S-4 Amendment No. 7], <https://d18m0p25nwr6d.cloudfront.net/CIK-0001876042/7ed4d644-9847-4931-bb98-61514624e796.pdf>.

¹⁹⁴ Paul Vigna, "Stablecoin Firm Circle Financial Halts SPAC Attempt," *Wall Street Journal* (Dec. 6, 2022), B1 (reporting that Circle ended its "attempt to go public through a special-purpose-acquisition merger" because the SEC did not declare its prospectus effective); see also Dave Michaels & Peter Rudegeair, "SEC Stymies Crypto-Firm Listings," *Wall Street Journal* (Jan. 25, 2023), A1 (reporting that "[i]ncreased scrutiny from the [SEC] has derailed"

federal authorities are not be willing to allow FDIC-insured banks to establish their own stablecoin networks until federal agencies reach a consensus on how stablecoins should be regulated.

It seems more likely that federal agencies will allow tokenized deposits of FDIC-insured banks to be used on common ledgers operated by networks of commercial banks and central banks. The safety and reliability of tokenized bank deposits would be assured by the laws and regulations governing traditional bank deposits, including federal deposit insurance and other elements of the federal safety net for banks.¹⁹⁵ Tokenized bank deposits would be significantly safer and more reliable than stablecoins issued by nonbanks because nonbanks are not regulated under federal banking laws and are not protected by the federal safety net for banks.¹⁹⁶

In November 2022, the Federal Reserve Bank of New York (New York Fed) announced that it will conduct a “proof of concept” study along with ten large U.S. financial institutions. That study will examine the feasibility of using digital ledger technology to create a “regulated liability network,” which would perform instantaneous settlements of payments between financial institutions by using tokenized bank deposits and central bank reserves.¹⁹⁷ The New York Fed’s study is one of a series of initiatives the Fed has undertaken to determine whether a wholesale central bank digital currency (CBDC) could expedite the processing of large-volume payments between financial institutions, central banks, and other entities.¹⁹⁸

attempts by Circle and other crypto firms “to go public this past year as financial distress and failures spread across the volatile industry”).

¹⁹⁵ See *infra* notes 265-67, 283-88 and accompanying text (discussing the regulations governing deposits at FDIC-insured banks and the protections provided by the federal safety net for banks).

¹⁹⁶ Cocheo, *supra* note 12; Garratt et al., *supra* note 189.

¹⁹⁷ Fed. Res. Bank of NY, “Facilitating Wholesale Digital Asset Settlement” (Nov. 15, 2022), <https://www.newyorkfed.org/aboutthefed/nyic/facilitating-wholesale-digital-asset-settlement>; Martin Young, “US CBDC Proof of Concept Sees Big Banks Team Up With Federal Reserve,” *BeInCrypto* (Nov. 16, 2022), 2022 WLNR 36742346.

¹⁹⁸ John Adams, “New York Fed advances tests of CBDCs for cross-border payments,” *American Banker* (Nov. 21, 2022), 2022 WLNR 37454449; see also Kyle Campbell, “N.Y. Fed: CBDC could make cross-border settlements

A group of senior technology executives at large U.S. and foreign banks issued a similar “Regulated Liability Network” (RLN) proposal after the New York Fed announced its study. The proposed RLN would operate a digital ledger for a network of central banks, commercial banks, and (potentially) regulated nonbanks that provide payments services. RLN would be a regulated financial market utility and would perform instantaneous transfers of funds among its member institutions by using tokenized bank deposits, central bank reserves, and (potentially) regulated stablecoins issued by nonbanks. RLN would begin with large-volume wholesale payments and, if successful, could possibly expand to include retail payments.¹⁹⁹

It is not yet clear whether the distributed ledger networks envisioned by the foregoing “regulated liability network” projects will be superior to existing payment systems and technologies. At present, permissionless blockchains that use stablecoins and other cryptocurrencies to execute payment transactions are too slow, too fragmented, too unreliable, and too costly to be feasible for general commercial and consumer payments.²⁰⁰ It is conceivable, however, that private or public permissioned ledgers could be developed with the necessary scale, speed, reliability, and efficiency to compete with existing payments systems, particularly with regard to large-value wholesale payments. Given the number of ongoing experiments testing the use of stablecoins, tokenized deposits, and CBDCs, it would be prudent

faster, safer, more efficient,” *American Banker* (Nov. 6, 2021) (explaining that “a wholesale CBDC would be used for payment clearing and settlement between banks, governments, official institutions and nonbank financial companies”), 2022 WLNR 35345697.

¹⁹⁹ Penny Crossman, “Bankers design a new blockchain that works like bitcoin—but it’s regulated,” *American Banker* (Nov. 28, 2022), 2022 WLNR 38335526; see also *The Regulated Liability Network: Digital Sovereign Currency, Whitepaper* (Nov. 15, 2022) (presenting the RLN proposal), <https://regulatedliabilitynetwork.org/wp-content/uploads/2022/11/The-Regulated-Liability-Network-Whitepaper.pdf>.

²⁰⁰ Adachi et al., *supra* note 39, § 3; BIS 2022 Annual Report, *supra* note 9, at 75-89; Frederic Boissay et al., “Blockchain scalability and the fragmentation of crypto,” *BIS Bulletin No. 56* (7 June 2022), <https://www.bis.org/publ/bisbull56.pdf>; FSOC Digital Assets Report, *supra* note 1, at 4, 8-13, 25-26, 40-45, 66-68, 72-73.

for federal agencies to plan for the possibility that stablecoins and tokenized deposits could become widely-accepted payment instruments for wholesale (and possibly retail) transactions.²⁰¹

In addition to uncertainties about the future use of stablecoins and tokenized deposits, there are active debates about the merits of CBDCs and whether CBDCs should be wholesale or retail in nature. As indicated above, wholesale CBDCs could be used to facilitate instantaneous, large-volume payments among regulated financial institutions and central banks that are members of permissioned networks. Transfers of central bank reserves via wholesale CBDCs would ensure the finality of interbank payments made on such networks.²⁰² In contrast, retail CBDCs would be made available to individuals and nonfinancial businesses, either directly by providing them with central bank accounts or indirectly by giving them access to CBDCs through regulated financial intermediaries.²⁰³

Evaluating the feasibility, advantages, and disadvantages of wholesale and retail CBDCs is beyond the scope of this article. However, it seems likely that the Fed will choose to establish a wholesale CBDC before it adopts a retail CBDC. The New York Fed’s experiments with options for CBDCs have “focus[ed] mostly on wholesale CBDCs.”²⁰⁴ As discussed above, the New York Fed and a group of large financial institutions are exploring a “regulated liability network” concept for handling large-value payments that could potentially use wholesale CBDCs to ensure the finality of interbank payments.²⁰⁵ Proposals involving wholesale CBDCs

²⁰¹ BIS 2022 Annual Report, *supra* note 9, at 89-103; FSOC Digital Assets Report, *supra* note 1, at 16-18, 20, 114-20; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 8.

²⁰² BIS 2022 Annual Report, *supra* note 9, at 93-98, 101-02; U.S. Department of the Treasury, *The Future of Money and Payments: Report Pursuant to Section 4(b) of Executive Order 14067*, at 4-10, 14-21, 31-32, 40 (Sept. 2022) [hereinafter Treasury Money and Payments Report], <https://home.treasury.gov/system/files/136/Future-of-Money-and-Payments.pdf>.

²⁰³ BIS 2022 Annual Report, *supra* note 9, at 98-102; Treasury Money and Payments Report, *supra* note 202, at 4-8, 11-16, 19-24, 37-38.

²⁰⁴ Adams, *supra* note 198.

²⁰⁵ See *supra* notes 197-98 and accompanying text.

are “less difficult to execute on both technological and political grounds” because they do not require major changes to the existing U.S. financial system.²⁰⁶

In contrast, adopting a retail CBDC would make very significant changes to the U.S. financial system by enabling individuals and nonfinancial businesses to conduct financial transactions by using a Fed-issued CBDC instead of bank deposits and bank credit. A retail CBDC would present a number of significant challenges, including (i) protecting private financial data from unwarranted government surveillance, (ii) dealing with the likely migration of deposits from banks to the Fed, thereby reducing the banking system’s ability to provide credit to the economy, and (iii) requiring the Fed to serve as the primary provider of deposit, credit, and payment services to the private sector, even if the Fed chooses to provide those services indirectly by subcontracting with financial intermediaries.²⁰⁷

The Fed has said that it “does not intend to proceed with issuance of a CBDC without clear support from the executive branch and from Congress, ideally in the form of a specific authorizing law.”²⁰⁸ Several Republican members of Congress and leading banking trade groups

²⁰⁶ Adams, *supra* note 198; *see also* Comment Letter, dated May 20, 2022, from the Bank Policy Institute to the Fed, at 2 n.5 (“A wholesale account-based CBDC that was available only to depository institutions, which can already establish accounts at the Federal Reserve, would be little different from the current system.”), <https://bpi.com/wp-content/uploads/2022/05/BPI-Files-Comments-in-Response-to-Federal-Reserve-CBDC-Discussion-Paper.pdf>.

²⁰⁷ For discussions of the potential risks and challenges of retail CBDCs, see Sebastian Infante et al., “The Macroeconomics of CBDC: A Review of the Literature” 3-7, 43-46 (Bd. of Governors of Fed. Res. Sys., Fin. & Econ. Discussion Working Paper No. 2022-076) (discussing concerns that a retail CBDC could disintermediate banks and cause a reduction in bank credit), <https://www.federalreserve.gov/econres/feds/files/2022076pap.pdf>; Marc Labonte & Rebecca M. Nelson, “Central Bank Digital Currencies: Policy Issues,” at 17-18, 23-25 (Congressional Research Service, updated Feb. 7, 2022) (discussing concerns that a retail CBDC could disintermediate banks, reduce bank credit, erode financial privacy, and involve the Fed in allocating credit and providing financial services to the general public, thereby threatening its political independence), <https://sgp.fas.org/crs/mise/R46850.pdf>; David Waugh, “Fed’s cryptocurrency pilot opens door for dangerous retail option,” *The Hill* (Dec. 8, 2022) (expressing same worries about a retail CBDC). For a comprehensive analysis of the potential advantages of creating private Fed accounts for individuals and nonfinancial businesses, which includes responses to many of the foregoing concerns, see John Crawford, Lev Menand & Morgan Ricks, “Fed Accounts: Digital Dollars,” 89 *George Washington Law Review* 113, 119-20, 142-50, 160-61, 167-72 (2021).

²⁰⁸ Bd. of Governors of the Fed. Res. Sys., *Money and Payments: The U.S. Dollar in the Age of Digital Transformation* 3 (Jan. 2022), <https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf>.

have either opposed or stated strong reservations about the creation of a Fed-issued retail CBDC.²⁰⁹ It therefore appears more probable, at least in the short term, that tokenized bank deposits and stablecoins will be used for making wholesale payments on digital networks that include banks and central banks.

Whether or not the Fed moves forward with a wholesale or retail CBDC, policymakers must develop a framework for regulating stablecoins and tokenized deposits that will protect the safety and stability of our banking system and avoid undue risks to our financial markets. Otherwise, stablecoins and tokenized deposits issued by nonbanks and uninsured depository institutions threaten to create a hazardous new form of shadow banking. For the reasons discussed below in Part III.C, Congress should mandate that all providers of stablecoins and tokenized deposits must be FDIC-insured banks.

III. Policymakers Should Adopt a Three-Part Plan to Protect Investors and Separate Our Banking System from the Crypto Industry.

The crypto boom and crash demonstrated that fluctuating-value cryptocurrencies and stablecoins create serious hazards for investors and pose significant risks to the stability of our financial system. Congress and federal regulators should respond to those dangers by adopting three important measures. First, the SEC should be recognized as the primary regulator

²⁰⁹ In 2022, Congressman Tom Emmer (R-MN) and Senator Ted Cruz (R-TX) introduced bills that would prohibit the Fed from issuing a retail CBDC. Press Release, “Emmer Introduces Legislation to Prevent Unilateral Fed Control of a U.S. Digital Currency” (Jan. 12, 2022), https://emmer.house.gov/press-releases?ContentRecord_id=1DC88783-A271-4F74-851D-5D234364DCEE; Press Release, “Sen. Cruz Introduces Companion Legislation to Rep. Emmer’s Bill Prohibiting Fed Unilateral Control of a U.S. Digital Currency” (Mar. 30, 2022), https://emmer.house.gov/press-releases?ContentRecord_id=F27590F0-8B13-4841-9EEF-3F60A42AB0F5. Several Republican House members subsequently argued that the Fed did not have authority to issue a CBDC without congressional approval. Claire Williams, “House Republicans challenge Fed’s ability to create CBDC without Congress,” *American Banker* (Oct. 5, 2022), 2022 WLNR 31789436. In addition, a coalition of leading bank trade associations strongly criticized proposals for a retail CBDC. Bank Pol’y Institute Press Release, “BPI and Coalition of Financial Trades Submit Comments to House Financial Services Committee on CBDCs” (May 25, 2022) (contending that “[t]he risks associated with issuing a [retail] CBDC are . . . real and likely to undermine any possible benefit that a CBDC would have”), <https://bpi.com/bpi-and-coalition-of-financial-trades-submit-statement-to-house-financial-services-committee-on-cbdc/>.

of most fluctuating-value cryptocurrencies. Second, federal bank regulators should prohibit FDIC-insured banks and their affiliates from investing and trading in fluctuating-value cryptocurrencies for their own accounts or on behalf of customers. In addition, federal bank regulators should bar FDIC-insured banks and their affiliates from providing credit, custodial, deposit, and payment services to issuers, broker-dealers, exchanges, and lending platforms dealing in fluctuating-value cryptocurrencies unless those firms (and their ultimate parent companies) are registered with and regulated by the SEC and/or the CFTC. Third, Congress should require that all issuers and distributors of stablecoins and tokenized deposits must be FDIC-insured banks. The foregoing measures would protect investors and greatly reduce the potential threats that cryptocurrencies pose to our banking system.

**A. Policymakers Should Affirm the SEC's Role as the Primary Federal
Regulator of Most Fluctuating-Value Cryptocurrencies.**

There is an ongoing policy debate over which federal agency should take the lead in regulating crypto-assets.²¹⁰ The SEC and CFTC have taken enforcement actions against issuers of fluctuating-value cryptocurrencies based on their respective authorities as regulators of markets for securities and commodities.²¹¹ In 2022, Senators Kirsten Gillibrand (D-NY), Cynthia Lummis (R-WY), Deborah Stabenow (D-MI), and John Boozman (R-AR) introduced bills that would establish the CFTC as the primary regulator of crypto-assets. Their bills would

²¹⁰ Allen Testimony, *supra* note 91, at 14-16; Kate Berry, "CFTC's Behnam urges lawmakers to build on the Stabenow-Boozman crypto bill," *American Banker* (Dec. 1, 2022), <https://www.americanbanker.com/news/cftcs-behnam-urges-lawmakers-to-build-on-stabenow-boozman-crypto-bill>; FSOC Digital Assets Report, *supra* note 1, at 86-94; Robert Kuttner, "Will Congress Let Crypto Pick Its Regulator?", *The American Prospect* (Aug. 16, 2022), <https://prospect.org/economy/will-congress-let-crypto-pick-its-regulator/>; Malathi Nayak et al., "Fight to Regulate Crypto at Crossroads as Ripple Ruling Looms," *Bloomberg* (Jan. 17, 2023), <https://www.bloomberg.com/news/articles/2023-01-17/ftx-collapse-puts-focus-on-ripple-case-for-who-should-regulate-crypto>; see generally Yuliya Guseva & Irena Hutton, "Digital Asset Innovations and Regulatory Fragmentation: The SEC versus the CFTC," *Boston College Law Review* (forthcoming) (draft of Dec. 16, 2022, available at <https://ssrn.com/abstract=4249503>).

²¹¹ FSOC Digital Assets Report, *supra* note 1, at 93-95; Guseva & Hutton, *supra* note 210, at 17-18, 21-28.

treat Bitcoin, Ethereum, and (potentially) many other fluctuating-value cryptocurrencies as digital commodities and place them under the CFTC's jurisdiction.²¹²

In contrast, SEC Chair Gary Gensler has argued that most cryptocurrencies are "securities" and are therefore subject to the SEC's regulatory jurisdiction under existing federal securities laws.²¹³ In November 2022, a federal district court in New Hampshire strengthened Gensler's position by holding that a blockchain token was a "security."²¹⁴ Several federal district courts previously held that sales of digital coins to investors were offerings of "investment contracts" that were "securities" under the Supreme Court's *Howey* test.²¹⁵ In December 2022, the SEC alleged that FTT tokens sold to investors by FTX were "securities" because (i) FTX "marketed [FTT] as an investment that would grow in value," and (ii) "FTT investors had a reasonable expectation of profiting from FTX's efforts to deploy investor funds to create a use for FTT and bring demand and value to their common enterprise."²¹⁶

Crypto firms that agree to pay interest or other compensation to investors for borrowing their crypto-assets are likely to be classified as issuers of promissory notes that are "securities"

²¹² Allen Testimony, *supra* note 91, at 15-16; Berry, *supra* note 210; Paul Kiernan, "Crypto Agenda in D.C. Faces Setbacks," *Wall Street Journal* (Nov. 15, 2022), A2 [hereinafter Kiernan, "Crypto Agenda"]; Paul Kiernan, "FTX's Collapse Pressures SEC Over Strategy," *Wall Street Journal* (Dec. 23, 2022), B8 [hereinafter Kiernan, "SEC Strategy"]; Kuttner, *supra* note 210.

²¹³ Kiernan, "SEC Strategy," *supra* note 212; Ephrat Livni & Matthew Goldstein, "Even after FTX, SEC Chair Sees No Need for New Crypto Laws," *New York Times* (Dec. 22, 2022), <https://www.nytimes.com/2022/12/22/business/gary-gensler-sec-crypto.html>.

²¹⁴ *SEC v. LBRY, Inc.*, Case No. 21-cv-260-PB (D.N.H., Nov. 7, 2022), 2022 WL 16744741, at *1, *6 (holding that a "blockchain token called LBC" was a "security" under the Securities Act of 1933 because LBRY's business model and LBRY's representations to investors caused "purchasers of LBC to expect that they too would profit from their holdings of LBC as a result of LBRY's assiduous efforts"); see also Helen Gugel et al., "SEC v. LBRY: Examining the implications of the SEC's latest victory for cryptocurrency and digital asset markets," 28 No. 18 *Westlaw Journal Securities Litigation and Regulation* 11 (Dec. 29, 2022) (stating that the LBRY decision is "consistent with the view of SEC Chairman Gary Gensler [that] the vast majority of digital asset tokens are securities"),

²¹⁵ Wilmarth, "Stablecoins," *supra* note 131, at 4-5, 17 nn.30, 33 (citing several federal district court decisions that applied the "investment contract" test established in *SEC v. W.J. Howey & Co.*, 328 U.S. 293 (1946), in determining that offerings of digital coins were offerings of "securities"); see also Guseva & Hutton, *supra* note 210, at 25-26 (discussing the "Howey test"); Phillips, *supra* note 119 (same).

²¹⁶ SEC Ellison Complaint, *supra* note 104, ¶¶ 4, 10, 75-90, 117, 120 (quotes at ¶¶ 10, 85, 90); see also *supra* notes 98-101 and accompanying text (discussing FTX's creation of and trading in FTT tokens).

under the Supreme Court's "*Reves* test."²¹⁷ In January 2023, the SEC sued Genesis and Gemini for unlawfully selling unregistered securities to retail investors through their "Gemini Earn" program.²¹⁸ The Gemini Earn program offered to pay interest rates as high as 8% to Gemini's customers who loaned their crypto-assets to Genesis.²¹⁹ The SEC alleged that the agreements made by Genesis and Gemini with investors constituted "securities" under both the *Reves* test and the *Howey* test.²²⁰

The SEC has recognized that Bitcoin and some other fluctuating-value cryptocurrencies do not meet the *Howey* test for treatment as "securities" as long as their ownership and governance structures remain decentralized and the returns received by their investors do not rely on the efforts of third-party managers or promoters.²²¹ However, many digital platforms and

²¹⁷ Wilmarth, "Stablecoins," *supra* note 131, at 4-5, 17 nn.31-32, 36 (discussing the test established in *Reves v. Ernst & Young*, 494 U.S. 56 (1990), for determining whether promissory notes are "securities"); *see also* Guseva & Hutton, *supra* note 210, at 26 (discussing the "*Reves* test" and its application to crypto lending products); Phillips, *supra* note 119 (same).

²¹⁸ SEC Press Release 2023-7, "SEC Charges Genesis and Gemini for the Unregistered Offer and Sale of Crypto Asset Securities through the Gemini Earn Lending Program" (Jan. 12, 2023), <https://www.sec.gov/news/press-release/2023-7>; Dave Michaels and Vicky Ge Huang, "SEC Sues Crypto Firms Over Loans," *Wall Street Journal* (Jan. 13, 2023), B1; Stefania Palmer & Joshua Oliver, "SEC sues Gemini and Genesis over crypto asset-lending program," *Financial Times* (Jan. 12, 2023), <https://www.ft.com/content/5a431910-6e2b-43c4-a587-6e89eac02205>.

²¹⁹ *See supra* notes 111-15 and accompanying text (describing the Gemini Earn program and its collapse).

²²⁰ SEC Genesis-Gemini Complaint, *supra* note 111, ¶¶ 44-67. In February 2023, the SEC filed an enforcement action alleging that Kraken's "staking-as-a-service program" involved the unlawful sale of unregistered securities to investors. SEC Press Release 2023-25, "Kraken to Discontinue Unregistered Offer and Sale of Crypto Asset Staking-As-A-Service Program and Pay \$30 Million to Settle SEC Charges" (Feb. 9, 2023), <https://www.sec.gov/news/press-release/2023-25>. The SEC maintained that Kraken sold unregistered "investment contracts" to investors when it pooled their crypto assets and transferred those assets to "blockchain validator[s]" while offering "advertised annual investment returns" as high as 21% to participating investors. *Id.* Kraken settled the SEC's charges by agreeing to stop offering staking services to U.S. residents and by paying \$30 million in civil penalties to the SEC. *Id.*; Scott Chipolina & Stefania Palmer, "Crypto exchange Kraken ends staking programme and pays \$30mn in SEC case," *Financial Times* (Feb. 9, 2023), <https://www.ft.com/content/77312c18-899f-4460-a858-fe5439373cb5>; Paul Kiernan, "SEC Steps Up Curbs on Crypto Industry with 'Staking' Pact," *Wall Street Journal* (Feb. 10, 2023), B11.

²²¹ In 2018, a senior SEC official stated that Bitcoin was not a "security" because its blockchain did not have a "central third party whose efforts are a key determining factor in the enterprise." As a result, Bitcoin did not constitute an "investment contract" under the *Howey* test, which "requires an investment of money in a common enterprise with an expectation of profit derived from the efforts of others." William Hinman, "Digital Asset Transactions: When *Howey* Met Gary (Plastic)" (June 14, 2018) (discussing the *Howey* test), <https://www.sec.gov/news/speech/speech-hinman-061418>. *See also* SEC Strategic Hub for Innovation & Fin. Tech., "Framework for 'Investment Contract' Analysis of Digital Assets" (April 3, 2019), <https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets> (same).

networks that claim to be “decentralized” are actually subject to centralized control by large participants.²²² Accordingly, those entities would not be exempt from regulation under federal securities laws.²²³

Federal regulators and policymakers should recognize the SEC as the primary regulator of most fluctuating-value cryptocurrencies because federal securities laws provide a far superior regime for regulating those crypto-assets.²²⁴ Federal securities laws provide significantly stronger disclosure requirements, broader antifraud provisions, and more effective safeguards for retail investors, compared with the Commodity Exchange Act and the CFTC’s regulations thereunder.²²⁵ For example, the CFTC does not have authority to regulate sales of commodities on spot markets except to prevent fraud and market manipulation.²²⁶ As a result, “spot markets for crypto-assets that are not securities provide relatively fewer protections for retail investors compared to other financial markets that have significant retail participation.”²²⁷ Similarly, the CFTC has very limited powers to regulate crypto exchanges that conduct spot trading if they do not offer futures or derivatives products to customers.²²⁸ In contrast, the SEC has a strong

²²² For discussions of the centralized control that exists within many purportedly “decentralized” platforms and networks, see Allen Testimony, *supra* note 91, at 2, 6, 9-10; Sirio Aramonte et al., “DeFi Risks and the Decentralisation Illusion” 21, 27-29 (BIS Quarterly Review, Dec. 2021), https://www.bis.org/publ/qtrpdf/r_qt2112b.pdf; FSOC Digital Assets Report, *supra* note 1, at 13, 41-44, 63-64, 72-73; Treasury Crypto-Assets Report, *supra* note 10, at 10-12.

²²³ FSOC Digital Assets Report, *supra* note 1, at 86-88, 93-94, 97-98, 116.

²²⁴ Allen Testimony, *supra* note 91, at 14-20; Phillips, *supra* note 119.

²²⁵ Allen Testimony, *supra* note 91, at 14-20; Dennis M. Kelleher, “Fact Sheet: Setting the Record Straight on Crypto, FTX and Sam Bankman-Fried, and Financial Regulators” 2-4 (Better Markets, updated Nov. 29, 2022), https://bettermarkets.org/wp-content/uploads/2022/11/Better_Markets_FTX_FactSheet.pdf; see also Kuttner, *supra* note 210 (opposing the Gillibrand-Lummis bill because it would benefit the crypto industry by “taking regulatory jurisdiction away from the stronger SEC and giving it to the weaker CFTC”),

²²⁶ FSOC Digital Assets Report, *supra* note 1, at 88-90, 112-14; Guseva & Hutton, *supra* note 210, at 22-23.

²²⁷ FSOC Digital Assets Report, *supra* note 1, at 113.

²²⁸ Guseva & Hutton, *supra* note 210, at 23-24.

investor protection mandate and broad authority to regulate securities exchanges as well as broker-dealers who conduct transactions on those exchanges.²²⁹

For most of its history, the CFTC has been a small, underfunded agency and has been heavily influenced by the industries it regulates. Consequently, the CFTC has compiled a much weaker enforcement record than the SEC.²³⁰ Between 2017 and 2021, the SEC initiated more than three times as many crypto-related enforcement actions as the CFTC.²³¹ The SEC also imposed crypto-related enforcement penalties that were significantly larger than the CFTC's penalties.²³²

²²⁹ *Id.* at 24-28; *see also* Allen Testimony, *supra* note 91, at 15-16; Paul Clark, "Common-sense regulation of crypto is needed to instill confidence," *American Banker* (Feb. 6, 2023), 2023 WLNR 4511291 (discussing the SEC's rules governing securities brokers' custody of their customers' assets); U.S. Sec. & Exch. Comm'n, *Fiscal Year 2022 Agency Financial Report* 6 (Nov. 10, 2022) (describing the SEC's statutory authority and responsibility for "overseeing the nation's securities markets and certain primary participants, including broker-dealers, investment companies, investment advisers, clearing agencies, transfer agents, credit rating agencies, and securities exchanges"), <https://www.sec.gov/files/sec-2022-agency-financial-report.pdf>.

²³⁰ Douglas S. Eakeley & Yuliya Guseva, with Leo Choi & Katarina Gonzalez, "Crypto Enforcement Around the World," 94 *Southern California Law Review Postscript* 99, 117-27 (2021) (finding that the SEC has been "an exceptionally active enforcer in the digital-asset market" (*id.* at 117) and filed more than three times as many crypto-related enforcement actions between 2017 and 2020 as the CFTC did); Derek Fischer, "Dodd-Frank's Failure to Address CFTC Oversight of Self-Regulatory Organizations," 115 *Columbia Law Review* 69, 70-71, 84-86, 92-97 (2015) (stating that the CFTC's "regulation of the futures industry has been more laissez faire," "more hands off," and "consistently deferential," compared with the SEC's stronger regulation of the securities industry, due in part to "political and market pressure" on the CFTC as well as the CFTC's "resource crunch"); Kelleher, *supra* note 224 (stating that the SEC has a much stronger crypto-related enforcement record compared to the CFTC); Dennis Kelleher, "FTX's Penetration of the CFTC by a Revolving Door Hiring Spree of Former CFTC Officials" (Better Markets, Dec. 26, 2022) (contending that the CFTC is "the weakest, least funded, easiest to penetrate, and most capturable regulator," and stating that CFTC Chair Rostin Behnam acted as "a key ally" of FTX, Alameda, and Sam Bankman-Fried, while FTX and Alameda hired numerous former CFTC officials "to spearhead their CFTC influence and lobbying campaign"), <https://bettermarkets.org/newsroom/ftx-penetration-of-the-cftc-by-a-revolving-door-hiring-spree-of-former-cftc-officials/>; Kuttner, *supra* note 209 (describing the CFTC as a "relatively weak and understaffed" agency that has "no proven capacity to regulate the kind of retail transactions and small-investor abuses that are typical of crypto"); Robin Wigglesworth, "We need to talk about the CFTC," *Financial Times* (Dec. 15, 2022) (arguing that the CFTC is "by a mile the most compromised regulatory agency when it comes to crypto in general, and FTX specifically," and criticizing the close ties between multiple former CFTC officials and the crypto industry), <https://www.ft.com/content/066a5e46-380e-4f51-b02e-4276d9a869a1>; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 186-87, 189-92 (describing the successful campaign of the derivatives industry and its political allies that blocked the CFTC's attempt to regulate over-the-counter derivatives in 1998).

²³¹ Guseva & Hutton, *supra* note 210, at 33-38 (stating that the SEC brought 89 crypto-related enforcement actions between April 2017 and November 2021, compared with 27 enforcement actions filed by the CFTC).

²³² Eakeley & Guseva, *supra* note 230, at 124-27 (stating that the SEC's crypto-related enforcement penalties between 2017 and 2020 were "much more significant, with disgorgement being noticeably higher," compared to the CFTC's penalties).

In 2021 and 2022, FTX and other crypto firms conducted a massive lobbying campaign in support of proposed Senate bills that would have designated the CFTC as the primary regulator of crypto-assets.²³³ FTX and other crypto firms viewed the CFTC as a “friendlier regulator” with a “light-touch” approach.²³⁴ The crypto industry’s vigorous and heavily-funded support of the CFTC, the CFTC’s lack of a strong investor protection mandate, its relatively weak enforcement record, and its limited experience in regulating retail investments provide persuasive reasons for recognizing the SEC as the primary regulator of most fluctuating-value cryptocurrencies.²³⁵ Congress must provide the SEC with sufficient resources to carry out that responsibility.²³⁶

²³³ Kelleher, *supra* note 225; Kelleher, *supra* note 230; Kiernan, “Crypto Agenda,” *supra* note 212; Kuttner, *supra* note 210; *see also* Jesse Hamilton et al., “Congress’ FTX Problem: 1 in 3 Members Got Cash from Crypto Exchange’s Bosses,” *CoinDesk* (Jan. 17, 2023) (reporting that more than one-third of members of Congress received political contributions from Sam Bankman-Fried and other senior executives of FTX and its affiliates during 2021 and 2022, and the total amount of those contributions topped \$70 million), <https://www.coindesk.com/policy/2023/01/17/congress-ftx-problem-1-in-3-members-got-cash-from-crypto-exchanges-bosses/>; Kenneth Vogel et al., “‘It Was Relentless’: Inside a Crypto Exchange’s Bid for Influence,” *New York Times* (Nov. 23, 2022), A1 (describing the extensive lobbying campaign conducted by FTX during 2021 and 2022); *supra* note 212 and accompanying text (discussing the bills introduced by Senators Gillibrand, Lummis, Stabenow, and Boozman).

²³⁴ Paul Kiernan, “FTX’s Fall Halts Push for Light Oversight,” *Wall Street Journal* (Nov. 28, 2022), A1.

²³⁵ Allen Testimony, *supra* note 91, at 15-16; Dennis M. Kelleher, “No One Should Be Pushing FTX Endorsed Legislation Putting the Underfunded CFTC in Charge of the Crypto Industry Before Knowing the Facts” (Nov. 21, 2022), <https://bettermarkets.org/newsroom/no-one-should-be-pushing-ftx-endorsed-legislation-putting-the-underfunded-cftc-in-charge-of-the-crypto-industry-before-knowing-the-facts/>; *see also* authorities cited *supra* in notes 230 and 233.

²³⁶ Joel Seligman has proposed that Congress should create a “new standalone [federal] agency” to regulate crypto-assets. Joel Seligman, “The Rise and Fall of Cryptocurrency: The Three Paths Forward,” 19 *N.Y.U. Journal of Law & Business* 93, 125 (2022). He contends that a single federal agency with a “focus” on crypto-assets would be preferable to our current “fragmented” regulatory structure. *Id.* at 127.

I agree with Professor Seligman that the divided jurisdictions of the SEC and CFTC create significant challenges in addressing the risks posed by fluctuating-value cryptocurrencies. I therefore strongly support merging the SEC and CFTC to create a unified federal agency with comprehensive authority over financial markets (including crypto markets) for nonbank financial products and services. Such a unified agency would be comparable to the U.K.’s Financial Conduct Authority (FCA). *See* Financial Conduct Authority, *Annual Report and Accounts 2021/22* (19 July 2022), at 14-15 (explaining that the FCA “regulate[s] the conduct of around 50,000 financial services firms in the UK” to “protect consumers, support competition in financial services and maintain market integrity”), <https://www.fca.org.uk/publication/annual-reports/2021-22.pdf>. Unfortunately, past proposals to merge the SEC and CFTC have failed, due in large part to political rivalries between Congress’ financial services committees (which have jurisdiction over the SEC) and Congress’ agricultural committees (which have jurisdiction over the CFTC). Mark Schoeff Jr., “Proposal to merge SEC, CFTC will go belly up: Washington insiders,” *InvestmentNews*

**B. Federal Regulators Should Prohibit FDIC-Insured Banks and Their
Affiliates from Investing and Trading in Fluctuating-Value Cryptocurrencies
and from Providing Financial Services to Crypto Firms That Are Not
Regulated by the SEC or the CFTC.**

The crypto crash has demonstrated that fluctuating-value cryptocurrencies are extremely risky, highly volatile, and closely correlated assets. Fluctuating-value cryptocurrencies have not performed any lawful economic functions other than speculative investing and trading. Cryptocurrencies with fluctuating values boomed together during a period of unusually low interest rates and abundant liquidity, which encouraged investors to buy high-risk assets that promised exceptionally high yields. The values of the same cryptocurrencies crashed together when central banks increased interest rates significantly and sharply reduced the growth of monetary aggregates.²³⁷

As was true during other speculative bubbles, the boom and crash in fluctuating-value cryptocurrencies was accompanied by large-scale fraud, conflicts of interest, market manipulation, self-dealing, misappropriation of customer funds, and other abuses.²³⁸ Criminals

(Dec. 28, 2012), <https://www.investmentnews.com/proposal-to-merge-sec-cftc-will-go-belly-up-washington-insiders-48440>.

Unlike Professor Seligman, I do not support the creation of a specialized federal agency for crypto-assets. Fluctuating-value cryptocurrencies do not warrant a separate regulator because they are not fundamentally different from more traditional investments like securities, commodities, and derivatives. A specialized crypto regulator would be more vulnerable to capture by the crypto industry, as indicated by the far-reaching lobbying campaign that the crypto industry conducted during 2021 and 2022. See *supra* notes 233-35 and accompanying text. The creation of a specialized crypto regulator would also encourage promoters of other novel types of investments to push for the establishment of similar specialized agencies, thereby weakening the existing authorities of the SEC and CFTC.

²³⁷ See *supra* Parts I.A and I.C; see also Todd H. Baker, “Crypto Is Money Without a Purpose,” *Wall Street Journal* (Dec. 20, 2022), A17 (“Crypto trading can’t serve the productive purpose that defines finance. It performs no intermediation function to help expand the economy or improve society.”); Fabio Panetta, “Cavet emptor does not apply to crypto,” *Financial Times* (Jan. 4, 2023) (“[U]nbacked crypto assets” are “speculative assets” and “do not perform any socially or economically useful function.”), <https://www.ft.com/content/95249051-f9f0-494d-9fa0-c7cca8eda609>; see also authorities cited *supra* in notes 29-30 (reaching similar conclusions).

²³⁸ See *supra* Part I.C.2.

have frequently used fluctuating-value cryptocurrencies for illegal purposes, including extortion, money laundering, tax evasion, avoidance of sanctions against terrorist financing, and illegal gambling.²³⁹ Several FDIC-insured banks that provided financial services to crypto firms, including cryptocurrency issuers, exchanges, and lending platforms, suffered substantial losses and/or incurred significant legal, operational, and reputational risks during the crypto crash.²⁴⁰

Based on the foregoing evidence, federal bank regulators should determine that investing and trading in fluctuating-value cryptocurrencies, either as principal or as agent for others, are unsafe and unsound banking practices that are impermissible for FDIC-insured banks and their affiliates.²⁴¹ Investing and trading in floating-value cryptocurrencies—including the acceptance of cryptocurrencies as collateral for loans and derivatives transactions—are highly speculative activities that are functionally equivalent to gambling.²⁴² Even if such gambling is viewed as lawful, it has no place in the federally-insured and taxpayer-backed banking system. The financial, legal, operational, and reputational risks of investing and trading in floating-value cryptocurrencies are too great to allow FDIC-insured banks and their affiliates to engage in such activities, either as principals or agents.²⁴³

²³⁹ See *supra* note 34 and accompanying text.

²⁴⁰ See *supra* notes 149-60, 168-77 and accompanying text (discussing crypto-related problems at FDIC-insured banks); Reiners & Gazi, *supra* note 141, at 3-4 (same).

²⁴¹ See *Dodge v. Comptroller of the Currency*, 744 F.3d 148, 156 (D.C. Cir. 2014) (holding that an “unsafe and unsound” banking practice is one that threatens the “financial integrity” of a bank or otherwise poses “a reasonably foreseeable undue risk to the institution”) (internal quotation marks and citations omitted); Richard S. Carnell, Jonathan R. Macey, Geoffrey P. Miller & Peter Conti-Brown, *The Law of Financial Institutions* 337-44 (7th ed. 2021) (discussing the authority of federal bank regulators, under 12 U.S.C. § 1818(b), to issue cease-and-desist orders prohibiting banks, bank holding companies, and their affiliates from engaging in unsafe and unsound banking practices); Christopher K. Odinet, “Predatory Fintech and the Politics of Banking,” 106 *Iowa Law Review* 1739, 1790-91 (2021) (same).

²⁴² Allen Testimony, *supra* note 91, at 14; Todd H. Baker, “Let’s Stop Treating Crypto Trading as If It Were Finance,” *The CLS Blue Sky Blog* (Nov. 29, 2022) (“The best analogy to crypto trading is probably the relatively new phenomenon of professional e-sports (electronic sports) gambling.”), available at <https://clsbluesky.law.columbia.edu/2022/11/29/lets-stop-treating-crypto-as-if-it-werefinance/>; Panetta, *supra* note 237 (“[R]egulation should acknowledge the speculative nature of unbacked cryptos and treat them as gambling activities.”).

²⁴³ See Allen Testimony, *supra* note 91, at 11-12; Claire Williams, “‘A casino in your pocket’: is crypto trading just gambling?”, *American Banker* (Jan. 19, 2023) (stating that “the idea that crypto trading and gambling are strikingly

The Basel Committee’s prudential standards for crypto-assets held by banks classify fluctuating-value cryptocurrencies as “Group 2” crypto-assets and apply enhanced capital and liquidity requirements to those assets.²⁴⁴ The Basel Committee’s standards also establish exposure limits for Group 2 crypto-assets held by banks. Those exposure limits provide that (i) a bank’s total exposures to Group 2 crypto-assets “generally” should not exceed 1% of its Tier 1 capital, and (ii) the bank will be subject to significantly higher capital charges if its total exposures to those assets exceed 2% of its Tier 1 capital.²⁴⁵ The Basel Committee stated that its exposure limits are intended “to safeguard the banking sector against the potentially significant risks posed by Group 2 cryptoassets.”²⁴⁶

In January 2023, federal bank regulators took several actions indicating their heightened concerns about the risks posed by crypto-assets. On January 3, the FDIC, Fed, and OCC issued a joint statement describing “a number of key risks associated with crypto-assets and crypto-asset sector participants” and emphasizing the importance of not allowing those risks to “migrate to the banking system.”²⁴⁷ The agencies warned that “issuing or holding as principal crypto-assets

similar” supports the view that federal bank regulators “should insulate the banking system from the volatility of the crypto markets”), 2023 WLNR 2105641; *cf.* Odinet, *supra* note 241, at 1790-91 (discussing the “reputational harm” that FDIC-insured banks have incurred by entering into partnerships with predatory “fintech” lenders).

²⁴⁴ Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 1-2, 6, 17-28; Cravath, *supra* note 13, at 2, 6-7; *see also* *supra* note 13 and accompanying text (discussing the Basel Committee’s distinction between “Group 1” and “Group 2” crypto-assets). Group 2 crypto-assets that meet specified “hedging recognition criteria” are classified as “Group 2a” crypto-assets and are subject to somewhat higher capital requirements than traditional banking assets. Group 2 crypto-assets that do not meet those hedging criteria are classified as “Group 2b” crypto-assets and are subject to a much higher 1250% risk weight. That 1250% risk weight “will ensure that banks are required to hold minimum risk-based capital at least equal in value to their Group 2b cryptoasset exposures.” Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 1, 17-21; Cravath, *supra* note 13, at 5-6; Cravath, “Basel Committee Issues Second Consultation on Prudential Framework for Cryptoasset Exposures” 5-7 (July 11, 2022), <https://www.cravath.com/a/web/iwDOWnX7LxJtmVicBMp3d/4j2RHd/basel-committee-issues-second-consultation-on-prudential-framework-for-cryptoasset-exposures.pdf>.

²⁴⁵ Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 1-3, 21, 28 (quote) (explaining that, if a bank’s total exposures to Group 2 crypto-assets exceed 2% of its Tier 1 capital, all of its Group 2 exposures will be subject to the 1250% risk weight); Cravath, *supra* note 13, at 2, 6, 7-8 (same).

²⁴⁶ Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 4.

²⁴⁷ Bd. of Governors of the Fed. Res. Sys., Fed. Deposit Ins. Corp., and Office of the Comptroller of the Currency, “Joint Statement on Crypto-Asset Risks to Banking Organizations” 1 (Jan. 3, 2023), <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20230103a1.pdf>.

that are issued, stored, or transferred on an open, public, and/or decentralized network, or similar system is highly likely to be inconsistent with safe and sound banking practices.”²⁴⁸ The agencies also expressed “significant safety and soundness concerns with business models that are concentrated in crypto-asset-related activities or have concentrated exposures to the crypto-asset sector.”²⁴⁹ The agencies’ joint statement did not prohibit banks from providing banking services to crypto firms.²⁵⁰ The agencies explained that they would “continue to closely monitor crypto-asset-related exposures of banking organizations” and “assess whether or how current and proposed crypto-asset-related activities by banking organizations can be conducted” lawfully in a safe and sound manner.²⁵¹

On January 27, the Fed issued a policy statement clarifying that a state member bank (whether FDIC-insured or uninsured) must obtain the Fed’s approval before it engages in a crypto-related activity that has not been previously approved by the OCC for national banks or by the FDIC for FDIC-insured state banks.²⁵² The Fed’s policy statement also establishes a presumption that the Fed will not approve any such activity unless there is a “clear and compelling rationale” for permitting that activity.²⁵³ In addition, the Fed will “presumptively

²⁴⁸ *Id.* at 2.

²⁴⁹ *Id.*

²⁵⁰ See *id.* (stating that federally-regulated banks “are neither prohibited nor discouraged from providing banking services to customers of any specific class or type, as permitted by law or regulation”).

²⁵¹ *Id.*

²⁵² Bd. of Governors of Fed. Res. Sys., “Policy Statement on Section 9(13) of the Federal Reserve Act,” 4-5 (Jan. 27, 2023) [hereinafter Fed Crypto Policy Statement], <https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20230127a2.pdf>. The Fed issued its policy statement pursuant to 12 U.S.C. § 330, which authorizes the Fed to “limit the activities of State member banks and subsidiaries of State member banks in a manner consistent with [12 U.S.C.] § 1831a.” Under Section 1831a, an FDIC-insured state bank may not engage as principal in an activity that is impermissible for national banks unless the FDIC determines that “the activity would pose no significant risk to the Deposit Insurance Fund” and the state bank is in compliance with applicable capital requirements. 12 U.S.C. § 1831a(a)(1). The FDIC has adopted regulations (12 C.F.R. Part 362) implementing its authority under Section 1831a, but those regulations do not address crypto-related activities. The Fed published its policy statement in the Federal Register at 88 Fed. Reg. 7848 (Feb. 7, 2023).

²⁵³ Fed Crypto Policy Statement, *supra* note 252, at 4-5, 88 Fed. Reg. at 7849.

prohibit state member banks” from investing or trading as principals in “most crypto-assets, including bitcoin and ether,” because such activities are not permissible for national banks.²⁵⁴

The Fed’s policy statement allows state member banks to provide custodial and payment services and to issue tokenized deposits (and presumably stablecoins) that comply with the OCC’s interpretive letters addressing crypto-related activities of national banks.²⁵⁵ However, the Fed’s policy statement warns that issuing tokenized deposits or stablecoins on “open, public, and/or decentralized networks, or similar systems is highly likely to be inconsistent with safe and sound banking practices” because of “operational, cybersecurity, and run risks” associated with those types of networks.²⁵⁶ That warning indicates that the Fed will not allow state member banks to issue tokenized bank deposits or bank stablecoins on networks other than permissioned distributed ledgers that are subject to effective regulatory oversight.

Based on its policy statement, the Fed is very unlikely to allow state member banks (whether FDIC-insured or uninsured) to engage in crypto-related activities that have not received previous approvals from the OCC or the FDIC.²⁵⁷ On the same day the Fed issued its policy statement, the Fed also denied the application of Custodia Bank, an uninsured Wyoming SPDL, to become a state member bank. The Fed stated that Custodia Bank’s “novel business model and proposed focus on crypto-assets presented significant safety and soundness risks,” and the bank’s

²⁵⁴ *Id.* at 8-9, 88 Fed. Reg. at 7850.

²⁵⁵ *Id.* at 8-10, 88 Fed. Reg. at 7850; *see also supra* notes 123-26 and accompanying text (discussing the OCC’s interpretive letters); *see also* Davis Polk, “Insights: Crypto’s integration into the traditional financial system is under more pressure” (Feb. 2, 2023) (analyzing the Fed’s policy statement), <https://www.davispolk.com/insights/client-update/cryptos-integration-traditional-financial-system-under-more-pressure>.

²⁵⁶ Fed Crypto Policy Statement, *supra* note 252, at 10, 88 Fed. Reg. 7850.

²⁵⁷ *See* Davis Polk, *supra* note 255 (explaining that the Fed’s policy statement “has effectively established a strong presumption against approval” of crypto-related activities that have not been previously authorized by the OCC for national banks or by the FDIC for FDIC-insured banks).

“risk management framework was insufficient to address concerns” related to those risks.²⁵⁸

The foregoing pronouncements of the Basel Committee and federal banking regulators recognize the very significant risks that fluctuating-value cryptocurrencies and crypto firms pose to our banking system. However, the Basel Committee’s standards would permit banks to retain meaningful exposures to fluctuating-value cryptocurrencies and would not impose specific limits on other types of bank exposures to crypto-related firms.²⁵⁹ Prior to January 2023, the OCC, the Fed, and the FDIC allowed national banks and FDIC-insured state banks to provide custodial, deposit, and payment services to crypto firms and (in at least two cases) to provide crypto trading services to their customers.²⁶⁰ The agencies’ most recent policy statements are inadequate because they allow banks and crypto firms to maintain significant relationships, thereby encouraging both groups to lobby for permission to expand those relationships. As Dennis Kelleher correctly warned, “crypto companies have been relentless in attempting to penetrate the core of the banking business.”²⁶¹

In view of the disastrous record of fluctuating-value cryptocurrencies and the significant problems they have created for several banks, federal bank regulators should completely ban FDIC-insured banks from investing and trading in such assets, either as principals or as agents for others.²⁶² In addition, federal bank regulators should determine that it is an unsafe, unsound,

²⁵⁸ Bd. of Governors of Fed. Res. Sys., Press Release, “Federal Reserve Board announces denial of application by Custodia Bank, Inc. to become a member of the Federal Reserve System” (Jan. 27, 2023), <https://www.federalreserve.gov/newsevents/pressreleases/orders20230127a.htm>. The Fed stated that Custodia Bank intended to engage in “novel and untested crypto activities that include issuing a crypto asset on open, public and/or decentralized networks.” *Id.*; see also *supra* notes 136-37, *infra* note 312 and accompanying text (discussing Custodia Bank and its crypto-focused business plan).

²⁵⁹ Reiners & Gazi, *supra* note 141, at 14.

²⁶⁰ See *supra* notes 123-29, 161-77 (analyzing the OCC’s, Fed’s, and FDIC’s previous actions concerning the crypto-related activities of banks).

²⁶¹ Claire Williams, “The unlikely crypto companies using the Trump-era ‘hot money’ rule,” *American Banker* (Feb. 6, 2023), 2023 WLNR 4522341 (quoting Mr. Kelleher).

²⁶² See *supra* notes 241-43 and accompanying text (discussing the agencies’ legal authority to impose such a ban).

and prohibited banking practice for FDIC-insured banks and their affiliates to provide credit, custodial, deposit, payment, or other financial services to cryptocurrency issuers, brokers, exchanges, or lending platforms unless those entities (and their ultimate parent companies) are registered with and regulated by the SEC and/or the CFTC.²⁶³ Before an FDIC-insured bank provides financial services to a crypto firm that is registered with only one of those agencies, the bank should provide its primary federal regulator with an opinion from qualified U.S. legal counsel affirming that the crypto firm is not subject to the other agency's regulatory jurisdiction.

Many crypto ventures have used various strategies to evade compliance with applicable federal securities and commodities laws, including the creation of ostensibly “decentralized” structures and the use of subsidiaries and offshore locations to shield their parent companies from effective regulatory oversight.²⁶⁴ In view of the grave risks posed by unregulated and poorly-regulated crypto enterprises, federal bank regulators should declare that it is an unsafe, unsound, and prohibited banking practice for FDIC-insured banks and their affiliates to provide financial services to crypto firms unless they (and their ultimate parent companies) are registered and regulated pursuant to U.S. laws governing securities, commodities, futures, and derivatives.

C. Congress Should Mandate That All Providers of Stablecoins and Tokenized Deposits Must Be FDIC-Insured Banks.

1. Providers of Stablecoins and Tokenized Deposits Should Be Subject to the Regulatory Safeguards Governing FDIC-Insured Banks.

I have previously argued that Congress should require all issuers and distributors of

²⁶³ See *supra* note 241 and accompanying text (describing the federal bank regulators' power to prohibit unsafe and unsound banking practices).

²⁶⁴ See Allen Testimony, *supra* note 91, at 2, 15-20; FSOC Digital Assets Report, *supra* note 1, at 5, 13, 15, 56-57, 86-87, 92-95, 97, 108-09, 114-16; Kelleher, *supra* note 225; see also *supra* notes 35-38, *infra* notes 281-82 and accompanying text (discussing Binance's and Tether's efforts to evade regulatory oversight).

stablecoins to be FDIC-insured banks.²⁶⁵ That requirement would ensure that stablecoin providers and their parent holding companies must comply with the regulatory safeguards established by the Federal Deposit Insurance Act (FDI Act)²⁶⁶ and the Bank Holding Company Act (BHC Act).²⁶⁷ Those safeguards are urgently needed because stablecoins are functionally equivalent to deposits. As discussed below, it would be a grave error to allow nonbanks to issue or distribute stablecoins that function as shadow deposits outside our regulated banking system.

The Basel Committee’s prudential standards for crypto-assets provide that “Group 1” crypto-assets include tokenized deposits (digital representations of traditional bank deposits) and stablecoins that satisfy prescribed Group 1 standards.²⁶⁸ The Basel Committee’s Group 1 standards require stablecoins to have “effective stabilisation mechanisms,” including “reserve assets [that] are sufficient to enable the cryptoassets to be redeemable at all times for the peg[ged] value.”²⁶⁹ Tokenized deposits and qualifying “Group 1” stablecoins are exempted from the enhanced capital and liquidity requirements and exposure limits that apply to riskier Group 2 crypto-assets.²⁷⁰

Circle’s USDC stablecoin—currently the world’s second-largest stablecoin²⁷¹—appears to satisfy the Basel Committee’s “Group 1” standards. Circle represents that its USDC stablecoin has “[s]tability you can trust” because “every digital dollar of USDC on the internet is 100% backed by cash and short-dated U.S. treasuries, so that it’s always redeemable 1:1 for U.S.

²⁶⁵ Wilmarth, “Stablecoins,” *supra* note 131, at 2, 9-13; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 11-13.

²⁶⁶ 12 U.S.C. §§ 1811-1835a.

²⁶⁷ 12 U.S.C. §§ 1841-1852.

²⁶⁸ Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 1, 2, 6-10.

²⁶⁹ *Id.* at 6-10 (quotes at 6, 8).

²⁷⁰ See *supra* note 13 and accompanying text (discussing the Basel Committee’s distinction between “Group 1” and “Group 2” crypto-assets), *supra* notes 244-46 and accompanying text (describing the heightened requirements that apply to “Group 2” crypto-assets).

²⁷¹ See *supra* notes 48-49 and accompanying text (discussing Circle’s USDC stablecoin).

dollars.”²⁷² Circle’s customer agreement provides that its customers have the “right to redeem” their USDC stablecoins “for an equivalent amount of USD[ollars]” held in their accounts with Circle.²⁷³

Circle’s USDC stablecoins fall within the widely-accepted functional definition of “deposits” because Circle issues its stablecoins in exchange for its customers’ funds and promises to return the same amount of funds to its customers when they redeem their stablecoins.²⁷⁴ Circle’s financial statements designate the funds Circle receives in exchange for its stablecoins as “Deposits from customers and stablecoin holders.”²⁷⁵ Circle acknowledges that its “liabilities” for those “Deposits”—which exceeded \$47 billion in September 2022—are not covered by FDIC deposit insurance.²⁷⁶

Circle and other issuers of Group 1 stablecoins should be required to comply within the legal regime governing FDIC-insured banks. Equivalent regulatory treatment for stablecoins and

²⁷² Circle, “USD Coin: Crypto that’s held to a higher standard,” <https://www.circle.com/en/usdc> (visited Jan. 31, 2023); see also *id.* (stating that Circle’s USDC stablecoin is “a trusted, widely accepted, and highly liquid digital dollar” that has “global reach” and is “available whenever and wherever you need it”).

²⁷³ Circle, “Legal & Privacy: USDC Terms” (updated Dec. 20, 2022), ¶ 2 (final paragraph), <https://www.circle.com/en/legal/usdc-terms> (visited Jan. 31, 2023).

²⁷⁴ See *Moneygram Int’l, Inc. v. Commissioner*, 999 F.3d 269, 274 (5th Cir. 2021) (defining “deposits” as “funds that customers place in a bank for the purpose of safekeeping that are repayable to the depositor on demand or at a fixed time”) (internal quotation marks and citation omitted); *United States v. Jenkins*, 943 F.2d 167, 174 (2d Cir.) (defining “deposit” as “a sum of money placed in the custody of a bank, to be withdrawn at the will of the depositor”), *cert. denied*, 502 U.S. 1014 (1991); see also *In re Thaxton Group, Inc., Securities Litigation*, C/A No. 8:04-2612-GRA, 2006 WL 8462530, at *1–*3, *9–*14 (D.S.C., Mar. 20, 2006) (holding that the defendant (a nonbank finance company) accepted “deposits” by selling demand promissory notes to investors, thereby “taking money from investors in return for a promise to return the funds on demand,” and explaining that the “notes were designed to imitate bank certificates of deposit and money market accounts in order to attract bank depositors to the note program”); Gary B. Gorton & Jeffrey Y. Zhang, “Taming Wildcat Stablecoins,” 90 *University of Chicago Law Review* (forthcoming) (draft of Sept. 30, 2021, available at <https://ssrn.com/abstract=3888752>), at 6-16 (discussing the functional similarities between stablecoins and bank deposits, and stating that “issuers of stablecoins are essentially unregulated banks,” *id.* at 6); Wilmarth, “Stablecoins,” *supra* note 131, at 2-3, 7-9 (stating that many stablecoins are “deposits” under the generally-accepted functional meaning of that term, and discussing Facebook’s “Novi” pilot project, which offered customers the ability to purchase stablecoins for a fixed price of \$1 per coin and promised to redeem those stablecoins for the same price).

²⁷⁵ Circle S-4 Amendment No. 7, *supra* note 193, at 125, 269, 271, 272, 274, 277, F-2, F-17, F-50, F-63.

²⁷⁶ *Id.* at 277; see also *id.* at 251 (stating that the amount of USDC stablecoins in circulation on Sept. 30, 2022 was \$47.3 billion).

deposits is mandated by FSOC's "same activity, same risk, same regulatory treatment" principle, which FSOC affirmed in its report evaluating the financial stability risks of digital assets.²⁷⁷ FSOC's report recognized that, without equivalent regulatory treatment, stablecoin providers would engage in "regulatory arbitrage" by offering deposit services without complying with the same requirements that FDIC-insured banks must satisfy.²⁷⁸

So-called "stablecoins" that do not qualify for classification as Group 1 crypto-assets under the Basel Committee's standards should not be treated as stablecoins. Such crypto-assets do not have "effective stabilization mechanisms," including adequate financial resources and sufficient legal, operational, and regulatory protections to ensure their timely redemption at their pegged value.²⁷⁹ Any non-qualified "stablecoins" should be classified as higher-risk Group 2 crypto-assets under the Basel Committee's standards.²⁸⁰

Federal agencies (including the SEC and the CFTC) should prohibit all persons from advertising or representing that any Group 2 crypto-asset is a "stablecoin" because such a representation would be deceptive and manipulative. For example, it is highly doubtful whether Tether—the largest stablecoin—would qualify as a Group 1 stablecoin in view of its offshore location, its lack of strong government oversight, its failure to maintain its \$1 peg in May and November 2022, its past regulatory problems, and continuing questions about the adequacy of its financial disclosures and reserves.²⁸¹ Similarly, Binance has avoided effective regulatory

²⁷⁷ FSOC Digital Assets Report, *supra* note 1, at 111.

²⁷⁸ *Id.* at 75, 114-16.

²⁷⁹ Basel Committee Cryptoasset Exposure Standards, *supra* note 13, at 1-3, 6-10 (quote at 6).

²⁸⁰ *Id.* at 1-2, 6.

²⁸¹ See *supra* notes 52, 84 and accompanying text (discussing Tether's temporary failure to maintain its \$1 peg in May and November 2022); Foldy et al., *supra* note 49 (same, and describing Tether's incorporation in the British Virgin Islands, its past regulatory problems, and continuing questions about the adequacy of its financial disclosures and reserves); FSOC Digital Assets Report, *supra* note 1, at 46-47, 51-52, 94-96, 104 (same); Wilmarth, "Treasury Comment Letter," *supra* note 21, at 2, 6, 14 (same).

oversight, has not published publicly audited financial statements, and did not hold sufficient reserves to maintain the \$1 peg for one of its stablecoins during 2020 and 2021.²⁸²

Congress should mandate that all issuers and distributors of Group 1 stablecoins must be FDIC-insured banks because the regulatory regime governing those banks provides crucial protections for our banking and financial systems, our economy, and the general public.²⁸³ The regulatory safeguards for FDIC-insured banks include: (a) deposit insurance coverage, funded by risk-based deposit insurance premiums; (b) periodic reporting and examination requirements; (b) the supervisory and enforcement powers of federal banking agencies; (c) special procedures for resolving failed and failing banks; (d) risk-based capital requirements and other safety and soundness standards; (e) prompt corrective action remedies; (f) competition standards governing bank mergers; (f) prohibitions against abusive tying practices; (f) “source of strength” obligations for parent companies; (g) community reinvestment standards; and (h) disclosure requirements and expedited funds availability rules for deposits.²⁸⁴ The BHC Act requires all companies that own or control FDIC-insured banks to satisfy additional safeguards, including (i) competition standards governing holding company acquisitions of banks; (b) limitations on permissible nonbanking activities; (c) the Fed’s supervisory and enforcement powers; (d) risk-

²⁸² See *supra* notes 35-38, 51 and accompanying text (discussing Binance’s largely unregulated and unaudited status and persistent shortfalls in Binance’s reserves for one of its stablecoins during 2020 and 2021).

²⁸³ Congress could enact such a mandate by amending Section 21(a) of the Glass-Steagall Act, 12 U.S.C. § 378(a). Section 21(a) currently prohibits securities firms and other persons that are not chartered or regulated as depository institutions from engaging in “the business of receiving deposits subject to check or to repayment upon presentation of a passbook, certificate of deposit, or other evidence of debt, or upon request of the depositor.” 12 U.S.C. § 378(a)(1), (2); see also Wilmarth, “Stablecoins,” *supra* note 131, at 7-11 (discussing Section 21(a)). I have previously proposed that Congress should amend and strengthen Section 21(a) by (i) defining the term “deposits” to “include all short-term financial instruments that are payable in practice at par (100% of the amount invested) either on demand or within ninety days of issuance,” and (ii) requiring all such deposits to be issued by FDIC-insured banks. Wilmarth, “Stablecoins,” *supra* note 131, at 7-13; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 242-43 (quote).

²⁸⁴ Wilmarth, “Stablecoins,” *supra* note 131, at 11; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 12.

based capital requirements; and (d) provisions protecting the privacy of customer financial information.²⁸⁵

With limited exceptions, Section 4 of the BHC Act prohibits companies that own or control FDIC-insured banks from engaging in commercial activities or owning or controlling commercial ventures.²⁸⁶ Section 4's prohibition reflects the BHC Act's longstanding policy of separating banking and commerce. That policy is designed to prevent the formation of large banking-and-commercial conglomerates that would pose significant dangers to our financial system, economy, and society. Those dangers include (1) excessive concentrations of economic and financial power and political influence, (2) conflicts of interest that would undermine the ability of banks to act as objective providers of credit and other financial services, and (3) risks of systemic contagion between the financial and commercial sectors of our economy that could inflict huge losses on the federal "safety net" for FDIC-insured banks.²⁸⁷ The federal safety net for banks includes the Deposit Insurance Fund, the Fed's discount window and emergency lending programs for banks, the Fed's payments system guarantees (including guarantees for interbank payments made on Fedwire), and the federal government's explicit and implicit backstops for "too big to fail" banking organizations.²⁸⁸

A congressional mandate requiring all stablecoin providers to be FDIC-insured banks would provide crucial protections for our banking and financial systems as well as nonfinancial

²⁸⁵ *Id.*

²⁸⁶ 12 U.S.C. § 1843(a)(2), (c), (k), (n) & (o); see Barr, Jackson & Tahyar, *supra* note 127, at 723-25, 729-32, 740-43 (explaining that the BHC Act generally prohibits bank holding companies from engaging in commercial activities or owning or controlling commercial enterprises, and describing the limited exemptions to that prohibition); Arthur E. Wilmarth, Jr., "The OCC's and FDIC's Attempts to Confer Banking Privileges on Nonbanks and Commercial Firms Violate Federal Laws and Are Contrary to Public Policy," 39 *Banking & Financial Services Policy Report* No. 10 (Oct. 2020), at 6-11, 21 nn.55-73 (same) [hereinafter Wilmarth, "Banking Privileges"], available at <https://ssrn.com/abstract=3750964>.

²⁸⁷ Wilmarth, "Banking Privileges," *supra* note 286, at 6-11; Wilmarth, "Stablecoins," *supra* note 131, at 11-12.

²⁸⁸ Wilmarth, "Banking Privileges," *supra* note 286, at 1, 6, 7, 9; Wilmarth, "Stablecoins," *supra* note 131, at 11-12.

businesses and consumers. Among other benefits, that mandate would prevent Big Tech firms and other commercial enterprises from issuing or distributing stablecoins.²⁸⁹ Big Tech firms are very likely to issue stablecoins to expand their involvement in financial services and crypto-related activities unless federal authorities prevent them from doing so.

Apple and Google allow their customers to use their payment apps to buy cryptocurrencies on several crypto exchanges.²⁹⁰ Facebook pursued a determined campaign to create a global stablecoin, and it abandoned that project only after encountering stiff resistance from U.S. and international bank regulators. The deposit and payment services contemplated by Facebook's stablecoin project would have enabled Facebook to amass a vast amount of data about its customers' financial assets and transactions.²⁹¹ A congressional mandate requiring all stablecoin providers to be FDIC-insured banks would prevent Big Tech firms from using stablecoins to increase their economic and financial power and expand their ability to collect and monetize their customers' private financial information.²⁹²

As shown above, Circle and other nonbank providers of stablecoins accept deposits but do not comply with the regulatory safeguards governing FDIC-insured banks and their parent holding companies. Circle is a state-licensed money transmitter, and Circle must follow directives from the U.S. Treasury Department's Financial Crimes Enforcement Network (FinCEN) regarding compliance with anti-money laundering laws and sanctions on terrorist

²⁸⁹ Wilmarth, "Stablecoins," *supra* note 131, at 2, 4, 11-13.

²⁹⁰ See, e.g., Kashayar Abbasi, "How to Buy Bitcoin With Google Pay," *Bankless Times* (updated Dec. 13, 2022), <https://www.banklesstimes.com/cryptocurrency/bitcoin/buy-with-google-pay/>; "Bitstamp Now Supports Apple Pay and Google Pay," *Bitstamp Blog* (Aug. 31, 2022), <https://blog.bitstamp.net/post/bitstamp-now-supports-apple-pay-and-google-pay/>; Shailey Singh, "How to buy Bitcoin with Apple Pay?," *Cointelegraph* (Jan. 5, 2023), <https://cointelegraph.com/news/how-to-buy-bitcoin-with-apple-pay>.

²⁹¹ Wilmarth, "Stablecoins," *supra* note 131, at 1-4, 7-8, 12-13; Adams, *supra* note 186 (discussing Facebook's sale of its stablecoin project to Silvergate Bank); Crossman, *supra* note 186 (same, and describing the strong pushback that Facebook's stablecoin project received from U.S. and international regulators).

²⁹² Wilmarth, "Stablecoins," *supra* note 131, at 1-4, 11-13; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 10-13.

organizations.²⁹³ However, state money transmitter laws vary widely, and they do not provide strong protection to customers who deposit funds with licensed transmitters for extended periods of time.²⁹⁴ Similarly, FinCEN's requirements for money transmitters are not intended to ensure that consumers can recover funds they have entrusted to those entities.²⁹⁵

In 2022, PayPal announced that it planned to create its own stablecoin “to make crypto more accessible to mainstream users.”²⁹⁶ PayPal is a state-licensed money transmitter that provides lending and payment services to over 400 million consumers and merchants.²⁹⁷ PayPal allows merchants to accept cryptocurrencies as payments, and PayPal also enables consumers to buy and sell cryptocurrencies.²⁹⁸ In 2021, PayPal CEO Dan Schulman said that he wanted to “transform PayPal” into a “platform” for “digital payments of all kinds.”²⁹⁹

At the end of 2021, PayPal held over \$30 billion of customer balances that were not in the custody of PayPal's partner banks and therefore were not eligible for FDIC pass-through

²⁹³ Circle S-4 Amendment No. 7, *supra* note 193, at 73, 76, 200, 204, 208, 217, 238, 277-78, F-17, F-63; *see also* FSOC Digital Assets Report, *supra* note 1, at 98-100, 115 (discussing state licensing of money transmitters and FinCEN's requirements for such entities); Treasury Action Plan, *supra* note 34, at 7-8, 13 (same).

²⁹⁴ Dan Awrey, “Bad Money,” 106 *Cornell Law Review* 1, 7-8, 40-56 (2020) (describing the “alarming . . . permissiveness” of state laws regulating money transmitters, and stating that the laxity of those laws “undermines the credibility of [money transmitters'] monetary commitments”); Clark, *supra* note 229 (stating that state money transmitter laws “were not designed to regulate firms facilitating trading in investment assets”); FSOC Digital Assets Report, *supra* note 1, at 97-98 (explaining that state money transmitter laws “typically [provide] only very limited loss absorbing buffers for the purpose of consumer protection”); Statement of CFPB Director Rohit Chopra on the 2022 Annual Report of the Financial Stability Oversight Council (Dec. 16, 2022) (questioning whether state money transmitter laws adequately protect consumers) [hereinafter Statement of CFPB Director Chopra].

²⁹⁵ <https://www.consumerfinance.gov/about-us/newsroom/statement-of-cfpb-director-rohit-chopra-on-the-2022-annual-report-of-the-financial-stability-oversight-council/>

²⁹⁶ FSOC Digital Assets Report, *supra* note 1, at 98, 115.

²⁹⁷ Wilmarth, “Stablecoins,” *supra* note 131, at 1; Adams, *supra* note 186 (quoting a senior PayPal executive).

²⁹⁸ John Adams, “PayPal poses big threat to banks in race to develop stablecoins,” *American Banker* (Jan. 12, 2022), 2022 WLNR 1029010; PayPal Holdings, Inc., Form 10-K Annual Report 5-8, 12, 19-20, 37, 71, 76 (Feb. 3, 2022) [hereinafter PayPal 10-K Report], <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001633917/82fd6358-df11-4e57-af9d-a5c66d48fadbf.pdf>.

²⁹⁹ Adams, *supra* note 297; PayPal 10-K Report, *supra* note 297, at 5, 8, 12, 19-20, 37, 71, 76, 109.

³⁰⁰ Tim Bradshaw, “PayPal's Dan Schulman on seizing the opportunities in digital payments,” *Financial Times* (Aug. 22, 2021), <https://www.ft.com/content/398c5fa2-8ee5-4eaa-9fe7-04bb4ef996e5>.

deposit insurance.³⁰⁰ PayPal's customer balances are unsecured liabilities of PayPal and are not protected by federal deposit insurance.³⁰¹ PayPal provides deposit-like treatment to its customers by allowing them to withdraw their balances on demand or to transfer their balances to third parties.³⁰²

Thus, PayPal (like Circle) holds tens of billions of dollars of uninsured de facto deposits and does not comply with the federal regulatory safeguards governing FDIC-insured banks.³⁰³ To stop this intolerable practice, Congress must prohibit entities that are not FDIC-insured banks from accepting shadow deposits (short-term financial claims that serve as de facto deposits).³⁰⁴ Rohit Chopra, Director of the Consumer Financial Protection Bureau, recently highlighted the dangers that nonbank stablecoin issuers and nonbank payments firms pose to consumers and our financial system:

[N]onbank peer-to-peer payments firms serving millions of American consumers could pose similar financial stability risks [as those generated by nonbank stablecoin issuers]. These firms issue runnable deposit-like liabilities and invest in riskier, less liquid assets. People often maintain balances and treat the account like a quasi-bank account. The funds may not be protected by deposit insurance and the failure of such a firm could lead to millions of American consumers

³⁰⁰ PayPal 10-K Report, *supra* note 297, at 61, 71, 87; *see also* Wilmarth, "Pandemic Crisis," *supra* note 52, at 8 (stating that PayPal held over \$30 billion of uninsured customer balances at the end of 2020).

³⁰¹ PayPal 10-K Report, *supra* note 297, at 71 (stating that the "customer balances" shown on PayPal's financial statements are "direct claims against us" and do not include customer funds that are "eligible for FDIC pass-through insurance");

³⁰² PayPal, "PayPal Balance Terms and Conditions" (updated Jan. 10, 2023): "Holding Funds in Your Balance Account," "Withdrawing Funds from a Balance Account," and "Sending Money to a Friend or Family Member," <https://www.paypal.com/us/webapps/mpp/ua/pp-balance-tnc#holding> (visited Jan. 31, 2023); *see also* Wilmarth, "Pandemic Crisis," *supra* note 52, at 8 (stating that "PayPal's customer balances are functionally equivalent to bank checking deposits").

³⁰³ PayPal 10-K Report, *supra* note 297, at 12, 19; Wilmarth, "Pandemic Crisis," *supra* note 52, at 8-10.

³⁰⁴ Wilmarth, "Pandemic Crisis," *supra* note 52, at 8-10; Wilmarth, "Stablecoins," *supra* note 131, at 2-4, 6-7, 11-15; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 8-16.

becoming unsecured creditors of the bankruptcy estate, similar to the experience with FTX. Our patchwork state money transmitter laws were not designed to ensure the long-term stability of these types of firms.³⁰⁵

2. Congress should reject proposals that would allow nonbanks and uninsured depository institutions to issue or distribute tokenized deposits and stablecoins.

Congress should reject proposed legislation that would allow nonbanks and uninsured depository institutions to issue or distribute tokenized deposits and stablecoins. In 2022, Senators Kirsten Gillibrand (D-NY), Cynthia Lummis (R-WY), and Patrick Toomey (R-PA) introduced bills that would authorize the issuance of stablecoins by uninsured, special-purpose depository institutions that are chartered by the OCC or the states. In addition, Senator Toomey's bill would allow state-licensed money transmitters (like Circle and PayPal) and nondepository trust companies chartered by the OCC or the states (like Gemini Trust and Paxos Trust) to issue stablecoins.³⁰⁶ Those bills represent bad public policy and should not be enacted.

The Gillibrand-Lummis and Toomey bills would also require the Fed to provide master accounts to uninsured stablecoin banks and nondepository stablecoin issuers. Granting Fed master accounts to such institutions would allow them to receive highly beneficial clearing, payment, and settlement services from the Fed—including guarantees for payments made on Fedwire, daylight overdraft privileges, and instant payment services under the forthcoming

³⁰⁵ Statement of CFPB Director Chopra, *supra* note 294.

³⁰⁶ Kyle Campbell, "FTX gives Congress a reason to rein in crypto. The question is how," *American Banker* (Nov. 18, 2022) (discussing the Gillibrand-Lummis bill), 2022 WLNR 37160533; Kyle Campbell, "The Lummis-Gillibrand crypto bill provision that has banks on edge," *American Banker* (June 8, 2022) (same), 2022 WLNR 17868540; Davis Polk, "Toomey stablecoin bill 2.0: Key changes" (Dec. 22, 2022) (describing Sen. Toomey's revised stablecoin bill), <https://www.davispolk.com/insights/client-update/toomey-stablecoin-bill-20-key-changes>; Arthur E. Wilmarth, Jr., "Bank Think: Gillibrand-Lummis crypto bill ignores the lessons of history," *American Banker* (June 17, 2022) (criticizing the Gillibrand-Lummis bill) [hereinafter Wilmarth, "Gillibrand-Lummis Bill"], <https://www.americanbanker.com/opinion/gillibrand-lummis-crypto-bill-ignores-the-lessons-of-history>.

FedNow program. In addition, uninsured national stablecoin banks chartered by the OCC would become Fed member banks and could borrow from the Fed's discount window.³⁰⁷

Until recently, a deposit-taking bank could not receive a bank charter and obtain a Fed master account unless it was approved for federal deposit insurance by the FDIC. The OCC has not issued charters for uninsured deposit-taking national banks since Congress established the FDIC in 1933, and it is highly doubtful whether the OCC has authority to approve such charters.³⁰⁸ Prior to 2019, every state required state-chartered banks that accepted deposits from the general public to obtain federal deposit insurance.³⁰⁹ State laws requiring federal deposit insurance for deposit-taking banks were the product of hard experience during the savings and loan and banking crises of the 1980s and early 1990s. During those crises, systemic collapses occurred among state-chartered depository institutions that relied on state-sponsored private deposit insurance schemes. The demise of those state-sponsored schemes inflicted severe losses on depositors and damaged local economies in several states, including Ohio, Maryland and Rhode Island.³¹⁰

³⁰⁷ Davis Polk, *supra* note 306; Wilmarth, "Banking Privileges," *supra* note 286, at 5-6, 21 nn.44, 48; Wilmarth, "Gillibrand-Lummis Bill," *supra* note 305; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 14; *see also* Julie A. Hill, "Opening a Federal Reserve Account," 40 *Yale Journal of Regulation* (forthcoming) (draft of Jan. 31, 2023, available at <https://ssrn.com/abstract=4048081>), at 7-12 (describing Fed master accounts and the services the Fed provides to holders of those accounts).

In January 2023, the Federal Reserve Bank of Kansas City denied an application by Custodia Bank, an uninsured Wyoming crypto bank, which sought to open a Fed master account. Custodia has filed a lawsuit claiming that the Federal Reserve Act compels the Fed to approve Custodia's application. Kyle Campbell, "Kansas City Fed rejects Custodia's master account application," *American Banker* (Jan. 27, 2023), 2023 WLNR 3332024, *see also* Davis Polk, *supra* note 136 (analyzing Custodia Bank's lawsuit against the Fed); Hill, *supra* note 306, at 35-40, 60-61 (same); *supra* notes 136-37, 258 and accompanying text (discussing Custodia Bank and its crypto-focused business plan).

³⁰⁸ Wilmarth, "Banking Privileges," *supra* note 286, at 6, 10 (contending that federal law does not authorize the OCC to approve charters for uninsured deposit-taking national banks); Wilmarth, "Stablecoins," *supra* note 131, at 10 (stating that the OCC asserted such authority in 2022 but has not issued any such charters); *see also* Lev Menand & Morgan Ricks, "Federal Corporate Law and the Business of Banking," 88 *University of Chicago Law Review* 1361, 1411 (2021) (pointing out that the Federal Reserve Act, in 12 U.S.C. § 222, "requires national banks to obtain deposit insurance").

³⁰⁹ Wilmarth, "Stablecoins," *supra* note 131, at 10, 19 n.68.

³¹⁰ *Id.* at 10, 19 n.69.

Wyoming (in 2019) and Nebraska (in 2020) disregarded the lessons of history and began to charter special-purpose crypto banks that accept deposits of crypto assets but do not have federal deposit insurance.³¹¹ In 2020, Acting Comptroller of the Currency Brian Brooks invited crypto firms to apply for uninsured deposit-taking national bank charters (although the OCC has not yet approved any such charters).³¹² The Gillibrand-Lummis and Toomey bills would codify the foregoing departures from sound banking principles by (i) authorizing the chartering of uninsured state-chartered banks and uninsured national banks that issue stablecoins, and (ii) requiring the Fed to provide master accounts to those institutions.³¹³

The turmoil that swept through crypto markets after the collapse of the Terra stablecoin in May 2022 demonstrates that uninsured issuers and distributors of stablecoins would pose intolerable dangers to our financial system and economy. Failures of uninsured stablecoin providers would be likely to trigger systemic runs on similar providers, which could potentially undermine the stability of our banking system, disrupt our payments system, and trigger a broader crisis in our financial markets.³¹⁴ Congress should avoid such perils by rejecting the Gillibrand-Lummis and Toomey bills (and similar proposals) and by requiring all providers of stablecoins and tokenized deposits to be FDIC-insured banks.

3. Policymakers should not apply the regulatory model for money market funds to nonbank stablecoin providers.

Congress and federal regulators should also reject proposals that would allow nonbanks

³¹¹ *Id.*; Wilmarth, “Treasury Comment Letter,” *supra* note 21, at 14; *see also supra* notes 131-37 and accompanying text (discussing Wyoming’s and Nebraska’s chartering of uninsured, special-purpose crypto depository institutions).

³¹² Wilmarth, “Gillibrand-Lummis Bill,” *supra* note 305.

³¹³ *See supra* notes 306-07 and accompanying text.

³¹⁴ *See Zhao, supra* note 30 (describing potential hazards created by (i) “rapid withdrawals from stablecoins backed by commercial paper,” which could “disrupt commercial-paper markets” and “create losses for traditional financial institutions holding similar assets,” and (ii) the collapse of stablecoins that are “widely adopted as a means of payment,” which would pose a “threat to financial stability”).

or uninsured banks to issue and distribute stablecoins if they maintain reserves and provide disclosures similar to those required for money market funds (MMFs). As shown below, the regulatory model for MMFs has failed to prevent repeated investor runs and bailouts and does not provide an adequate response to the risks posed by stablecoins.

Money market funds (like stablecoins and PayPal's customer balances) are highly unstable and run-prone "shadow deposits."³¹⁵ Unlike FDIC-insured bank deposits, shadow deposits are forms of "private money" that are not backed by the full faith and credit of any sovereign.³¹⁶ Holders of shadow deposits are likely to engage in panicked runs whenever they have serious doubts about the sufficiency of reserves backing those financial instruments.³¹⁷

In 2008 and 2020, investors ran on MMFs due to widely-shared concerns about the adequacy of their reserves.³¹⁸ In May 2022, investors ran on the Terra stablecoin and withdrew billions of dollars from the Tether stablecoin based on doubts about the sufficiency of their reserves.³¹⁹ State-sponsored private deposit insurance systems collapsed during the 1980s and early 1990s after shortfalls in their reserves became publicly known.³²⁰ As shown by those debacles, it is abundantly clear that any regulatory model relying on private reserves for stablecoins will almost certainly fail during future crises affecting stablecoins, and such a failure would probably have a highly adverse impact on our banking system and financial markets.

The SEC's track record with MMFs does not inspire confidence that the SEC could effectively control the systemic dangers of stablecoins by regulating them as investment

³¹⁵ Gorton & Zhang, *supra* note 274, at 3-9, 21-24; Wilmarth, "Pandemic Crisis," *supra* note 52, at 8-10; Wilmarth, "Stablecoins," *supra* note 131, at 2-6.

³¹⁶ Gorton & Zhang, *supra* note 274, at 3-5, 33, 38; Wilmarth, "Stablecoins," *supra* note 131, at 3, 6; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 8-9.

³¹⁷ Gorton & Zhang, *supra* note 274, at 3-6, 38-39; Wilmarth, "Stablecoins," *supra* note 131, at 2-6.

³¹⁸ Gorton & Zhang, *supra* note 274, at 21-24; Wilmarth, "Pandemic Crisis," *supra* note 52, at 4-10; Wilmarth, "Stablecoins," *supra* note 131, at 2-6.

³¹⁹ See *supra* notes 51, 76-80 and accompanying text; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 2-6.

³²⁰ Wilmarth, "Stablecoins," *supra* note 131, at 10; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 13-14.

companies under the Investment Company Act of 1940 (1940 Act).³²¹ The SEC's regulation of MMFs under the 1940 Act failed to ensure the resilience of those funds after Lehman Brothers collapsed in September 2008. Lehman's bankruptcy and default on its commercial paper triggered systemic runs by MMF investors and resulted in a comprehensive bailout of MMFs by the Treasury Department and the Fed. In addition, dozens of MMFs required financial support from their sponsors (including bank holding companies and asset managers).³²² Despite that calamitous experience, the SEC rejected recommendations that MMFs should stop providing deposit-like treatment by redeeming their shares based on a fixed net asset value (NAV) of \$1 per share, and should instead use floating NAVs like other mutual funds.³²³

In 2014, the SEC adopted reforms that required institutional prime (non-government) MMFs to use floating NAVs and allowed them to impose restrictions on redemptions. However, the SEC continued to permit retail prime MMFs and institutional and retail government MMFs to offer fixed NAVs. MMFs experienced another series of systemic runs by investors during the pandemic crisis in March 2020 and were bailed out a second time by the Treasury and the Fed.³²⁴ In December 2021, the SEC admitted that its reforms in 2014 did not prevent runs by investors in 2020. However, the SEC once again rejected the idea of requiring all MMFs to use floating NAVs. Instead, the SEC proposed a new set of limitations on redemptions.³²⁵

A recent study by Fed economists concluded that the SEC's 2014 reforms failed to work as intended, and the study also warned that the SEC's proposed 2021 reforms were not likely to

³²¹ 15 U.S.C. §§ 80a-1–80a-64.

³²² Barr, Tahyar & Jackson, *supra* note 127, at 1408-09; Gorton & Zhang, *supra* note 274, at 21-23; Wilmarth, "Stablecoins," *supra* note 131, at 5; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 156-57, 263-64, 276-82, 285-86.

³²³ Barr, Tahyar & Jackson, *supra* note 127, at 1409-14; Wilmarth, "Stablecoins," *supra* note 131, at 5-6.

³²⁴ Barr, Tahyar & Jackson, *supra* note 127, at 1414-19; Gorton & Zhang, *supra* note 274, at 24; Wilmarth, "Pandemic Crisis," *supra* note 52, at 4-7; Wilmarth, "Stablecoins," *supra* note 131, at 5-6.

³²⁵ Wilmarth, "Stablecoins," *supra* note 131, at 6.

be effective.³²⁶ The study's authors recommended that MMFs should be required to obtain backup liquidity guarantees from major banks to strengthen their ability to redeem their shares on demand. However, the authors acknowledged that their proposal could encourage "the growth of intermediation arrangements . . . that bypass the banking system" in the same way that MMFs and stablecoins have done.³²⁷

A much more effective reform would be a congressional statute providing that only FDIC-insured banks are authorized to issue MMFs with fixed NAVs or other financial claims that are payable at par on demand or within a short period of time. That reform—like my proposal to require all stablecoins to be issued and distributed by FDIC-insured banks—would abolish shadow deposits and require all short-term deposit substitutes to be regulated in the same way as bank deposits. In combination, those mandates would compel all forms of "private money" to disappear from our financial markets and to be replaced by bank deposits that are regulated under our federal banking laws, including the monetary policy regime established by the Federal Reserve Act.³²⁸

Conclusion

Unregulated cryptocurrencies and crypto firms pose unacceptable risks to investors and our banking system. To protect investors, policymakers should recognize the SEC as the primary federal regulator of most fluctuating-value cryptocurrencies. To protect our banking system, federal bank regulators should prohibit FDIC-insured banks and their affiliates from (1)

³²⁶ Huberto M. Ennis, Jeffrey M. Lacker, and John A. Weinberg, "Money Market Fund Reform: Dealing with the Fundamental Problem" 2, 8-12 (Fed. Res. Bank of Rich. Working Paper 22-08R, Aug. 31, 2022), https://www.richmondfed.org/-/media/RichmondFedOrg/publications/research/working_papers/2022/wp22-08.pdf.

³²⁷ *Id.* at 12-15 (quote at 13).

³²⁸ Wilmarth, "Stablecoins," *supra* note 131, at 2-13; Wilmarth, *Taming the Megabanks*, *supra* note 119, at 12-14, 153-57, 341-44, 355-56; Wilmarth, "Treasury Comment Letter," *supra* note 21, at 8-15; *see generally* Morgan Ricks, *The Money Problem: Rethinking Financial Regulation* (2016) (proposing that all short-term financial instruments that function as private "money claims" should be regulated as bank deposits to ensure the effectiveness of financial regulation and monetary policy).

investing and trading in fluctuating-value cryptocurrencies, either as principals or agents, and (2) providing credit, deposit, custodial, payment, or other financial services to crypto firms that are not registered with and regulated by the SEC and/or the CFTC. To ensure that stablecoins and tokenized deposits do not produce dangerous new forms of shadow deposits, Congress should mandate that only FDIC-insured banks can issue and distribute such instruments. The foregoing measures are urgently needed to prevent the crypto industry from causing substantial harm to investors and our banking system.