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Subcommittee on Digital Assets of the Committee on Banking, Housing and Urban Affairs U.S. Senate

"Exploring Bipartisan Legislative Frameworks for Digital Assets"

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Subcommittee Chairman Lummis, Subcommittee Ranking Member Gallego, members of the Subcommittee and staff, I am honored to be testifying before you today.

I am currently a Research Fellow, and Director of the Digital Assets Policy Project, at the Mossavar-Rahmani Center for Business and Government at the Harvard Kennedy School. I am also an independent consultant. I was the chairman of the Commodity Futures Trading Commission from 2014 to 2017. I served at the U.S. Treasury Department from 2009 to 2014, primarily as the Assistant Secretary for Financial Stability, where I oversaw the Troubled Asset Relief Program. Prior to my government service, I was a partner at the law firm of Cravath, Swaine & Moore LLP. The views I express are my own and do not represent the views of the Harvard Kennedy School.

Since 2014, when under my leadership the CFTC declared bitcoin to be a commodity, I have spoken and written about the need to improve regulation of digital assets.¹ This has included appearances before several committees of Congress.

I believe digital assets and tokenization technology could be very valuable in numerous ways. They could potentially be used for a variety of financial transactions and processes, in ways that might generate greater efficiency, growth, choice, opportunity and financial inclusion. But although it has been sixteen years since bitcoin was launched, we have not yet seen that much use that has generated real world value.

The stated purpose of the President's Executive Order on "Strengthening American Leadership in Digital Financial Technology" is to "support the responsible growth and use of digital assets, blockchain technology, and related technologies."² The question

¹ See Appendix: Recent Publications and Testimony on Digital Assets.

² United States, Executive Office of the President [Donald J. Trump]. Executive Order 14178: Strengthening American Leadership in Digital Financial Technology. 23 January 2025. *Federal Register*, vol. 90, no. 20, pp. 8647-8650 ("Executive Order 14178").

is how to fulfill those words. Will we create legal frameworks that encourage responsible development of digital technology in ways that create social utility, or frameworks that mostly encourage more speculative activity and more of the types of abuses we have seen far too much of to date?

To date, the crypto industry has been characterized by a primary focus on speculative activity as well as tokens and applications that have little social utility. There have been rampant abuses, fraud, manipulation, failures to protect consumers and the use of this technology for financial crime and evasion of sanctions. It is also true that the absence of a clear regulatory framework has caused some institutions to refrain from making investments that might lead to applications of greater utility. I believe that both the excessive speculative activity and the failure to develop more useful applications are in large part due to the absence of a strong regulatory framework— one that provides adequate consumer and investor protection and minimizes those risks. Yes, we need clarity of rules. But we need the right rules.

I will discuss how we accomplish that.

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Stablecoins and the GENIUS Act³

I am pleased that Committee Chairman Scott and others have said we should prioritize the passage of stablecoin legislation. Stablecoins are the most useful application of blockchain and digital asset technology to date. Their primary use to date has been for trading crypto assets. But they could become important as a general means of payment, and could facilitate the tokenization and settlement of real world assets on chain. They could also be helpful in maintaining the dominant role of the dollar in international trade and finance. Whether they achieve widespread use will be for the market to determine, not the government. But it will only happen if we create a regulatory framework that puts the "stable" into stablecoins.

Two and a half years ago, Professor Howell Jackson of Harvard Law School, Professor Dan Awrey of Cornell Law School and I wrote a detailed paper on how this could be done by our bank regulators under existing law.⁴ We did so because the stablecoin market was already large and growing, and there were significant risks that

³ United States, Congress, Senate, Committee on Banking, Housing, and Urban Affairs. GENIUS Act of 2025.

Senate Committee on Banking, Housing and Urban Affairs Press Release, 4 February 2025 ("GENIUS Act"). ⁴ Jackson, Howell E., Massad, Timothy G., and Awrey, Dan. "How We Can Regulate Stablecoins Now—Without

Congressional Action." Hutchins Center Working Paper, no. 76, August 2022 ("Howell et al. (2022)").

needed to be addressed. A framework would also enable the private sector to realize their potential. But there was little sign then that Congress would take action.

The good news is there seems to be growing support within Congress for such a measure. Three legislative proposals have recently been introduced: the "Guiding and Establishing National Innovation for U.S. Stablecoins of 2025" or the GENIUS Act introduced by Senators Hagerty, Scott, Lummis and Gillibrand; the "Stablecoin Transparency and Accountability for a Better Ledger Economy Act of 2025 or the STABLE Act introduced by leaders in the House;⁵ and the proposal introduced by Representative Waters that was the product of negotiations between her and former House Financial Services Committee Chair McHenry and others, which I will refer to as the McHenry-Waters Act.⁶

I will discuss these proposals by focusing on what I believe are the critical elements of a regulatory framework for this new technology: (i) the basic prudential and other requirements necessary to make stablecoins truly "stable"; (ii) preventing the use of stablecoins for financial crime and evasion of sanctions; (iii) the allocation of licensing, regulatory and supervisory responsibilities between federal and state authorities; (iv) issues pertaining to competition, concentration of power and achieving a level playing field; and (v) enforcement.

Making Stablecoins Stable. The critical elements necessary to make stablecoins stable include prudential requirements pertaining to reserves, capital, liquidity and other risk management standards. In addition, limitations on the activities of a stablecoin issuer, and a regulatory framework to deal with the possibility of financial distress, insolvency and bankruptcy, are necessary.

<u>Prudential Requirements</u>. All three proposals reflect the general consensus that a stablecoin issuer must hold reserves at least equal to the value of the outstanding tokens, and that those reserves should be invested conservatively—in bank deposits, Treasury securities, central bank reserves and similar high quality, liquid assets. All three proposals also call for capital and liquidity requirements. Capital provides a cushion to absorb not only losses on investments but also losses from operational events like cybersecurity breaches. Liquidity ensures that an issuer can meet its redemption obligations, particularly in periods of stress. The proposals also refer to regulators adopting other risk management standards, though these are not specified.

⁵ United States, Congress, House, Committee on Financial Services. *STABLE Act of 2025* [Discussion Draft]. House Financial Services Committee Press Release, 5 February 2025 ("STABLE Act").

⁶ United States, Congress, House, Committee on Financial Services. *Untitled Legislation* [Discussion Draft]. House Financial Services Committee Press Release, 10 February 2025 ("McHenry-Waters Act").

There are important differences in the proposals with respect to these rules, however. For example, both the GENIUS Act and the STABLE Act include significant qualifications regarding the capital and liquidity requirements. Specifically, under both proposals, capital requirements "may not exceed what is sufficient to ensure the ... [issuer's] ongoing operations," and liquidity requirements "may not exceed what is sufficient to ensure the financial integrity of the issuer and the ability of the issuer to meet [its] financial obligations. ..."⁷ This language can lead to lower requirements than appropriate. For example, in the case of capital, it might be interpreted to mean that capital can only be required in respect of operational risks such as business disruptions. But issuers will also face other categories of risk, such as interest rate risk, market risk or counterparty risk, for which capital may be necessary. In addition, while the words "not exceed" may not sound unreasonable, they could easily lead to protracted disputes by issuers who do not like a regulator's decision. These qualifications could lead to lower requirements that may increase the probability and potential impact of an issuer failing to meet its obligations or experiencing financial distress.

This is a new and rapidly evolving technology. None of us can predict what risks or circumstances will arise. The new stablecoin framework that we design will also operate in the shadow of the Supreme Court's decision in the Loper Bright case.⁸ Therefore, instead of explicitly constraining authority, and providing language that enhances the ability of rejected applicants or disgruntled issuers to challenge regulators, the legislation should explicitly provide sufficient authority and discretion for regulators to respond to whatever risks and circumstances arise. To be clear, the Loper Bright decision *invites* Congress to delegate authority; it does not prohibit it. If ever there were a case where that is needed, where we do not want courts making judgements about complex, technical issues—such as whether capital and liquidity requirements are "in excess"—it is here.

The GENIUS Act and the STABLE Act include central bank reserves among the permitted investments, which raises the general issue of whether stablecoin issuers have access to federal payments infrastructure. I discuss this below under "Competition, Concentration of Power and Achieving a Level Playing Field."

All three proposals include repurchase agreements among permitted investments (and the GENIUS Act includes reverse repurchase agreements) with a maturity of seven days or less that are backed by Treasury securities.⁹ Query whether that is desirable since such instruments can be highly illiquid for a participant that does not have

⁷ GENIUS Act, Section 4(a)(4)(A); STABLE Act, Section 4(a)(4)(A).

⁸ United States, Supreme Court. *Loper Bright Enterprises v. Raimondo. United States Reports*, vol. 603, 28 June 2024.

⁹ GENIUS Act, Section 4(a)(1)(A)(v).

access to the Federal Reserve discount window. In addition, secured repo transactions could prevent token holders from recovering their money in a bankruptcy, as discussed below under "Bankruptcy Protections."

Although there is agreement on the need for full reserves, there is not clarity on whether those reserves should be held in trust for the benefit of the holders to avoid possibility of attachment for other claims. None of the proposals require that reserves should be held by a third party custodian either.

None of the proposals says anything about diversification of investments. We should not overlook the lessons of the failure of Silicon Valley Bank, when a stablecoin issuer had a large amount of deposits in a single bank, most of which was uninsured. While regulators have authority to issue rules related to reserves, general language directing regulators to address issues of diversification, by type of investment as well as recipient, should be included.

I discuss how these prudential requirements should be set in the section on allocating responsibility between federal and state authorities.

Limitations on Activities. A second critical area necessary to make stablecoins stable, and on which there is a general consensus, is that the activities of a stablecoin issuer should be limited to those directly related to the issuance and redemption of stablecoins. All three proposals contain such limitations. However, none restrict incurring other indebtedness. There is also disagreement on whether there should be restrictions on an issuer's affiliate relationships and the activities of those affiliates. These types of restrictions are just as important, as discussed below in the competition section.

Bankruptcy Protections. A third critical area to make stablecoins stable concerns what happens in the event of a failure or bankruptcy of a stablecoin issuer. In the absence of addressing this issue, the standard corporate bankruptcy process would likely apply. That means holders of stablecoins would face a delay in recovering their money and potentially lose some or all of it. That is because a petition for a Chapter 11 reorganization would trigger the application of the automatic stay and begin a process that could take years. Holders would not be able to redeem their tokens until the conclusion of the process. It would also mean token holders would have an unsecured claim that is *pari passu* with all other unsecured debt claims. They must not only go to court to recover but would share the reserves that are supposed to back tokens one-for-one with all other unsecured creditors, thus creating doubt that they would get paid back in full.

Moreover, because the business model of some stablecoin issuers has been to have direct contractual relationships with only a small number of customers, there could be questions as to whether holders of tokens purchased on the secondary market would even have an equivalent claim against the issuer.

A stablecoin regulatory framework should also be designed to minimize the potential collateral damage of the failure of a stablecoin issuer. Even the failure of the relatively small, algorithmic stablecoin Terra quickly rippled through the crypto sector and triggered other defaults. A failure of a systemically important issuer could trigger much greater damage, particularly if authorities do not have the tools to swiftly respond.

Ideally, a stablecoin regulatory framework should exempt issuers from the application of the Bankruptcy Code and it should create a dedicated resolution process. That process should ensure that holders get their money back as soon as possible. That process should be fast so that we minimize collateral damage. It should involve the appointment of a dedicated receiver, and it should be designed to work for federal and state-chartered issuers. States do not write their own bankruptcy laws, so while a state-chartered issuer might be able to create a trust structure that reduces some of the risks related to a standard corporate bankruptcy process, we would be better off to create a process that will minimize risks and damage for both federal and state-chartered issuers.¹⁰

Neither the STABLE Act nor the GENIUS Act provides for such a process. While the STABLE Act does not address bankruptcy protection for customers in any way, the GENIUS Act at least states that in the event of an "insolvency proceeding" with respect to a stablecoin issuer, a claim of a person holding a stablecoin issued by that issuer will have "priority" over all other claims against the issuer.¹¹ While that provides some protection against diminution in value resulting from the claims of other unsecured creditors, holders would still have to wait until the end of the process to recover.

Only the McHenry-Waters proposal creates a dedicated resolution process involving a federal receiver. It also contains a statement that holders claims receive "priority."¹²

It should be noted that even stating that holders claims are "prioritized" may be illusory. Under the STABLE Act and the GENIUS Act, issuers are entitled to pledge

¹⁰ For a general discussion of risks of bankruptcy, see Howell et al. (2022), p. 5; Awrey, Dan. "Money in the Shadow of Bankruptcy." *Beyond Banks: Technology, Regulation, and the Future of Money*. Princeton University Press, 2025.

¹¹ GENIUS Act, Section 9(a).

¹² McHenry-Waters Act, Section 3(c)(10).

assets as collateral to secure a repo transaction for the purpose of creating liquidity. Participants to repo transactions have super-priority in bankruptcy and may be able to seize reserve assets without even having to create a post-bankruptcy claim.

The risk created by this ability to pledge is substantial. One can imagine a Bear Stearns-like scenario where a stablecoin issuer is facing liquidity pressures. It could enter into a repo contract covering a large part—or even all—of its reserves to generate liquidity. But news of the contract could put further pressure on its liquidity as customers anticipate that there will be fewer reserve assets available for distribution post-bankruptcy. Thus, subjecting stablecoin issuers to bankruptcy while letting them pledge assets for liquidity purposes exposes holders to greater risk.¹³

Moreover, users of other stablecoins might fear that other issuers will do (or might have already done) the same thing, in light of market conditions, similarity of business models, and equivalent restrictions on assets and activities. This could create conditions for the type of contagion we saw after the failure of the Reserve Primary Fund in September 2008 (the money market fund which had less than 1.5% of its assets in Lehman commercial paper at the time that Lehman filed for bankruptcy). Litigation related to its failure continued until September 2013.¹⁴

If we really want to promote stablecoins as a viable general means of payment, then creating an appropriate bankruptcy process supports that goal. It can give users of stablecoins more confidence about using them.

<u>Addressing the Risks of Financial Crime and Evasion of Sanctions.</u> Beyond the risks related to whether stablecoins really are stable and will hold their value, one of the greatest risks is their potential use for financial crime and evasion of sanctions. There were recent reports of some high-profile cases which underscored the risks, specifically the use of stablecoins by Russian smugglers to evade sanctions and by Hamas to fund its activities and launder money.¹⁵ It is impossible to know with any certainty the scale of such illicit activity. As the digital asset and stablecoin market grows, however, it is likely to grow, absent sufficient steps to prevent it. Whether stablecoins can become a safe and trustworthy means of payment turns in large part on whether we can adequately address this risk.

¹³ I am grateful to Professor Awrey for our discussions on these issues.

¹⁴ Raymond, Nate. "Settlement Reached in Reserve Primary Fund Lawsuit." *Reuters*, 7 September 2013.

¹⁵ See, e.g., Berwick, Angus and Ben Foldy. "Inside the Russian Shadow Trade for Weapons Parts, Fueled by Crypto." *Wall Street Journal*, 1 April 2024 ("Inside the Russian Shadow Trade," *Wall Street Journal*"); Berwick, Angus and Ian Talley. "Hamas Needed a New Way to Get Money From Iran. It Turned to Crypto." *Wall Street Journal*, 12 November 2023 ("'Hamas Needed a New Way to Get Money From Iran,' *Wall Street Journal*").

All three proposals make clear that the Bank Secrecy Act or BSA applies to stablecoin issuers. The STABLE Act, however, contains no express grant of responsibility or legal authority for the regulation, supervision, or enforcement of BSA compliance. The GENIUS Act directs the relevant stablecoin regulators to issue "appropriate operational, compliance, and information technology risk management standards, including Bank Secrecy Act and sanctions compliance, tailored to the business model and risk profile of the permitted payment stablecoin issuer, consistent with other legal authorities."¹⁶ In addition to granting authority to the federal stablecoin regulators to take action, the McHenry-Waters proposal extends authority to the Treasury Department, which is desirable in light of its long-standing role in the design and implementation of the anti-money laundering (AML) and combating financial terrorism (CFT) framework, particularly through the Financial Crimes Enforcement Network (FinCEN) and the Office for Foreign Asset Control (OFAC).

While incorporating stablecoin issuers into the BSA framework is necessary, it is not sufficient. The BSA is designed for centralized intermediaries. While a stablecoin issuer is a centralized intermediary, one need not interact with a stablecoin issuer to acquire, transfer, redeem or otherwise cash out a stablecoin. One need not even interact with another centralized intermediary, such as a so-called "off ramp" or "on ramp" that itself might also be subject to the BSA—that is, crypto trading platforms or other entities on which one may acquire a stablecoin or redeem or sell it for fiat currency.

While the existing BSA/AML/CFT framework imposes compliance obligations on covered institutions, the actors and services within the digital asset world do not always fall within its categories. Stablecoins are transferred on decentralized blockchains, and transfers can be made from one self-hosted wallet to another. The "Travel Rule" adopted by the Financial Action Task Force extends the regulatory perimeter by requiring centralized entities to share or obtain information about transferors and transferees, but that only extends the perimeter one "hop" in the best case. Moreover, there are intermediaries in jurisdictions that do not comply with such rules or do a poor job enforcing compliance. It is easy to create a crypto exchange in a non-compliant jurisdiction at which stablecoins could be transferred, thus creating a means for money laundering.

Stablecoin legislation—as well as any other regulatory framework for digital assets needs to be far more creative and comprehensive in addressing these risks. We need to expand the regulatory perimeter to include other actors and services in the DeFi world and expand the methods for addressing these risks. There have been many suggestions in this regard as well as innovations by other countries in their

¹⁶ GENIUS Act, Section 4(a)(4)(A)(iii).

frameworks.¹⁷ That should include addressing the risks that self-hosted wallets pose and requiring more aggressive monitoring of all transactions on chain by stablecoin issuers. (The GENIUS and STABLE Acts appear to address self-hosted wallets only in the customer protection section.) It should include requiring stablecoin issuers to continuously monitor transactions on-chain and report or freeze assets of suspicious parties. It could include giving the Office for Foreign Asset Control explicit extraterritorial jurisdiction over transactions in stablecoins pegged to the dollar as they generally would have over dollar transactions.

Congress could specify exactly how the existing AML/CFT framework should be modified, or it could grant the Treasury Department and the federal banking agencies charged with responsibility for overseeing stablecoin issuers clear authority to design, implement and enforce bespoke AML/CFT obligations that address the unique challenges. It should also encourage the development of technologies that might assist in addressing this risk, such as being able to program stablecoin smart contracts to reject transactions of parties who do not possess some sort of on chain identification credential provided by an appropriate authority .

I note that the general crypto legislation introduced by Senators Lummis and Gillibrand calls for a more comprehensive review of what is needed to combat terrorism and illicit finance with respect to digital assets and the creation of a working group involving Treasury, the Justice Department, the Department of Homeland Security, the Department of State and others to develop and recommend appropriate measures. It also directs the Secretary of the Treasury to "adopt guidance clarifying the sanctions compliance responsibilities and liability of an issuer of a payment stablecoin with respect to downstream transactions relating to the stablecoin that take place after the stablecoin is first provided to a customer of the issuer."¹⁸

<u>Allocation of Responsibilities Between Federal and State Authorities.</u> The allocation of responsibilities for the licensing, regulation and supervision of stablecoin issuers between federal and state authorities has been one of the most challenging issues in developing a stablecoin regulatory framework. A few states have recently developed their own frameworks and some favor building on a state-based regulatory model, as we currently have for other nonbank payment platforms like PayPal.

¹⁷ See, e.g., Adeyemo, Wally. "Remarks by Deputy Secretary of the Treasury Wally Adeyemo at the 2023 Blockchain Association's Policy Summit." 2023 Blockchain Association's Policy Summit, 29 November 2023; Hall, Eric, et al. "December Brings Flurry of Treasury Activity Against Virtual Currency Services." *DLA Piper*, 19 December 2023; Rettig, Rebecca, et al. "Genuine DeFi as Critical Infrastructure: A Conceptual Framework for Combating Illicit Finance Activity in Decentralized Finance." *SSRN*, accessed on 7 February 2025.

¹⁸ United States, Congress, Senate. Lummis-Gillibrand Responsible Financial Innovation Act. *Congress.gov*, 118th Congress, Senate Bill 2281, introduced 12 July 2023 ("Lummis-Gillibrand Responsible Financial Innovation Act"), Section 305. *See also* Lummis-Gillibrand Responsible Financial Innovation Act, Section 304.

On the other hand, the policy arguments for a strong federal role in stablecoin regulation are compelling. State-based regulation can lead to regulatory arbitrage and a race to the bottom. Indeed, the state laws that regulate nonbank payments today are quite inconsistent and minimal. Many of the critical elements of a robust regulatory regime, such as insolvency protections and AML/CFT oversight, are inherently federal responsibilities. In addition, a strong federal role is necessary given the global nature of blockchain technology and potential growth of stablecoin usage. Clearly there already is a need for cross-border harmonization of rules which can only occur at the federal level. If usage of stablecoins grows dramatically as some predict, there could also be macro-economic implications of that growth. Only the federal government possesses the tools and resources that would be needed to respond to any systemic instability within the stablecoin market. Finally, whether stablecoin issuers should have access to central bank reserves and the federal payment infrastructure is a federal responsibility.

The critical design choice thus becomes establishing the right balance between state and federal responsibilities, as it pertains to licensing, regulation including the setting of prudential requirements and other standards, and ongoing supervision to ensure compliance with those standards and to respond to any distress or instability. All three proposals envision the coexistence of federal and state responsibility. I have recently testified as to what I believe are the many weaknesses of the STABLE Act in allowing issuers to choose whether to be subject to state or federal law, and allowing states to engage in licensing, regulation and supervision without sufficient federal standards or supervision. The GENIUS Act contains very similar language but provides, by contrast, at least a few desirable constraints. A stablecoin issuer can only select a state licensing, regulatory and supervisory framework where the relevant state framework is "substantially similar" to the federal framework, and second, the total market capitalization of the relevant stablecoin is not more than \$10 billion. The Act creates a process for the Treasury Department to review whether a state framework is "substantially similar" to the federal framework.¹⁹ If those two criteria are not met, the GENIUS Act provides for a transition process to federal regulation and supervision.

I think the idea of a trigger that if tripped would mean that federal regulation and supervision would apply is a workable one. The specific elements of that trigger can be debated, but I would prefer a lower monetary cap, and also that there be a faster transition process for an issuer exceeding the cap (the Act refers to a 360-day period and it is not clear whether an issuer must secure federal registration within that time).

¹⁹ GENIUS Act, Section 4(a)(7)(B)(4)(B).

In addition, I think there still need to be federal minimum standards with respect to the prudential requirements noted earlier—investment of reserves, capital, liquidity and risk management standards. The state role should be to apply them in the licensing process, and supervise compliance with them, except in the case of an issuer that crosses the threshold which triggers federal oversight. The states could also supplement the federal standards but not lower them. (While the GENIUS Act language requiring state standards to be "substantially similar" to federal standards is useful in this regard, expressly providing for federal minimum standards would provide greater regulatory clarity and certainty.)

The McHenry-Waters proposal has some other provisions which favor federal oversight. It requires all issuers to register with a federal regulator and be subject to coordinated federal and state regulation, supervision and enforcement. In addition, the Federal Reserve Board is required to enter into memoranda of understanding with state regulators governing information sharing and supervision and to consult with state regulators.

Competition, Concentration of Power and Achieving a Level Playing Field.

Stablecoins first caught the attention of Congress when Facebook, now Meta, proposed launching Libra. Many in Congress on both sides of the aisle were concerned about the risks of concentration of power and misuse of data, and the erosion of the traditional separation of banking and commerce. Those issues, and in particular limitations on affiliate relationships and activities, remain important and need to be addressed. There are also critical policy choices that may shape how stablecoins affect banks and traditional means of intermediation, and competition and innovation generally. These include whether a stablecoin issuer should be allowed to pay interest, whether it should be granted access to the federal payments infrastructure, and whether the regulatory framework should be technology-neutral or technology-specific. These are addressed below.

<u>Limitation on Affiliate Relationships and Activities.</u> While the GENIUS Act and the STABLE Act limit the activities of a stablecoin issuer to those directly pertaining to stablecoins, there are no restrictions on the entities that could own an issuer or on its affiliate relationships, or on transactions with those affiliates. Yet those affiliate relationships pose multiple risks and concerns.

First, many of the same concerns that motivate strict prudential standards at the *entity level* apply with equal or greater force at the *group level*. Especially in the presence of significant intra-group exposures, financial distress within the wider corporate group can quickly engulf a stablecoin issuer, preventing it from meeting its financial obligations to customers. As a consequence, regulators should be given the power to establish rules governing intragroup relationships and transactions. At a minimum,

and as a corollary to the entity-level prohibition against borrowing, these restrictions should include a prohibition against any direct or indirect lending by a stablecoin issuer to its affiliates. They should also include restrictions on the ability to transfer or otherwise share customer or transaction information with its affiliates.

Second, the United States has long sought to separate "banking" from "commerce." While the rationales for this separation have evolved over time, a principal one is to avoid concentration of private market power over key inputs like capital, money and payments. Members of Congress on both sides of the aisle have expressed concerns about the power of a handful of technology firms. Permitting them to enter—or expand further into—the market for payments, where their enormous networks and privileged access to customer information give them substantial advantages, would only entrench their power further. To avoid this, a stablecoin issuer should be prohibited from affiliations with firms engaged in general commercial activities.

Other types of relationships raise concerns as well, such as those between a stablecoin issuer and other crypto firms, such as crypto trading platforms—relationships which already exist today. In the absence of any rules on affiliate transactions, such relationships might lead to the favoring of one particular stablecoin on a platform and policies to discourage the use of others. These relationships also raise concerns about the sharing of customer and transaction data.

Neither the STABLE Act nor the GENIUS Act contain any restrictions on affiliate relationships or transactions. Nor do they impose any separation between payments and commerce.

By contrast, the McHenry-Waters proposal provides that stablecoin issuers that are subsidiaries of IDIs are subject to the affiliation and group level activity restrictions of the Bank Holding Company Act. It also requires the Federal Reserve to issue regulations to prevent a "non-financial commercial company" from controlling a nonbank payment stablecoin issuer, to restrict the affiliates of such a nonbank issuer to activities that are "financial activities" or "incidental to such activities," and to impose restrictions on affiliate transactions similar to those for banks.²⁰

<u>Payment of Interest.</u> The proposals do not prohibit an issuer from paying interest on a stablecoin. That raises the possibility that stablecoins would serve not only as a means of payment but as an investment vehicle, much like a money market fund. It also could generate greater competition with banks and their ability to attract deposits. To date, there has been a substantial disincentive for stablecoin issuers to pay interest because a stablecoin might then be deemed a security. But the GENIUS Act and

²⁰ McHenry-Waters Act, Section 3(e)(2).

STABLE Act would eliminate that disincentive by providing explicitly that stablecoins are not securities. Because this is a new and evolving technology, and because we do not yet know how it might impact the financial sector generally, we should tread cautiously for the time being. The legislation should either prohibit the payment of interest or at least empower regulators to do so.

<u>Access to Central Bank Reserves and the Federal Payment Infrastructure</u>. Although the GENIUS Act and Stable Act include central bank reserves as a permitted investment, a stablecoin issuer can only hold central bank reserves if the Federal Reserve permits it to have a master account, and the Federal Reserve has taken the position that it does not currently have the authority to do so. Investing reserves in U.S. dollar central bank reserves would eliminate any risk related to intermediation, and access to the Federal Reserve's payment infrastructure would enhance efficiency of settlement and might enhance competition with banks with respect to payments. While there are many issues as to whether the Federal Reserve should grant access to a master account and the payment infrastructure that deserve full consideration, in a process that involves public comment, the legislation should give the Federal Reserve the *authority* to do so.²¹

<u>Creating a Level Playing Field.</u> Another element relative to competition is whether the legislation should be technology-neutral rather than technology-specific. That is, all three proposals create a new framework only for stablecoins, built on specific and largely similar definitions of "stablecoins," which are defined as a type of "digital assets" recorded on "cryptographically-secured distributed ledgers". The danger is that another technology will come along that will raise many similar issues but not be covered. In addition, we already have other nonbank payment platforms that will not be subject to this framework. To the extent there are benefits from this framework in terms of customer confidence in the stability of stablecoins or otherwise—they will not be entitled to them, nor will they be subject to the requirements of the framework. Thus, the framework may create an unlevel playing field relative to existing and possible future entrants to the market for payments. I recognize that there is bipartisan momentum to pass legislation that applies only to stablecoins, so this ship may have sailed. But we should recognize that the framework could become legally and technologically obsolete.

Similarly, although the proposals all permit federal regulators to prescribe standards for interoperability, any such standards are likely to focus only on interoperability as

 $^{^{21}}$ I note also that the language on central bank reserves is not limited to U.S. dollar central bank reserves. GENIUS Act, Section 4(a)(1)(A)(vii).

between stablecoin issuers. Because other payment providers would not be subject to the framework, it is difficult to see how interoperability would apply to them.

Enforcement. A final issue is how to extend the regulatory perimeter to capture stablecoin issuers operating outside of the U.S. Tether is and has always been the largest stablecoin issuer, with a market capitalization today of \$142 billion.²² Tether is incorporated offshore and is not subject to U.S. regulation (other than being registered as a money service business). For years now, many commentators and officials have expressed concerns about its practices, including the nature of its investments, its lack of transparency, and the use of Tether for money laundering and evasion of sanctions.²³ Of the five largest dollar-denominated stablecoins, two others are also not subject to U.S. regulation (FDUST and DAI), and we may see more as the market grows.

The GENIUS Act makes it "unlawful for any person other than a permitted payment stablecoin issuer to issue a payment stablecoin in the United States."²⁴ The STABLE Act contains slightly different language, prohibiting the issuance of stablecoins "for use by any person in the United States."²⁵ However, neither proposal has specific enforcement provisions. Both provide for modest civil monetary penalties for knowingly participating in the issuance of a prohibited stablecoin, but it is not clear who is responsible for enforcing this prohibition, nor are there any criminal penalties. By contrast, the McHenry-Waters proposal has a broader prohibition, gives the Attorney General enforcement power, provides explicitly for extraterritorial application, and has higher civil penalties as well as criminal penalties.

Of course, even if such enforcement provisions are added, a lenient state chartering path might offer a way for a stablecoin issuer that cannot or does not wish to meet federal requirements to remain in business without changing any practices. An issuer might persuade a state to design regulations to accommodate the issuer's registration, particularly if the issuer brought business to that state. Tether is an extremely profitable firm and surely has the ability to offer such inducements.²⁶ That is a

²² "Tether Market Cap." *CoinMarketCap*, accessed on February 25, 2025.

²³ See, e.g., New York State, Office of the Attorney General. Attorney General James Ends Virtual Currency Trading Platform Bitfinex's Illegal Activities in New York. New York State Attorney General Press Release, 23 February 2021; Prentice, Chris. "Crypto Firms Tether, Bitfinex to Pay \$42.5 [Million] to Settle U.S. CFTC Charges." Reuters, 15 October 2021; "Inside the Russian Shadow Trade," Wall Street Journal; "Hamas Needed a New Way to Get Money From Iran," Wall Street Journal; Faux, Zeke. "A Thin Crust of Ice." Number Go Up. Crown Currency, 2023.

²⁴ GENIUS Act, Section 3.

²⁵ See STABLE Act, Section 3.

²⁶ See Kharif, Olga. "Tether Sees \$10 Billion in Net Profits for 2024." Bloomberg, 20 December 2024.

reminder of the importance of getting a proper allocation of responsibility between state and federal authorities.

I note also that the GENIUS Act and the STABLE Act have provisions calling for the development of reciprocal arrangements or bilateral agreements with jurisdictions having substantially similar stablecoin regulatory frameworks to enhance interoperability, which I think is a good provision.

* * *

Market Structure

I would also like to make a few comments on market structure regulation.

First, designing market structure regulation is a far more difficult challenge than designing a stablecoin regulatory framework, and there is far less consensus on what to do. Market structure regulation requires resolving some complex regulatory boundaries, including when is a digital asset a security, a commodity, both or neither. There is a risk that we will significantly undermine the securities law framework that has served this country so well and has made our securities markets the envy of the world. The leading legislative proposals that have been introduced would likely do just that.

Second, while these issues need to be addressed, there are better ways to proceed at this time than to have Congress rewrite the securities and commodities laws in an attempt to define these jurisdictional boundaries properly. Congress should defer to the regulators for the time being. The SEC has already launched a crypto task force that is taking on these challenges. It is engaged in several areas of work, including examining "the status of crypto assets under the securities laws."²⁷ The CFTC has also announced its intention to engage in a variety of efforts to bring clarity to digital asset regulation. We should let the SEC and the CFTC engage in this work, and work together, to address these issues. Ideally, the agencies will engage in these efforts by also engaging with the public and soliciting input either through formal rule making or in other ways. Congress can then review what the agencies can do on their own, and what Congress may need to do, to achieve the proper framework.

It is especially ironic that many in the crypto industry want Congress to move forward quickly with market structure regulation even though that would effectively pre-empt

²⁷ Peirce, Hester M. "The Journy Begins." Statement by Securities and Exchange Commissioner Hester M. Peirce, 4 February 2025.

the SEC and CFTC from developing the rules and guidance they have requested for four years now.

Third, if Congress wishes to take action now, it should focus on directing the two agencies to work together to come up with appropriate rules. I have advanced a few suggestions in this regard. Former SEC Chair Jay Clayton (who was appointed by President Trump in his first term) and I proposed that the two agencies get together to develop joint rules for the crypto market, and Congress could mandate that this should happen.²⁸ Professor Howell Jackson and I also wrote a paper detailing how the two agencies could develop joint rules through a self-regulatory organization.²⁹ (I use the term SRO consistent with our laws—which is entities that are overseen in numerous ways by the regulator, as described in our paper. I do not mean simply an organization of industry representatives that claims it can regulate participants.) While the agencies could do this on their own, Congress could also mandate it.

Fourth, another way for Congress to provide a regulatory framework and some clarity to the market without drastically revising the securities laws is as follows: Congress would assign responsibility for regulating the "spot" market for tokens that are not securities to the CFTC, but it would not revise the definition of securities. It would also not define a new category of "digital commodities" that are deemed not to be securities. Instead, it would give the CFTC authority over any trading platform that trades bitcoin or ether. That would be a simple way to establish jurisdiction over the market—it is easy to identify such platforms, and there is no significant platform that does not trade those tokens. It would prescribe some core principles and direct the CFTC to develop rules to implement such principles—like prevention of fraud and manipulation, prevention or minimization of conflicts of interest, protection of customer assets, disclosure to investors, reporting requirements, and so forth. It would also mandate that those rules should apply not only to the trading of bitcoin and ether, but to all other tokens listed on the platform. That is critical to achieving full investor protection. It would further specify, however, that the platforms are not to trade securities, and that the CFTC and SEC should consult to determine if a token is a security. If a token is deemed a security, it would be removed from the platform and required to be traded on a securities platform, unless the SEC agreed otherwise. There would be provisions to deal with disagreements between the agencies.

This would create an immediate framework for regulation that protects investors without rewriting the securities laws. It would complement, rather than undermine,

²⁸ See Clayton, Jay and Timothy Massad. "How to Start Regulating the Crypto Markets—Immediately." *Wall Street Journal*, 4 December 2022; Clayton, Jay and Timothy Massad. "A Path Forward for Regulating Crypto Markets." *Wall Street Journal*, 7 July 2023.

²⁹ See Massad, Timothy G. and Howell E. Jackson. "How to Improve Regulation of Crypto Today—Without Congressional Action—and Make the Industry Pay For It." *Hutchins Center Working Paper*, no. 79, October 2022.

the work of the SEC's task force in defining the status of crypto assets under the securities laws and what areas fall out of their jurisdiction. It could be seen as a permanent or interim solution. As the market develops and we gain more knowledge, the approach could be refined. But it could very quickly bring investor protection to the market without undermining decades of securities laws and without creating more questions than answers.

Fifth, some of the legislative proposals for addressing market structure are deeply flawed in ways that could easily undermine our securities laws and frankly bring more confusion than clarity. This is especially true with respect to the use of the concept of "decentralization", which is a key metric in the Financial Innovation and Technology Act for the 21st Century (FIT 21).

Blockchain and smart contracts offer the potential to automate certain functions and reduce the role of traditional intermediaries exercising discretion. However, the term "decentralization" and "DeFi" are used to describe all sorts of protocols, processes and services taking place in the crypto universe that vary tremendously with respect to the degree to which they are automated, decentralized or distributed, or with respect to the degree to which firms or human actors exercise control or discretion. DeFi protocols and services often have what some in the academic community have called "centralization vectors"—that is, ways in which there is some degree of control or discretion, including administrative keys that permit modification of code or restricting access.³⁰ It is also the case that there may be an automated protocol but a related "front-end" service provided by a firm or person in which discretion and control are being exercised. Therefore, the term "decentralization" is of little value. We need more precise analysis and language to determine whether and how regulations might need to be adjusted.

In addition, calling something "decentralized" or "DeFi" should not be an exemption from regulation. On the contrary, we should look at the processes being performed or the services being provided and consider what are the best ways to achieve the regulatory goals that are nevertheless present. While automation and ability for users to control assets may reduce certain types of risks that are often the targets of regulation, they may introduce others, and in any event we must still ensure that the regulatory goals of consumer and investor protection, market integrity and transparency, financial stability or prevention of financial crime are achieved.

A simple example is to imagine a "decentralized" or automated platform for the trading of Treasury securities that becomes a dominant, and indeed systemically

³⁰ Shuler, Katrin, et al. "On DeFi and On-Chain CeFi: How (Not) to Regulate Decentralized Finance." *Journal of Financial Regulation*, vol. 10, no. 2, 2024.

important, platform given the importance of that market. Even if such a platform truly was automated and not subject to the control of a human operator, we would still want to make sure various regulatory goals were achieved.

When it comes to market structure, I do not think the concept of "decentralization" is the proper way to distinguish between tokens that should be considered securities and those that should be considered commodities, or the way to draw the line between the jurisdiction of the SEC and that of the CFTC. It is difficult to measure and not a good indicia of whether the securities law or commodities law framework should apply.

The FIT 21 Act in particular proposes a way to delineate jurisdiction between the agencies that is based on decentralization, how a digital asset is acquired, and who holds the digital asset. It is a very complicated test that is difficult to apply. Among other things, the classification of a token could change over time—not simply from a restricted security to a digital commodity, but back again. The "self-certification" process is an invitation for abuse. It is not clear there would even be sufficient information to apply the test accurately, and the decentralization component of the test has metrics that hardly seem "decentralized." The application of the test could also fracture the market with respect to any individual token—some might be commodities and some securities. It would not bring the regulatory clarity that its proponents claim.

Moreover, it could undermine our capital markets generally, by making it easy to evade the regulation that has been a foundation of their strength and attractiveness globally. The issue is not only that we must make sure the SEC retains authority for digital assets that have indicia of investment contracts. There is the risk that stocks, bonds and other securities could be wrapped in a digital token issued on a decentralized blockchain in an attempt to avoid securities law regulation altogether. Thus, the legislation could create the risk of wholesale regulatory arbitrage for securities of all sorts.

Sixth, the issues of preventing financial crime and sanctions evasion are critical in overall market structure regulation as they are with stablecoins. This is another reason first to put in place a stablecoin regulatory framework that gives the Treasury Department and regulators sufficient authority to develop appropriate measures to address those risks, and then build on that in addressing market structure.

For all these reasons, we should proceed carefully in addressing the market structure question, and should get stablecoin legislation in place first. Stablecoins are a product that have great potential, as discussed above. What regulators learn in addressing this market will be useful as we think about other aspects of digital asset regulation.

* * *

I would like to make comments on two other issues in the Executive Order, as the Subcommittee may be asked to consider these issues in the future, one being the crypto stockpile and the other concerning the language prohibiting a CBDC.

Bitcoin Strategic Reserve or Crypto Stockpile

The working group created by the Executive Order is directed to "evaluate the potential creation and maintenance of a national digital asset stockpile and propose criteria for establishing such a stockpile, potentially derived from cryptocurrencies lawfully seized by the Federal Government through its law enforcement efforts."³¹

I believe the creation of a crypto stockpile is a bad idea for several reasons, as is the idea of a bitcoin strategic reserve. The President suggested the latter during the campaign, and some have gone even further by suggesting that not only should the government hold on to bitcoin it seizes but also the government should actually buy more bitcoin.

Assets seized through law enforcement efforts are typically sold in auctions or returned to the victims of the crimes which led to the seizures. I do not believe we should make an exception and hold on to crypto. It would create an unlevel playing field in this regard, and there is no good argument in its favor.

The expectation that prices of crypto will appreciate is not a good reason to retain what we seize or to buy more. There is no assurance prices will appreciate, of course. Crypto prices have been extremely volatile and there are plenty of examples of tokens that shot up in price only to later crash (e.g., FTT (the FTX token), or Luna, the token backing the Terra stablecoin that collapsed). A better argument can be made on that basis for holding on to equity securities that the government seizes—they have a longer and more consistent record of appreciating in price and are just as easy to store, but the government should not retain, or generally invest in, those either.

There is no strategic reason for the government to hold on to bitcoin or other crypto tokens. Doing so would not serve an important use case as there is with oil, for which we created a strategic reserve. It is also neither necessary nor desirable to create such a stockpile or reserve to advance the country's leadership in this technology. The way to do that is to create legal frameworks that allow for responsible private sector innovation. It is more likely that government investment would distort policy choices and create risks of conflicts and corruption. Finally, the idea that a bitcoin reserve

³¹ Executive Order 14178.

would support the dollar or the monetary system has been thoroughly debunked by George Selgin at the Cato Institute and others.³²

Executive Order Language on a CBDC

The Executive Order language concerning a CBDC also raises concerns.

I recognize there are strong views on the subject of a retail CBDC among the members of this Subcommittee and I do not wish to focus on that issue. However, if we want the private sector to develop digital asset and blockchain technology to facilitate tokenization of assets of real value, and utilize atomic settlement so that transactions involving such assets settle instantly and efficiently on chain, the federal payments infrastructure operated by the Federal Reserve must be compatible. Banks (and other payment institutions that might be granted access to the system in the future) must be able to settle the digital asset transactions of their customers in a compatible and efficient manner. While settlement between banks is already electronic, there may be systems improvements that are necessary to facilitate interbank settlements involving their respective on-chain atomic settlement transactions.

In addition, the dollar is the primary currency for international trade and transactions. With the growth of stablecoins and digital assets as well as fast payment systems generally around the world, we must make sure that the technology for cross-border payments flowing through the federal payments infrastructure remains at the cutting edge. That does not require the issuance of a CBDC that individuals would hold. But it means making sure the Federal Reserve continues to do necessary research and development.

Unfortunately, the language in the Executive Order has such breadth that it raises concerns as to whether any such research and development can continue. That is because it defines a CBDC very broadly, as "a form of digital money or monetary value, denominated in the national unit of account, that is a direct liability of the central bank," and it prohibits "any action to establish, issue, or promote CBDCs within the jurisdiction of the United States or abroad" and any "plans or initiatives" related to the creation of a CBDC.³³

³² Selgin, George. "The 'Digital Gold' Fallacy, or Why Bitcoin Can't Save the US Dollar." *Cato Institute*, 29 November 2024. *See also* Carter, Nic. "I Don't Support a Strategic Bitcoin Reserve, and Neither Should You." *Bitcoin Magazine*, 30 December 2024.

³³ Executive Order 14178.

If the Subcommittee wants to bring about development and innovation with respect to digital assets, it should make sure our core payments infrastructure can handle it.

Finally, I know that many are opposed to a retail CBDC because they are concerned the government would use that technology to monitor transactions of individuals, collect data on individuals, target political opponents, or even censor transactions. We have witnessed an unprecedented seizure of the Treasury payment system recently in a manner that creates many of the same risks. The Treasury payments system is critical to the operation of the government and our economy. Approximately 90% of all government payments flow through that system. Approximately 1.3 billion payments, having a value of over \$6 trillion, were made last year. Tens of millions of individuals depend on it for direct payments or for payments made by institutions paid through that system. Access to that system is normally limited to a handful of people even within Treasury. But in this case, a few young programmers who had no prior experience with the system or even working in the government obtained access. While the courts have at least temporarily limited their access,³⁴ the seizure creates risks similar to those that many worry would come with a retail CBDC. It creates the possibility that payments could be stopped or "edited" notwithstanding the absence of legal authority to do so, thereby usurping the power of Congress. It creates the risk that huge quantities of data on individuals could be harvested and used in inappropriate ways. It poses additional serious risks—including simply interfering with or damaging the system in such a way that payments are disrupted, or undermining confidence in a manner that negatively affects the credit and standing of the United States.

* * *

The Trump Meme Coins

Finally, although the Trump meme coins are not part of the Subcommittee's agenda, they cannot be ignored when the Subcommittee's desire is to create frameworks that can encourage responsible and useful innovation. It is difficult to imagine an action that the President could take which would be more contrary to the spirit and opening words of the Executive Order, issued just a few days later, which is to "promote United States leadership in digital assets" and "responsible growth

³⁴ See United States, United States District Court for the Southern District of New York. *State of New York v. Trump* [Court Opinion and Order]. Docket no. 25-1144, 21 February 2025; United States, United States District Court for the District of Columbia. *Alliance for Retired Americans v. Bessent* [Court Order]. Docket no. 25-0313, 6 February 2025. *See also* United States, United States District Court for the District of Columbia. *Alliance for Retired Americans v. Bessent* [Complaint]. Docket no. 25-0313, 3 February 2025.

and use of digital assets."³⁵ One does not have to be a digital assets expert to understand why the issuance of the meme coins contradicts the spirit of that order and was plainly wrong. It was a money grab and a conflict of interest. The potential for conflicts of interest will also continue over time. Companies and countries looking to curry favor with the Administration or seeking government action may believe it is in their interest to purchase the coins to show their support. That risk is heightened by the structuring of the issuance, because additional tokens will be released over the next four years which will presumably generate additional revenue to the Trump Organization, which creates incentives for others to push up the price.

It is a black eye for digital assets. It is exactly the kind of speculative behavior that we have seen too much of and it reinforces many of the negative perceptions of digital assets. It is simply, as one observer said, a "classic meme-coin pump and dump scheme."³⁶

Conclusion

I share your desire to create responsible digital asset regulation. The United States created an excellent regulatory framework for securities markets beginning in the 1930s, one that remains a model for countries around the world and has been a foundation for our markets to become the most important in the world. We can do the same here.

³⁵ Executive Order 14178.

³⁶ Khalili, Joel. "The Trump Memecoin's 'Money-Grab' Economics." *Wired*, 20 January 2025 (citing Interview with Jacob Silverman).

Appendix: Recent Publications and Testimony on Digital Assets

"Stablecoins and national security: Learning the lessons of Eurodollars," Timothy G. Massad, The Brookings Institution, April 17, 2024, https://www.brookings.edu/articles/stablecoins-andnational-security-learning-the-lessons-of-eurodollars/

"The U.S. Can Make the Rules on Stablecoins, or We Can Take Them," Barron's, July 19, 2023, https://www.barrons.com/articles/stablecoins-regulation-currencies-us-6e759212

Jay Clayton and Timothy Massad, "A Path Forward for Regulating Crypto," The Wall Street Journal, July 7, 2023, https://www.wsj.com/articles/regulating-crypto-markets-1e5ec5c5

Testimony before the Subcommittee on Digital Assets, Financial Technology and Inclusion of the U.S. House of Representatives Financial Services Committee and the Subcommittee on Commodity Markets, Digital Assets and Rural Development of the U.S. House of Representatives Committee on Agriculture, "The Future of Digital Assets: Measuring the Regulatory Gaps in the Digital Asset Market," May 10, 2023, https://financialservices.house.gov/calendar/eventsingle.aspx?EventID=408754

Testimony before the Subcommittee on Commodity Markets, Digital Assets and Rural Development of the U.S. House of Representatives Committee on Agriculture, "The Future of Digital Assets: Identifying Gaps in Spot Market Regulation" April 27, 2023, https://agriculture.house.gov/calendar/eventsingle.aspx?EventID=7604

Jay Clayton and Timothy Massad, "How to Start Regulating the Crypto Markets—Immediately," The Wall Street Journal, Dec. 4, 2022, https://www.wsj.com/articles/how-regulate-cryptocurrency-markets-11670110885

"How We Can Improve Regulation of Crypto Today—Without Congressional Action—and Make the Industry Pay For It," Timothy Massad and Howell Jackson, October 13, 2022, https://www.brookings.edu/research/how-to-improve-regulation-of-crypto-today-without-congressional-action-and-make-the-industry-pay-for-it/

"Former CFTC Chair on How to Regulate Stablecoins Without Passing Any New Laws, "Odd Lots Podcast, September 22, 2022, https://podcasts.apple.com/us/podcast/former-cftc-chair-on-how-to-regulate-stablecoins-without/id1056200096?i=1000580279346

"How We Can Regulate Stablecoins Now—Without Congressional Action," Howell Jackson, Timothy Massad and Dan Awrey, The Brookings Institution, August 2022, https://www.brookings.edu/research/how-we-can-regulate-stablecoins-now-withoutcongressional-action/

"The Treasury Option: How the U.S. Can Achieve the Financial Inclusion Benefits of a CBDC Now," Howell Jackson and Timothy Massad, The Brookings Institution, March 2022, https://www.brookings.edu/research/the-treasury-option-how-the-us-can-achieve-the-financial-inclusion-benefits-of-a-cbdc-now/

Presentation to SEC Investor Advisory Committee on digital assets regulation, Dec 2, 2021 Banking With Interest Podcast, November 30, 2021, https://bankingwithinterest.libsyn.com/abetter-way-forward-for-cbdcs-stablecoins

Testimony before the Joint Economic Committee of Congress, November 17, 2021, on regulation of digital assets and central bank digital currencies, https://www.jec.senate.gov/public/index.cfm/hearings-calendar?ID=215B7EAF-1838-4CE3-A499-55B99EA864F9

"Regulating Stablecoins Isn't Just About Avoiding Systemic Risk," The Brookings Institution, October 5, 2021, https://www.brookings.edu/research/regulating-stablecoins-isnt-just-about-avoiding-systemic-risk/

"A Bitcoin ETF Would Be Good for Investors and Regulators," Bloomberg, July 7, 2021, https://www.bloomberg.com/opinion/articles/2021-07-07/a-bitcoin-etf-would-be-good-for-investors-and-regulators?sref=hU7uPhn8

"Can a Cryptocurrency Break the Buck?" Bloomberg, May 31, 2021, https://www.bloomberg.com/opinion/articles/2021-05-31/stablecoins-like-tether-should-face-regulators-scrutiny?sref=hU7uPhn8

"Coinbase's Small Fine Is a Big Warning to IPO Investors," Bloomberg, April 8, 2021, https://www.bloomberg.com/opinion/articles/2021-04-08/coinbase-s-small-fine-is-a-big-warning-to-ipo-investors?sref=hU7uPhn8

"Cryptocurrencies: Speculative Bubble or the Future of Money?" Presentation at Harvard University, April 1, 2021, https://www.youtube.com/watch?v=4cJB11qnVqA

"Libra 2.0: Why you might like it even if we can't trust Facebook," The Brookings Institution, June 2020, https://www.brookings.edu/research/facebooks-libra-2-0/

"It's Time to Strengthen the Regulation of Crypto-assets," The Brookings Institution, March 2019, https://www.brookings.edu/research/its-time-to-strengthen-the-regulation-of-crypto-assets/