

Stablecoins: Promoting Innovation While Addressing Risks

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Following last November's interagency [Report on Stablecoins](#) by the President's Working Group on Financial Markets, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency, and December's [congressional hearings both at the Senate Banking Committee](#) and the [House Financial Services Committee](#), we expect Congress to take up stablecoin legislation in 2022. Given [divergent views](#) on how stablecoins should be regulated, it is not clear whether congressional efforts to establish a federal prudential framework will be able to address the regulatory and supervisory concerns of federal banking regulators while also satisfying the market development interests of stablecoin issuers. There is an urgency to this effort, particularly given the recent explosive growth in stablecoins, and the potential widespread adoption of stablecoins as a means of payment outside the crypto ecosystem. In developing a framework for federal prudential regulation that advances the interests of all stakeholders, it is important to consider the unique attributes of stablecoins and their attendant risks.²

Stablecoins are a hybrid financial instrument. Federal policymakers should consider the worst-case scenario and lessons learned from the past financial crisis when developing a framework for regulating stablecoins. This approach should incorporate appropriate recovery and resolution plan requirements, as one state has done,³ given the rapid growth of the stablecoin industry and associated liquidity, operational, and potential systemic risks.

In Part 1 of this paper, we provide a brief overview of stablecoins, explore stablecoin economics, and discuss stablecoin characteristics. In Part 2, we outline various risks and policy concerns noted by federal bank regulators and members of Congress and discuss broad principles to guide development and implementation of a special purpose federal banking charter. In Part 3, we explore stablecoin's potential benefits outside the crypto ecosystem and discuss ways for innovation to continue within a clear and consistent prudential regulatory framework.

1. Stablecoin Overview

A payment stablecoin is a type of cryptocurrency that is designed to maintain a stable value relative to a national currency or other reference asset and be redeemable for fiat currency.⁴ Stablecoins are non-interest bearing and collateralized by assets that are stored off the blockchain and "in reserve" with a central issuer or financial institution.⁵ The largest stablecoins run on multiple blockchains⁶ but are separate tokens on each blockchain that share a single backing.⁷

According to the [2021 Financial Stability Oversight Committee \(FSOC\) Report](#), the market capitalization of stablecoins issued by the largest stablecoin issuers exceeded \$127 billion as of October 2021.⁸ This amount reflects a nearly 500 percent increase over the preceding 12 months. The FSOC Report notes that as of December 2021, stablecoins are predominantly used in the United States to facilitate trading, lending, and borrowing of other digital assets. For example, stablecoins allow market participants to engage in speculative digital asset trading; to move value easily between digital asset platforms and applications; and to store and transfer value associated with digital asset trading, lending, and borrowing within the distributed ledger environment. In general, stablecoins cannot be exchanged for goods and services outside of the crypto ecosystem, although it is anticipated that widespread adoption of stablecoins as a means of payment could occur rapidly, and consumers will soon be able to use stablecoins as a form of remittance, facilitating the ["near-real-time" cross-border settlement of funds](#).

Stablecoin Business Model and Economics

If the price of a stablecoin is pegged to a national currency like the U.S. dollar, why would someone invest in stablecoins? How does an investor redeem their stablecoins? How do stablecoin issuers make a profit? Market participants engage in digital asset trading invest in stablecoins because their value is tied to a known reserve currency (such as the U.S. dollar or Euro), which makes it comparatively more stable in value compared to digital currencies that are not collateralized, such as bitcoin or ether. Thus, stablecoins operate both as a medium of exchange and an investment product. Using crypto brokerages, it is easier for digital asset traders to convert bitcoin into stablecoin as compared to cash (which relies on the banking system). Investors typically hold their stablecoins in a digital wallet hosted by a custodial wallet provider that interacts with the blockchain that manages and tracks their stablecoins.

Investors are attracted to the stability associated with stablecoins given the reserves that back their value. Thus, the primary risk investors assume is "reserve risk"—i.e., [when stablecoins are not fully backed by reserve currencies \(either in cash or other kinds of high quality liquid assets\) to support all of a stablecoin's value](#). After a stablecoin investor creates an account on a crypto exchange and deposits money into the account (via bank transfer, or through a debit or credit card), the investor makes a purchase (typically incurring a .01 percent—.04 percent fee)⁹ and the stablecoin issuer agrees to mint and buy back the stablecoin at par upon redemption via a tokenized IOU. Issuers hold reserve assets to back their obligation to redeem the outstanding stablecoins, providing comfort that the issuer can buy back all of an investor's outstanding coins, on demand. Currently, however, stablecoins are not subject to a federal prudential regulatory standard, including uniform disclosure or redemption requirements.

Similar to purchasing stablecoins, in order to convert (or "redeem") stablecoins back into U.S. dollars, stablecoin investors need a bank account.¹⁰ The cost of redeeming stablecoins can vary greatly depending on the exchange and applicable fees. In testimony before the U.S. Senate Banking Committee last December, Alexis Goldstein, Director of Financial Policy at the Open Markets Institute, discussed the fees (i) a stablecoin investor (Person A), using ACH, would pay initially to move \$200 onto a cryptocurrency exchange, purchase a stablecoin, and send approximately \$200 worth of stablecoins to another person (Person B) on the same exchange; and (ii) Person B would pay to trade the stablecoin for their local currency (Euro), and then withdraw it. Goldstein's examination concluded that the total fees incurred by utilizing stablecoins and cryptocurrency exchanges is more expensive (\$5.98 on the low end, and \$86.44 on the high end) compared to utilizing a payment system like Western Union, which would incur \$4.88 in fees for the same funds transfer.¹¹

The potentially lucrative trading fees associated with both the issuance and redemption of stablecoins help explain how stablecoin issuers make a profit,¹² but may not provide a complete picture across all stablecoin issuers. For example, some stablecoin issuers may believe that not every stablecoin investor will seek to redeem their investment at the same time. Therefore, with collateral backing the stablecoin, issuers may invest a portion of the collateral base in the short term (e.g., U.S. treasuries and money market funds), turn a profit, and still have enough reserves on hand to pay back those investors who seek to redeem. In July 2021, [Fitch Ratings reported](#) that "the rapid growth of stablecoin issuance could, in time, have implications for the functioning of short-term credit markets,"

presenting "potential asset contagion risks linked to the liquidation of stablecoin reserve holdings." Fitch Ratings noted this "run risk" was especially acute for stablecoins that use fractional reserves (i.e., holding a proportion of collateral in liquid assets as a reserve) or adopt higher-risk asset allocation such as Tether, which disclosed on March 31, 2021 that it held only 26.2 percent of its reserves in cash, fiduciary deposits, reverse repo notes and government securities, with a further 49.6 percent in commercial paper.¹³

Currently, the U.K. Prudential Regulatory Authority is exploring what regulation might be necessary to enable stablecoin issuers who pose systemic risk to hold reserve assets in central bank accounts, commercial bank deposits, or high-quality liquid assets.¹⁴ If adopted, this could require stablecoin issuers to back their tokens (i) with high-quality liquid assets (HQLA); (ii) with central bank liabilities equivalent to reserves; or (iii) with deposits placed at commercial banks acting as custodians.

Hybrid Classification

While stablecoin issuers may have differing business models, as a whole they have been compared to unregulated banks.¹⁵ Additionally, stablecoin arrangements have been compared to demand deposits and money market funds (MMFs),¹⁶ and while stablecoins do have similarities to both demand deposits and MMF shares, as a hybrid they are neither.

Under the Bank Holding Company Act (BHCA), an institution is considered a bank (subject to certain exemptions) if it is either (1) an FDIC-insured bank or (2) an institution that accepts demand deposits and makes commercial loans.¹⁷ While, as discussed below, the Report on Stablecoins seeks to categorize stablecoin issuers as FDIC-insured banks, stablecoin issuers today are **not** FDIC insured. Notwithstanding the absence of deposit insurance coverage, stablecoin arrangements can also be viewed as a form of demand deposit—i.e., payable on demand (or on less than seven days' notice).¹⁸ Some stablecoin issuers, however, may under the terms of their stablecoin arrangement, postpone redemption payments for seven days, or suspend redemptions at any time,¹⁹ making the demand deposit analogy imperfect for all situations. Stablecoin issuers also do not make commercial loans, and therefore do not meet the second prong of the BHCA.²⁰ Fundamentally, stablecoin issuers do not engage in maturity and liquidity transformation—i.e., using short-term deposits to make long-term loans and investments—which is the "core function of modern banking and the lifeblood of the real economy."²¹ Stablecoin issuers are therefore not banks in either a statutory or economic

sense, even though, in certain situations, their contractual relationship with a stablecoin investor is akin to that of a bank and its depositor.²²

Unlike demand deposits, MMFs are regulated by the Securities and Exchange Commission (SEC), are required to invest in short-term debt securities (e.g., certificates of deposits, U.S. Treasury bills, commercial paper), and are not insured by the FDIC. While there have only been two instances where an MMF fell below a \$1.00 share price, MMFs—like stablecoins—are similarly susceptible to run risk or "breaking the buck."²³ When the net asset value of an MMF falls below \$1.00, investors will no longer be able to redeem one share for one dollar. This is like bank depositors not being able to withdraw the full value of their demand deposits,²⁴ or stablecoin investors not being able to redeem their stablecoins at par.

Breaking the buck can quickly result in market-wide panic and contagion risk as investors rush to sell their shares *en masse*. These impacts were experienced after Lehman Brothers filed for bankruptcy in September 2008 (sparking the last financial crisis) and in March 2020, as volatility spread through global markets because of COVID-19. In each case, investors requested substantial redemptions from prime and tax-exempt MMFs, and the Federal Reserve established emergency facilities designed to provide nonrecourse loans to U.S. banking firms secured by high-quality asset-backed commercial paper purchased by the banking firms from MMFs. In March 2020, eligible collateral under the Federal Reserve's [MMLF facility](#) covered a much wider array of short-term debt securities.²⁵

Addressing Run Risk

While stablecoins share certain characteristics of demand deposits as well as MMF shares and other securities, stablecoin arrangements—and their underlying business models—are unique. In considering a sensible federal regulatory framework that addresses run risk, policymakers might accept the difficulty with categorizing stablecoins at the outset, and instead consider the varying consequences that would result under both a bank and MMF model if a stablecoin issuer were to fail. The resolution regime or other process that would ensue if a stablecoin issuer could not meet redemption demand—even where reserves are fully held in cash and cash equivalents—is a critical question for federal policymakers to consider more fully, particularly given the potential for stablecoin arrangements to scale rapidly and pose both systemic and operational risk.²⁶

To help chart a regulatory course, policymakers should consider possible stablecoin failure from a safety and soundness, consumer protection, and financial stability perspective. What is the optimal supervisory framework that would be charged with helping ensure the safety and soundness of stablecoin issuers and wallet providers? Could a dual supervisory examination process work across state and federal regimes or would a federal regulatory framework render state examination obsolete? Now imagine the continued rise of stablecoins as a widespread form of digital money, the fact that today they are not treated as banks or subject to clear and uniform reserve requirements, and the prospect of material financial distress or operational failure. What if stablecoin issuers do not have sufficient assets to address mass redemptions, posing systemic risks to the broader financial system? Or, what if sufficient assets are on hand, but because of a [software bug](#) or [wallet provider cyberattack](#) investors cannot redeem their stablecoins?

Under a securities-centric model, the Federal Reserve—as in the case of MMFs—could step in and provide emergency assistance to stabilize the financial markets. But this result is undesirable from a moral hazard perspective. It is also at odds with an overarching goal of the [President's Working Group on Financial Markets](#) for MMF reform to "reduce the likelihood that official sector interventions and taxpayer support will be needed to halt future MMF runs or address stresses in short-term funding markets more generally."²⁷ Alternatively, analogous regulatory measures, [such as proposed increased liquidity requirements for MMFs](#), could make stablecoins resilient to systemic risk, mitigating the need for emergency intervention, but carry a cost related to increased regulatory burdens.

If policymakers are primarily focused on minimizing the need for federal emergency intervention and taxpayer support in the context of run risk, they might prefer a bank-centric model with a resolution regime that has processes in place to address sudden or severe liquidity problems associated with failed insured depository institutions (e.g., deposit runs).²⁸ This model assumes some stablecoin arrangements could meet the requirements for pass-through deposit insurance coverage,²⁹ with the FDIC serving as receiver for a failed stablecoin issuer under the Federal Deposit Insurance Act. While this regime is designed to protect customers' insured deposits at banks and is backed by the Deposit Insurance Fund (which is funded by assessments on insured banks), it could be replicated in the stablecoin issuer context, albeit not without some industry objections and trade-offs. For example, it would presumably entail imposing on stablecoin issuers some form of the FDIC's supervisory framework for operational safety and soundness and

consumer protection. It would also involve the imposition of assessments on stablecoin issuers to support this regulatory, supervisory, and resolution structure. In particular, stablecoin issuers would potentially be subject to leverage and risk-based capital ratios that may not align with their fully backed, 100 percent reserve of cash or cash equivalents³⁰ business model.³¹ Recently [updated capital guidance requirements](#) issued by the State of Wyoming for special purpose depository institutions in July 2021 could be a useful model for policymakers in considering how to calibrate capital ratios proportional to the stablecoin issuer business model.

Alternatively, if stablecoin issuers are not regulated like banks or MMFs, either Chapter 7 and/or 11 of the U.S. Bankruptcy Code could be the applicable regime. Do the policy considerations change assuming the activities conducted within stablecoin arrangements pose (or could pose) systemic risk, meaning their failure could have significant impacts on financial stability in the United States? In the latter scenario, policymakers have several choices:

1. Through congressional action, they could require stablecoin issuers to fully back issuances by a 100 percent reserve of cash or cash equivalents (as "full-reserve" narrow banks), thereby increasing the likelihood that issuers could meet redemption demand (and freeing taxpayers from having to bail out failed stablecoin issuers); or
2. They could default to an established prudential regulatory regime that does not depend on congressional action and instead, via FSOC:
 - a. Subjects the designation, under Title VIII of the Dodd-Frank Act, of certain activities conducted within stablecoin arrangements as, or as likely to become, systemically important payment, clearing, and settlement (PCS) activities, which would permit the appropriate agency to establish risk-management and other prudential standards for financial institutions that engage in such activities;³² or
 - b. Designates stablecoin arrangements as systemically important financial market utilities (FMUs), subjecting those arrangements to consolidated supervision;³³ or
 - c. Designates stablecoin issuers as "systemically important financial institutions" (SIFIs), pursuant to FSOC's authority in Title I of the

Dodd-Frank Act (assuming the relevant PCS activities are not regulated as securities), meaning issuers would be subject to enhanced prudential standards (e.g., capital, liquidity, and resolution planning requirements).³⁴

Policy options across this continuum raise the concern that while regulation may serve a clear prudential purpose, too much (or insufficiently tailored) regulation could stifle responsible innovation. Conversely, the danger in not defining a sensible, uniform, and clear regulatory path tailored to stablecoins now is the prospect that significant risks could rapidly materialize with more widespread adoption of stablecoins, as articulated in the Report on Stablecoins and by members of Congress.

2. Policy Concerns

Regulatory Agency Priorities

Along with the President's Working Group on Financial Markets—which consists of the Secretary of the Treasury, the Chair of the Board of Governors of the Federal Reserve System, the Chair of the SEC, and the Chair of the Commodity Futures Trading Commission (CFTC)—the FDIC and the Office of the Comptroller of the Currency (collectively, the PWG) joined in the issuance of the interagency Report on Stablecoins on November 1, 2021 (Report). The Report represents the collective views of the federal banking agencies—in consultation with a variety of market participants, trade associations, and experts³⁵—and is the result of comprehensive, meaningful, and proactive interagency coordination. As discussed below, however, certain of its recommendations have been questioned by various stablecoin experts, academics, and members of Congress, supporting the view that a federal prudential framework is not straightforward, and will require a nuanced and balanced approach.

The Report's key takeaway is its urgent appeal for Congress to act expeditiously to establish oversight and regulation of stablecoin issuers, wallet providers, and related entities. The goal of such legislation would be "to ensure that payment stablecoins and payment stablecoin arrangements are subject to a federal prudential framework on a consistent and comprehensive basis."³⁶ Supporting its recommendations are the PWG's concerns with three key risks: (i) "run risk"/risks to financial stability;³⁷ (ii) payment system risk; and (iii) risks of scale.

First, the Report cautions that a stablecoin failing to maintain the requisite confidence in its users could pose a "systemic risk" of a run on a single stablecoin, or worse, a run on other stablecoins or other types of financial institutions or instruments believed to share a similar risk profile.³⁸ Second, the Report considers the various risks associated with payment systems, including operational risk,³⁹ settlement risk,⁴⁰ and liquidity risk.⁴¹ Third, the Report notes that in the past year alone, stablecoins have shown the ability to grow rapidly at both an individual and an aggregate level. Citing this growth, the Report raises three sets of policy concerns associated with an individual stablecoin being able to scale rapidly, including that:

- An issuer's failure or key participant could pose systemic risk.
- The combination of a stablecoin issuer or a wallet provider with a commercial firm could lead to an excessive concentration of economic power.
 - This could raise "policy concerns analogous to those traditionally associated with the mixing of banking and commerce, such as advantages in accessing credit or using data to market or restrict access to products."
 - This could also have "detrimental effects on competition and lead to market concentration in sectors of the real economy."⁴²

In response to these risks, the Report recommends requiring stablecoin issuers to be insured depository institutions that are regulated at both the depository institution and the holding company level, and notes that certain stablecoin arrangements may qualify for deposit insurance—e.g., as a "pass-through" deposit.⁴³ In addressing payment system risk, the Report recommends that custodial wallet providers be subject to appropriate federal oversight, and that "the federal supervisor of a stablecoin issuer" impose appropriate risk-management standards on "any entity that performs activities that are critical to the functioning of the stablecoin arrangement."⁴⁴ On the topic of systemic risk and concentration of economic power, the Report recommends requiring issuers to comply with activities restrictions that limit affiliation with commercial entities, such as limits on affiliations with commercial entities and/or on the use of users' transaction data.⁴⁵

Additional risks referenced in the Report that are of particular interest to the SEC and CFTC include risks related to market integrity and investor protection, which encompass possible fraud and misconduct in digital asset trading, including market manipulation, insider trading, and front running, as well as a lack of trading or price transparency.⁴⁶

Beyond the Report, the federal banking agencies have raised related risks, including [consumer protection](#) concerns focusing on the unbanked and underbanked, and [ensuring that consumers retain access to a form of safe central bank money](#). Through the FSOC, federal regulators have noted that stablecoins are often advertised as being supported or backed by a variety of "reserve assets," but that the reserves of these stablecoins may not be subject to rigorous audits and the quality and quantity of collateral may not, in some cases, correspond to the issuer's claims.⁴⁷

Congressional Views

Following issuance of the Report, on December 8, 2021, the House Financial Services Committee held a hearing on "Digital Assets and the Future of Finance: Understanding the Challenges and Benefits of Financial Innovation in the United States."⁴⁸ In her opening remarks, Chairwoman Waters stated:

As the prevalence of cryptocurrency grows, it has also raised environmental concerns tied to the computing power needed to mine some of the coins, which can rival the energy needs of entire countries like Sweden or Argentina. At the same time, the promise of digital assets in providing faster payments, instantaneous settlements, and lower transaction fees for remittances are areas that our Committee is exploring.⁴⁹

On December 14, 2021, the Senate Banking Committee (SBC) held a hearing to address growing concerns over the security and legitimacy of stablecoins. In his opening statement, SBC Chairman Sherrod Brown noted:

[T]hese tokens can crash, with crypto markets diving by almost 30 percent in one day. History tells us we should be very concerned when any investment becomes so untethered from reality. Look at the 1929 stock market crash. . . . Stablecoins and crypto markets aren't actually an alternative to our banking system. They're a mirror of the same broken system – with even less accountability, and no rules at all. . . . So let's be clear about one thing: if you put your money in stablecoins, there's no guarantee you're going to get it back.

They call it a currency, implying it's the same as having dollars in the bank, and you can withdraw the money at any time. But many of these companies hide their terms and conditions in the fine print, allowing them to trap customers' money. And if there's no guarantee you'll get your money back, that's not a currency with a fixed value – it's gambling. And with this much money tied up, it sure looks to me like a potential asset bubble.⁵⁰

In contrast, the Ranking Member of the SBC, Senator Pat Toomey, observed:

Stablecoins can speed up payments, especially cross-border transfers, reduce costs, including remittances, and help combat money laundering and terrorist financing through an immutable and transparent transaction record. . . . [S]tablecoins are a very important innovation, and they introduce new capabilities into money that did not previously exist. In addition to their ease of use and reduced fees associated with their transfer, stablecoins can improve the privacy and security of our transactions. They also introduce the concept of money programmability, or smart contracts, which allow automated transactions based on a sequence of verifiable events. In recognition of the potential of these new capabilities, any regulation should be narrowly tailored and designed to do no harm. At the same time, sensible regulatory standards may help to protect against key risks, such as redemption or run risk.⁵¹

The discussion and testimony that followed focused on whether:

1. Stablecoin issuers should be insured depository institutions (following the Report's recommendations) given their unique business models compared to banks;
2. Federal oversight can adequately protect against consumer harm and systemic risks, including "run risk";

3. Federal oversight over stablecoins and related prudential requirements could stifle innovation and make the United States less competitive; and
4. Stablecoins can promote financial inclusion.

Following the SBC hearing, Senator Toomey issued a statement on [Stablecoin Principles to Guide Future Legislation](#), noting that "[l]egislation should promote innovation in the rapidly evolving global digital economy." The Toomey Principles deserve closer study as they help set the stage for future stablecoin legislation and potential bipartisan support.

Principle 1. *Stablecoin issuance should not be limited to insured depository institutions because stablecoin issuers have different business models than traditional banks; requiring all stablecoin issuers to become banks would stifle innovation, and the regulation of payments activities should create a level playing field.*

While it is true that stablecoin issuers have different business models than banks (i.e., they do not engage in liquidity or maturity transformation), it is not clear that requiring stablecoin issuers to become insured depository institutions would stifle innovation. Circle's Co-Founder and CEO, Jeremy Allaire, recently [stated](#) that Circle is "seeking to become a U.S. Federally-chartered national commercial bank, operating under the supervision and risk management requirements of the Federal Reserve, U.S. Treasury, OCC, and the FDIC." Mr. Allaire went further: "[F]ull-reserve banking, built on digital currency technology, can lead to not just a radically more efficient, but also a safer, more resilient financial system."⁵²

Practically, it is not clear how stablecoin issuers with a full-reserve (or "narrow bank") model could meet the minimum leverage capital ratios that apply to "fractional reserve" banks—i.e., banks that invest deposits in commercial loans or other illiquid assets that generate higher returns than cash or cash equivalents.⁵³ Even if Congress could recalibrate bank-centric capital ratios to accommodate stablecoin issuer business models,⁵⁴ the Federal Reserve, in 2019, expressed [several concerns about narrow banks](#) outside the context of stablecoins—in particular, the idea that state-chartered financial institutions with business models that involve taking deposits from institutional investors and investing all or substantially all of the proceeds in balances at Reserve Banks operate outside of "the same set of capital and other prudential requirements as other federally regulated banks."⁵⁵

Principle 1 envisions providing stablecoin issuers with a choice of three regulatory regimes:

- (i) Operating under a conventional bank charter;
- (ii) Acquiring a special-purpose banking charter designed for stablecoin providers in accordance with new legislation; or
- (iii) Registering as a money transmitter under the existing state regime and as a money services business under the Financial Crimes Enforcement Network (FinCEN)'s federal regime.

Although "a conventional bank charter" is not defined, we assume it means either a federal or state charter coupled with a master account at the Federal Reserve, providing the chartered institution with direct access to the Federal Reserve's payment systems as a means to settle transactions with other banks. While option (i) appears consistent with a recent OCC interpretative letter clarifying the OCC's authority to charter national trust banks,⁵⁶ as well as recently developed state-sponsored special purpose depository institution (SPDI) charters,⁵⁷ access to the Federal Reserve's payment system, based on the current stablecoin issuer model (which runs on blockchains) does not appear to be necessary. Even as part of a broader growth strategy ([as Circle stated](#)), where access to a master account could reduce the costs and time for settling transactions, it is not clear whether stablecoin issuers could [meet the Federal Reserve's proposed access requirements](#). It is also not clear whether the Federal Reserve might expect stablecoin issuers to maintain master accounts as a means of holding reserves directly with a Federal Reserve Bank (as opposed to FDIC-insured banks or state-chartered trust companies).⁵⁸ In theory, option (i) seems workable, but not without additional clarity on the need for (or accessibility of) a Federal Reserve master account.

Option (iii) preserves the status quo. Currently, three of the largest U.S. stablecoin issuers are state-regulated dollar-backed stablecoins that are licensed as money transmitters and regulated by FinCEN, which is a bureau of the U.S. Department of Treasury: Paxos Standard and Binance Dollar, both issued by Paxos Trust Company; the Gemini Dollar, issued by Gemini Trust Company; and USD Coin (USDC), issued by Circle.⁵⁹ While option (iii) is beneficial in the sense that it is already familiar to stablecoin issuers and involves both state and federal regimes, this model, on its own, is unlikely to address the various risks cited in the Report, particularly since only federal regulators are

charged with addressing financial stability risk. In addition, state licensing regimes do not have uniform redemption and disclosure requirements.⁶⁰

Option (ii) holds more promise for several reasons. First, creating a special purpose federal banking charter (SPFBC) allows policymakers thoughtfully to integrate stablecoins into the financial system without having to retrofit stablecoins into ill-fitting bank-centric or securities-centric models. This could mean:

- Regulating stablecoin issuers as full-reserve narrow banks within the federal bank regulatory perimeter, subject to uniform disclosure and reserve requirements determined by the Federal Reserve (e.g., 100 percent backed by cash or cash equivalents),⁶¹ but not subject to the panoply of prudential standards that might otherwise apply if issuers were conventional, fractional reserve banks;
- Providing a clear "on-ramp" in the event stablecoin issuers desire (or need) to maintain a Federal Reserve master account;
- Limiting affiliations between stablecoin issuers and wallet providers with commercial firms (i.e., avoiding the mixing of banking and commerce) without requiring stablecoin issuers to be insured depository institutions;
- Alternatively, limiting such affiliations, but assuming reserve assets held at an FDIC-insured bank meet the requirements for "pass-through" deposit insurance coverage to each stablecoin holder (up to \$250,000)⁶²:
 - Defining stablecoins as deposits subject to federal deposit insurance protections (and assessments to support federal deposit insurance coverage);
 - Requiring stablecoin issuers to be insured depository institutions—thereby subjecting issuers to consolidated supervision and regulation by the FDIC and Federal Reserve; and
 - Recalibrating ratios to reflect the lower risk-and-return profile of stablecoin issuers who maintain a narrow bank, full-reserve model.⁶³

Second, a SPFBC would allow policymakers to build off sound initiatives that Wyoming and New York have introduced in developing an SPDI charter and special purpose virtual

currency licensing, respectively. This approach would not only leverage compliance efforts stablecoin issuers have undertaken at the state level, but also could help address a number of risks discussed in the Report on Stablecoins by:

- Permitting deposit taking (presumably insured U.S. dollar deposits as noted above), but prohibiting commercial lending;⁶⁴
- Allowing for the maintenance of capital requirements sufficient to ensure the integrity of the stablecoin issuer and its ongoing operations, and consistent with its risk profile (thereby helping address operational risk concerns);⁶⁵
- Allowing stablecoin issuers to maintain unencumbered high-quality liquid assets (thereby addressing run risk);⁶⁶
- Incorporating targeted recovery and resolution planning requirements (thereby addressing safety and soundness as well as financial stability risks);⁶⁷ and
- Incorporating a receivership framework (consistent with the insured depository institution model noted above).⁶⁸

Third, a SPFBC presents an opportunity to incorporate a uniform federal supervision and risk management framework focused on safety and soundness, consumer protection, and financial stability risk, although without careful thought, it could mean preempting a state money transmitter licensing regime altogether and negating benefits derived from maintaining a dual banking system for stablecoins. Given recent litigation focused on federal preemption issues involving the OCC's Fintech Charter,⁶⁹ policymakers should explore the benefits associated with a dual federal/bank supervisory model focusing on consumer protection and safety and soundness issues. For example, given similar developments in other countries,⁷⁰ to the extent stablecoin issuers sought a Federal Reserve master account, it is possible to envision a state-based licensing and supervisory authority remaining in place, while the Federal Reserve would be empowered to ensure the safety, soundness, and integrity of its own payments system.

Principle 2. *All stablecoin issuers should have to adopt clear redemption policies, disclosure requirements regarding the assets backing the stablecoin, and potentially meet liquidity and asset quality requirements.*

Given the various risks cited in the Report, Principle 2 is sensible and compatible with a SPFBC. To the extent stablecoins are treated as deposits (as noted above), redemption policies for stablecoin investors could be structured like a demand deposit, meaning they could be withdrawn at any time, without advance notice. A SPFBC would require stablecoin issuers, under the terms of their stablecoin arrangement, to honor redemptions at any time, without any minimums or issuer-based withdrawal fees.

Clear and uniform disclosure requirements would also support addressing consumer protection risk as well as investor and market protections. These protections are especially important to federal regulators,⁷¹ and could be supported by input from the Consumer Financial Protection Bureau (CFPB), as well as studies focusing on ways to [improve disclosures to inform consumer financial decisionmaking](#).

Given the liquidity risk noted in the Report,⁷² it is also worth exploring whether a SPFBC should mandate consistent risk-management standards directed at stablecoin arrangements. This effort could result in stablecoin issuers maintaining sufficient liquidity in the form of high-quality liquid assets to ensure their ability to withstand short-term liquidity disruptions for a period of time.⁷³

Principle 3. Commercial entities should be eligible to issue stablecoins, provided they choose one of these regimes.

Consistent with our discussion above regarding how to consider bringing nonbank stablecoin issuers within the bank regulatory perimeter through an SPFBC, there is value in policymakers coordinating with the CFPB and other regulators to ensure that commercial entities, such as large tech companies and other nonbank providers, are subject to a regulatory, supervisory, and examination framework designed to protect consumers, financial stability, and the safety and soundness of the financial system. Comments on the CFPB's [Notice and Request for Comment Regarding the CFPB's Inquiry into Big Tech Payment Platforms](#) published in November 2021 are a useful starting point for understanding how Big Tech companies use personal payments data and manage data access to users, and how the CFPB can help ensure adequate consumer protection.

Principle 4. Non-interest bearing stablecoins should not necessarily be regulated like securities.

Payment stablecoins are non-interest bearing financial instruments. They do not provide synthetic exposure to underlying securities, and therefore it is not clear why they should be regulated like securities.

Principle 5. *Regulation should protect the privacy, security, and confidentiality of individuals utilizing stablecoins, including allowing customers to opt out of sharing any information with third parties.*

Despite omission of privacy issues in the Report, we expect federal regulators will support the need for robust consumer privacy protections, and will work closely with the CFPB to develop applicable protections that are not otherwise addressed under [Regulation P](#).

Principle 6. *Financial surveillance requirements under the Bank Secrecy Act should be modernized, including for existing financial institutions, in light of emerging technologies like stablecoins.*

Lastly, on the topic of illicit finance risk, the Report notes that stablecoins can present money laundering and terrorist financing risks,⁷⁴ and that the U.S. Treasury with and through FinCEN will continue leading efforts to assess these risks through the forthcoming National Risk Assessments on Money Laundering, Terrorist Financing, and Proliferation Financing, and Illicit Finance Strategy.⁷⁵ We expect the OCC will propose any stablecoin-specific amendments to its implementing regulations under the Bank Secrecy Act, consistent with this broader effort by Treasury.

3. Thoughtfully Harnessing Innovation

"If well-designed and appropriately regulated, stablecoins could support faster, more efficient, and more inclusive payments options."⁷⁶ Although the Report is comprehensive in its discussion of risks applicable to stablecoin arrangements, it acknowledges the potential benefits of responsible stablecoin innovation. There is skepticism about whether today's stablecoins advance financial inclusion.⁷⁷ Nevertheless, the future development of stablecoins outside the crypto ecosystem—if appropriately regulated—could foster competition and modernize our U.S. and global payments system in important ways. It is already possible to envision a world where stablecoins are the preferred method of global remittance because they are virtually frictionless and cheaper than transacting on traditional payment rails. In the longer term, imagine a future where federally regulated stablecoins and a Central Bank digital currency co-exist.

Regulating nonbank stablecoin issuers within a federal regulatory framework requires considering how best to provide issuers access to certain of the benefits banks enjoy, but also how best to subject issuers, and wallet providers, to bank-like oversight. It involves recalibrating rules so they are tailored to stablecoin business models and do not discourage innovation, while also integrating robust consumer protections. This means potentially providing consumers with a backstop, such as insured deposit protection, requiring issuers to submit recovery and resolution plans, and having a uniform set of disclosure, redemption, and reserve requirements (based on a full-reserve bank model). Policymakers should also consider cooperatively working with states on a shared supervisory framework, as well as international standard setters, who have each demonstrated significant thought leadership on stablecoin policy issues.

For now, balancing the urgency of legislation with requisite thoughtfulness is policymakers' greatest challenge. It is one that can be accomplished through continued coordination across federal regulators, Congress, and innovators.

Endnotes

¹ DWT acknowledges the helpful insights provided on this paper by Dong Hong, former U.S. Senate Banking Counsel, and Pierre Whatley, Principal, FS Vector.

² As of the date of this paper, the Federal Reserve had not yet issued its eagerly anticipated report regarding the [potential benefits and risks associated with the issuance of a Central Bank Digital Currency \(CBDC\)](#). This paper does not address whether a CBDC could ultimately displace payment stablecoins as a medium of exchange. We assume the answer to this question will develop over time, and in parallel with the continued rise of payment stablecoins.

³ 021-002-020 Wyo. Code R. §§ 4, 6; see also Financial Stability Board, Regulation, Supervision and Oversight of "Global Stablecoin" Arrangements: Progress Report on the implementation of the FSB High-Level Recommendations (Oct. 7, 2021), at 3 ("Recommendation 7. Authorities should ensure that GSC arrangements have appropriate recovery and resolution plans."), <https://www.fsb.org/wp-content/uploads/P071021.pdf>.

⁴ Payment stablecoins are distinct from a smaller subset of stablecoin arrangements that use other means to attempt to stabilize the price of the instrument (sometimes referred to as "synthetic" or "algorithmic" stablecoins). This paper (and the Report on Stablecoins) focuses on payment stablecoins given their more widespread adoption. We will hereinafter refer to payment stablecoins simply as "stablecoins" except where distinguished from other types of stablecoins.

⁵ See Office of the Comptroller of the Currency (OCC) Interpretive Letter #1179 (Nov. 2021), at 1 (noting that it is legally permissible for banks to hold deposits that serve as reserves for stablecoins that are backed on a 1:1 basis by a single fiat currency, provided the bank can demonstrate, to the satisfaction of its supervisory office, that it has controls in place to conduct the activity in a safe and sound manner). <https://www.occ.gov/topics/charters-and-licensing/interpretations-and-actions/2021/int1179.pdf>.

⁶ E.g., Ethereum, Solana, Algorand.

⁷ See blogpost of Neha Narula, Director of the [Digital Currency Initiative](#) at MIT Media Lab, *The Technology Underlying Stablecoins* (Sept. 23, 2021). <https://nehanarula.org/2021/09/23/stablecoins.html>.

⁸ Some of the largest stablecoins in this category by market value include Tether (USDT), Circle (USDC), and Binance (USD). As of December 31, 2021, the combined market cap of these stablecoin tokens exceeded \$130 billion. <https://coinmarketcap.com/view/stablecoin/>.

⁹ This range of USD-to-stablecoin conversion fee assumed a \$200 purchase of Tether and was provided as an illustrative example at last December's hearing on *Stablecoins: How Do They Work, How Are They Used, and What Are Their Risks?*, *Hearing Before the U.S. Senate Committee on Banking, Housing, and Urban Affairs* (2021) (see statement of Alexis Goldstein, Director, Financial Policy, Open Markets Institute at 9-10), <https://www.banking.senate.gov/imo/media/doc/Goldstein%20Testimony%202012-14-21.pdf>.

¹⁰ This process may change over time to the extent stablecoins become a widely accepted form of payment.

¹¹ See statement of Alexis Goldstein, *supra* note 9, at 9-10.

¹² Fee revenue is a function of the in/out flow, which is driven by changes in demand—primarily for access to crypto markets, with stablecoins serving as a major on/off ramp. Assuming annual in/out flow of \$10B and 0.1% issuance/redemption fee, this strategy could generate \$10M in revenue. Aleks Larsen, *The Business of Stablecoins*, Blockchain Capital (Dec. 2018), <https://blockchain.capital/the-business-of-stablecoins/>.

¹³ Fitch Ratings contrasted Tether with USD Coin, the second-largest U.S. dollar-linked stablecoin, which is backed by U.S. dollars on a 1:1 basis held in custody accounts. Fitch Ratings, *Stablecoins Could Pose New Short-Term Credit Market Risks* (July 1, 2021).

¹⁴ See HM Treasury, *UK regulatory approach to cryptoassets and stablecoins: Consultation and call for evidence* (2021), at 3.24, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950206/HM_Treasury_Cryptoasset_and_Stablecoin_consultation.pdf.

¹⁵ Gary B. Gorton & Jeffery Y. Zhang, *Taming Wildcat Stablecoins* (Oct. 2021), at 6, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3888752.

¹⁶ Reuters, *Fed's Powell 'legitimately undecided' on central bank digital currency* (July 15, 2021). As noted by Federal Reserve Chairman Jerome Powell: "[M]y point with stablecoins is they're like money funds, they're like bank deposits, and they're growing incredibly fast but without appropriate regulation. And if we're going to have something that looks just like a money-market fund or bank deposit . . . we really ought to have appropriate regulation and today we don't." <https://www.reuters.com/business/finance/feds-powell-says-hes-undecided-central-bank-digital-currency-2021-07-15/>.

¹⁷ See 12 U.S.C. § 1841(c)(1).

¹⁸ Board of Governors of the Federal Reserve System, *Consumer Compliance Handbook, Regulation D Reserve Requirements*, https://www.federalreserve.gov/boarddocs/supmanual/cch/int_depos.pdf.

¹⁹ President's Working Group on Financial Matters, Federal Deposit Insurance Corporation, Office of the Comptroller of the Currency, *Report on Stablecoins* (Nov. 2021), at 4 ("Report"), https://home.treasury.gov/system/files/136/StableCoinReport_Nov1_508.pdf.

²⁰ For an in-depth treatment on this topic, see Gorton & Zhang, *supra* note 15, at 17-18.

²¹ For a thoughtful analysis of stablecoin issues, see *Stablecoins: How Do They Work, How Are They Used, and What Are Their Risks?*, Hearing Before the U.S. Senate Committee on Banking, Housing, and Urban Affairs (2021) (statement of Jai Massari at 2 (internal citation omitted)), <https://www.banking.senate.gov/imo/media/doc/Massari%20Testimony%2012-14-211.pdf>.

²² See Gorton & Zhang, *supra* note 15, at 12 (discussing the debt contracts that characterize most relationships between stablecoin issuers and investors).

²³ The first case of a money market fund breaking the buck occurred in 1994, when Community Bankers U.S. Government Money Market Fund was liquidated at 94 cents because of large losses in derivatives. In 2008, the Reserve Fund was affected by the bankruptcy of Lehman Brothers and the subsequent financial crisis. The Reserve Fund's price fell below \$1 due to assets held with Lehman Brothers. <https://www.investopedia.com/terms/b/breaking-the-buck.asp>.

²⁴ Gorton & Zhang, *supra* note 15, at 22.

²⁵ *Id.* at 23-24.

²⁶ As noted in Part 2, *infra* note 67, special purpose depository institutions chartered in Wyoming are required to submit recovery and resolution plans (based on a federal regulatory model). Wyoming's implementing rule also incorporates a receivership regime (which would rely on outside experts). 021-002-020 Wyo. Code R. § 6.

²⁷ Report of the President's Working Group on Financial Markets: Overview of Recent Events and Potential Reform Options for Money Market Funds (2020), at 18-20, <https://home.treasury.gov/system/files/136/PWG-MMF-report-final-Dec-2020.pdf>.

²⁸ Federal Deposit Insurance Corporation, *Resolutions Handbook* (2019), at 10, <https://www.fdic.gov/bank/historical/reshandbook/resolutions-handbook.pdf>.

²⁹ This model assumes some stablecoin arrangements (i.e., where virtually all reserve assets are in deposits at insured depository institutions or in U.S. Treasury bills) meet the requirements for "pass-through" deposit insurance coverage, as discussed in the Report, but not yet confirmed by the FDIC. Report on Stablecoins at 4.

³⁰ See Jeremy Allaire, *Our Journey to Become a National Digital Currency Bank*, Circle (Aug. 11, 2021), <https://www.circle.com/blog/our-journey-to-become-a-national-digital-currency-bank>.

³¹ See statement of Jai Massari, *supra* note 21, at 4.

³² See Report at 18 n.36; 11 U.S.C. § 5464.

³³ See Report at 18 n.36.

³⁴ *Id.*

³⁵ *Id.* at 23 (Annex A, List of Outreach Participants).

³⁶ *Id.* at 2.

³⁷ The Report identifies four potential factors that may undermine the required confidence: use of reserve assets that may devalue or become illiquid, failure to properly safeguard the reserve assets, lack of clarity regarding redemption rights, and operational risks related to cybersecurity and privacy. *Id.* at 12.

³⁸ *Id.* at 12.

³⁹ Although the Report acknowledges that stablecoins, in some respects, may be more operationally resilient than other payment systems, it identifies "novel operational risks," (*Id.* at 13), related to the validation and confirmation of transactions as well as the management and integrity of the distributed ledger.

⁴⁰ The Report notes the "heightened uncertainty" and "credit and liquidity pressures" posed by some stablecoin arrangements not clearly defining the point at which settlement is final in their rules and procedures. In particular, the combination of open network access with consensus-based settlement mechanisms may lengthen the time necessary for a technical settlement. The Report asserts that this, coupled with the lack of a single party held accountable for defining or ensuring legal settlement finality, may create questions about the reliability and finality of payments. *Id.* at 13.

⁴¹ Because the timing and processes of stablecoin arrangements may misalign with other systems, such as payment systems, the Report identifies a potential liquidity risk where a temporary shortage of available stablecoins may arise. *Id.*

⁴² *Id.* at 14.

⁴³ *Id.* at 2-3, 17.

⁴⁴ *Id.* at 2, 17.

⁴⁵ *Id.* at 3, 17.

⁴⁶ *Id.* at 10.

⁴⁷ FSO Report, at 173, Box G: Stablecoins.

⁴⁸ See Hearing Memo at <https://financialservices.house.gov/uploadedfiles/hhrg-117-ba00-20211208-sd002.pdf> for a comprehensive summary of broader policy concerns surrounding crypto, including discussion of stablecoin issues.

⁴⁹ <https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=408893>

⁵⁰ Press Release, U.S. Senate Committee on Banking, Housing, and Urban Affairs, Brown: We Must Protect Consumers and the Economy from Stablecoin Risks (Dec. 14, 2021), <https://www.banking.senate.gov/newsroom/majority/brown-we-must-protect-consumers-and-the-economy-from-stablecoin-risks>.

⁵¹ Press Release, U.S. Senate Committee on Banking, Housing, and Urban Affairs, Toomey Lays the Groundwork for Stablecoin Legislation (Dec. 15, 2021), <https://www.banking.senate.gov/newsroom/minority/12/14/2021/toomey-lays-the-groundwork-for-stablecoin-legislation>.

⁵² Allaire, *supra* note 30.

⁵³ See statement of Jai Massari, *supra* note 21, at 4 ("[U]nless Congress recalibrates the ratios to reflect the lower risk-and-return profile of stablecoin issuers who limit their reserve assets to cash and genuine cash equivalents, the stablecoin business model would be uneconomic for an insured depository institution . . .").

⁵⁴ *Id.*

⁵⁵ Regulation D: Reserve Requirements of Depository Institutions, 84 Fed. Reg. 8829 (Mar. 12, 2019), <https://www.govinfo.gov/content/pkg/FR-2019-03-12/pdf/2019-04348.pdf>.

⁵⁶ See OCC Interpretive Letter #1179, *supra* note 5, at 5 (noting that whether an institution may be chartered as a national trust bank is a question of federal law).

⁵⁷ See, e.g., State of Wyoming, Division of Banking, *Special Purpose Depository Institutions*, <https://wyomingbankingdivision.wyo.gov/banks-and-trust-companies/special-purpose-depository-institutions>.

⁵⁸ See Gorton & Zhang, *supra* note 15, at 15.

⁵⁹ Paxos and Gemini are both trust companies regulated by the New York State Department of Financial Services ("NYDFS"). Trusts are required to have their products and services approved and supervised by NYDFS. PAX, BUSD, and GUSD are expressly approved by the NYDFS and supervised by the regulator on an ongoing basis. See Dan Burstein, *A Regulated Stablecoin Means Having a Regulator*, Paxos (July 21, 2021), <https://paxos.com/2021/07/21/a-regulated-stablecoin-means-having-a-regulator/>.

⁶⁰ Report at 4 ("Some issuers are permitted under the terms of the arrangement to postpone redemption payments for seven days, or even to suspend redemptions at any time, giving rise to considerable uncertainty about the timing of redemptions.").

⁶¹ A SPFCB could also promote transparency regarding the composition and custody of reserves by requiring (i) the amount of "reserve" dollars to equal or exceed the number of stablecoins outstanding; (ii) reserves to be denominated in the currency of the reference asset; (iii) reserves to be invested in bank deposits, U.S. Treasuries, or other high quality liquid assets; and (iv) reserves to be segregated from corporate assets.

⁶² See Report at 4 n.6; see also Nate DiCamillo, *US FDIC Said to Be Studying Deposit Insurance for Stablecoins*, CoinDesk (Oct. 2021), [https://www.coindesk.com/policy/2021/10/06/us-fdic-said-to-be-studying-deposit-insurance-for-stablecoins/#:~:text=\(FDIC\)%2C%20a%20key%20U.S.,with%20the%20agency's%20thinking%20said.&text=Such%20coverage%20would%20insure%20holders,the%20collateral%20were%20to%20fail](https://www.coindesk.com/policy/2021/10/06/us-fdic-said-to-be-studying-deposit-insurance-for-stablecoins/#:~:text=(FDIC)%2C%20a%20key%20U.S.,with%20the%20agency's%20thinking%20said.&text=Such%20coverage%20would%20insure%20holders,the%20collateral%20were%20to%20fail).

⁶³ See statement of Jai Massari, *supra* note 21, at 4.

⁶⁴ N.Y. Comp. Codes R. & Regs. tit. 23, § 200.9(c).

⁶⁵ See, e.g., N.Y. Comp. Codes R. & Regs. tit. 23, § 200.8; 021-002-020 Wyo. Code R. § 2(a)-(b).; see also Wyoming SPDI Updated Capital Requirement Guidance, https://drive.google.com/file/d/11Rdmml_ayo7cfigsMVACaCNtHtBgDbfVv/view.

⁶⁶ 021-002-020 Wyo. Code R. § 9(b).

⁶⁷ *Id.* § 4; Financial Stability Board, *supra* note 3 ("Recommendation 7. Authorities should ensure that GSC arrangements have appropriate recovery and resolution plans.").

⁶⁸ *Id.* § 6.

⁶⁹ See *Lacewell v. Office of Comptroller of Currency*, 999 F.3d 130 (2d Cir. 2021) (holding that the New York Department of Financial Services lacked Article III standing because it failed to allege that OCC's decision caused it to suffer an actual or imminent injury in fact. The court explained that the decision did not implicate the sorts of direct preemption concerns that animated DFS's cited cases, and it will not do so until OCC receives an SPNB charter application from or grants such a charter to a non-depository fintech that would otherwise be subject to DFS's jurisdiction.).

⁷⁰ See Nick Catino, et al., *A Smart Solution to Advance Consumer-Centric Payments Innovation in America*, for a discussion of a hybrid of the U.S. state-based regulatory regime for "money transmitters" and the regulatory frameworks implemented or in the works in the U.K., Canada, EU, and Singapore, available at <https://morningconsult.com/opinions/a-smart-solution-to-advance-consumer-centric-payments-innovation-in-america/> ("Congress could create a national 'payments passport' by allowing money transmitters with at least 40 state licenses to obtain limited access to the payments system, provided they are subject to Federal Reserve regulatory standards and supervision tailored to payments services. This hybrid solution should appeal to a broad set of stakeholders, including state bank supervisors and the Federal Reserve system.").

⁷¹ See, e.g., Report at 11 (noting the need to address investor and market protection measures through clear and complete disclosures that protect against fraud, manipulation, and other risks); November 2021 Interview with Acting OCC Comptroller Michael Hsu, <https://www.coindesk.com/business/2021/11/08/too-much-innovation-is-dangerous-with-stablecoins-occ-chief-hsu/> ("There is some risk that folks who are least able to bear it lose their money," he said. "And I think we want to be really careful." (citing a July-August 2021 [poll](#) by Morning Consult in which 37% of respondents who were underbanked said they own cryptocurrency compared to only 10% of banked consumers)).

⁷² Report at 13.

⁷³ See Press Release, Board of Governors of Federal Reserve System, FDIC, OCC, *Federal banking regulators finalize liquidity coverage ratio* (Sept. 2014), <https://www.federalreserve.gov/newsevents/press-releases/bcreg20140903a.htm>.

⁷⁴ Report at 19.

⁷⁵ *Id.*

⁷⁶ *Id.* at 1.

⁷⁷ See, e.g., Blockchain Association, *How Digital Dollar Stablecoins Can Help Bring More Consumers Into the Financial System*, <https://theblockchainassociation.org/how-digital-dollar-stablecoins-can-help-bring-more-consumers-into-the-financial-system/#:~:text=Stablecoins%20not%20only%20provide%20help,interact%20with%20the%20financial%20system>. ("The speed, low cost, and low barriers to entry that stablecoins offer give current bank users more options of how to interact with the financial system."), but see *What is the Value Proposition of Stablecoins for Financial Inclusion?*, World Economic Forum (Nov. 2021), https://www3.weforum.org/docs/WEF_Value_Proposition_of_Stablecoins_for_Financial_Inclusion_2021.pdf at 8 ("The principal finding of this white paper is that stablecoins are subject to many of the same barriers that constrain citizens from accessing other financial products and services, such as bank accounts, mobile money accounts or fully digital remittance providers. Where stablecoins are accessible, they generally address financial inclusion barriers to a similar degree as other digital financial services. They may also introduce new risks, which vary depending on the specific system.").