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Wanted: A Prudential Framework for Crypto Assets

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I. INTRODUCTION

The collapse of the cryptocurrency exchange FTX in November 2022 is the most significant moment in cryptocurrency history since the introduction of the Bitcoin whitepaper on Halloween 2008. Although many commentators referred to FTX's failure as "crypto's 'Lehman moment,'" the fallout was primarily contained within the cryptocurrency ecosystem with minimal spillover into the traditional financial system.[1] The absence of systemic implications is revealed most clearly by the fact that the tech-heavy Nasdaq index went up by 1.9% the day FTX filed for bankruptcy.[2] For context, when Lehman Brothers filed for bankruptcy on September 15, 2008, the Nasdaq declined by 3.6%.[3] Despite capital markets' somewhat indifferent reaction to the FTX collapse, the entanglement of cryptocurrency with traditional finance and the novel risks it poses to traditional banks can no longer be ignored.

The fact that FTX's failure was not a "Lehman moment" for the broader financial system is a little-celebrated policy success. After all, just two months prior to FTX's collapse, the Financial

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1. *See* Andrew Singer, *Was the Fall of FTX Really Crypto's 'Lehman moment?,'* COINTELEGRAPH (Dec. 7, 2022), [https://perma.cc/6PNX-XVVW].

2. Sarah Min & Tanaya Macheel, *Nasdaq Adds 1.9%, S&P 500 Closes Nearly 1% Higher and Notches Best Week Since June*, CNBC (Nov. 11, 2022, 5:53 PM), [https://perma.cc/G23U-SCHH]. FTX filed for bankruptcy on November 11, 2022. David Yaffe-Bellany, *Embattled Crypto Exchange FTX Files for Bankruptcy*, N.Y. TIMES (Nov. 11, 2022), [https://perma.cc/ST7S-XRHS].

3. *See Lehman Brothers Collapse Stuns Global Markets*, CNN, [https://perma.cc/Q4B7-P9K4] (last visited Feb. 14, 2023); Nick Lioudis, *The Collapse of Lehman Brothers: A Case Study*, INVESTOPEDIA (Jan. 30, 2021), [https://perma.cc/TF56-BTR5].

Stability Oversight Council warned that "[c]rypto-asset activities could pose risks to the stability of the U.S. financial system if their interconnections with the traditional financial system or their overall scale were to grow without adherence to or being paired with appropriate regulation."[4] Limited interconnection between the crypto ecosystem and the traditional financial system is why FTX's fallout was limited, but this outcome was not preordained. FTX and its high-profile CEO, Sam Bankman-Fried, actively lobbied for policies that would have entwined the crypto sector with the traditional financial system.[5] This includes a proposal under consideration by the Commodity Futures Trading Commission (CFTC) at the time of FTX's failure that would have permitted FTX to self-clear non-intermediated crypto derivatives traded on margin by retail investors, as well as a bill introduced by the Senate Agriculture, Nutrition, and Forestry Committee that would create a new federally recognized asset class called digital commodities and give oversight of digital commodities markets to the CFTC.[6]

There was growing bipartisan momentum behind both proposals, and they may have been implemented in short order had FTX not collapsed when it did.[7] Thus, no small amount of luck played a role in limiting the FTX fallout. A more deliberate policy success can be found in the coordinated actions of federal bank regulators, such as the Board of Governors of the Federal Reserve System (the Federal Reserve), Federal Deposit Insurance Corporation (FDIC), and Office of the Comptroller of the Currency (OCC), who each had outstanding guidance in place at the time of FTX's failure expressing concerns over banks' ability to engage in crypto-asset activities in a safe and sound manner

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4. FIN. STABILITY OVERSIGHT COUNCIL, U.S. DEP'T OF THE TREASURY, REPORT ON DIGITAL ASSET FINANCIAL STABILITY RISKS AND REGULATION 4 (2022), [https://perma.cc/VMU9-8VYQ].

5. *See* Paul Kiernan, *FTX's Collapse Upends Sam Bankman-Fried's Washington Play*, WALL ST. J. (Nov. 28, 2022, 3:29 PM), [https://perma.cc/E8ZN-JWW8].

6. *CFTC Seeks Public Comment on FTX Request for Amended DCO Registration Order*, FINTECH FOUNDRY (Apr. 8, 2022), [https://perma.cc/7N2M-Q2Z8]; Digital Commodities Consumer Protection Act of 2022, S. 4760, 117th Cong. (2022).

7. *See, e.g.*, *Stabenow, Boozman, Booker, and Thune Introduce Legislation to Regulate Digital Commodities*, U.S. SENATE COMM. ON AGRIC., NUTRITION & FORESTRY (Aug. 3, 2022), [https://perma.cc/ZPU6-M4CP]; Kiernan, *supra* note 5.

and requiring banks to notify their appropriate regulator before engaging in such activity.[8] This guidance likely limited banks' willingness to engage in crypto-asset activities and restricted a potentially significant contagion channel through which volatility in the crypto markets spills into the traditional financial system.

Despite regulators' warnings, FTX's failure revealed that several banks were more exposed to crypto-asset activities than previously realized. Three notable examples are Silvergate Capital Corporation, Moonstone Bank, and Signature Bank.

Silvergate positioned itself as the leading bank for cryptocurrency exchanges (including FTX) and investors.[9] At the end of September 2022, deposits from crypto clients comprised 90% of the bank's overall deposit base, leaving the bank highly exposed to a volatile sector.[10] This risk became manifest post-FTX collapse when the bank experienced $8.1 billion in deposit outflows during the fourth quarter of 2022, more than 60% of its total deposits.[11] Silvergate was forced to sell assets to meet deposit outflows, resulting in a loss of $718 million, which exceeded "the bank's total profit since at least 2013."[12] Silvergate also borrowed $4.3 billion from the Federal Home Loan Bank of San Francisco in an unsuccessful effort to stay afloat.[13] On March 8, 2023, Silvergate's holding company announced they were voluntarily liquidating the bank.[14]

Another unpleasant surprise came in an FTX bankruptcy filing when it was revealed that Alameda Research, a crypto

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8. Mike Winters, *'Contagion risk': After the FTX Collapse, Top U.S. Regulators Warn Banks About Crypto*, CNBC (Jan. 6, 2023, 8:30 AM), [https://perma.cc/YUQ7-XPQ5]; *see also* Pete Schroeder, *U.S. Banks Must Seek Regulatory Permission Before Engaging in Certain Crypto Activities—Regulator*, REUTERS (Nov. 23, 2021, 4:42 PM), [https://perma.cc/9V7S-P4KG].

9. SILVERGATE, [https://perma.cc/663S-R693] (last visited Mar. 7, 2023).

10. Marc Rubinstein, *These Banks Were Left Holding the Bag in Crypto Implosion*, WASH. POST (Nov. 23, 2022, 7:07 AM), [https://perma.cc/XMT3-2QZW].

11. David Benoit, *Silvergate's Deposit Run Is Worse Than Great Depression-Era Runs*, WALL ST. J. (Jan. 5, 2023, 1:30 PM), [https://perma.cc/L6DM-C6P2].

12. David Benoit, *Silvergate Raced to Cover $8.1 Billion in Withdrawals During Crypto Meltdown*, WALL ST. J. (Jan. 5, 2023, 4:30 PM), [https://perma.cc/B47L-SHG7].

13. Kate Berry, *Silvergate Bank Loaded Up on $4.3 Billion in Home Loan Bank Advances*, AM. BANKER (Jan. 10, 2023, 1:56 PM), [https://perma.cc/W48Q-PNNR].

14. *Silvergate Capital Corporation Announces Intent to Wind Down Operations and Voluntarily Liquidate Silvergate Bank*, SILVERGATE (Mar. 8, 2023), [https://perma.cc/R67P-GA7T].

trading firm founded and owned by Sam Bankman-Fried, made an $11.5 million investment in the parent company (FBH Corp.) of Washington state-based Farmington State Bank in March 2022, more than double the bank's net worth at the time.[15] Farmington then changed its name to Moonstone Bank, and shortly thereafter, Moonstone's deposit base jumped from $10 million—where it had been for decades—to $84 million, of which $71 million came from just four accounts.[16] Alameda's investment came on the heels of Farmington's pivot to servicing crypto firms after the bank was purchased by FBH in 2020 and received a Federal Reserve Master Account in 2021.[17] According to Camden Fine, the former president and CEO of the Independent Community Bankers of America, "The fact that an offshore hedge fund that was . . . a crypto firm was buying a stake in a tiny bank for multiples of its stated book value should have raised massive red flags for the F.D.I.C., state regulators and the Federal Reserve."[18]

The banking industry took a major hit when Silicon Valley Bank (SVB) experienced massive deposit outflows and was put into FDIC receivership on March 10, 2023.[19] Following the SVB collapse—the biggest bank failure since the global financial crisis of 2008 and the second biggest bank failure in U.S. history—attention turned to Signature Bank, which had a similarly high percentage of uninsured deposits (more than 93% of SVB's deposits were uninsured, and 89% of Signature Bank's deposits were uninsured).[20] Unlike SVB, Signature had heavy exposure to

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15. *The Curious Case of FTX and Farmington State Bank, aka Moonstone*, PROTOS (Nov. 24, 2022, 1:18 PM), [https://perma.cc/TFL8-YSXX].

16. Stephen Gandel, *Crypto Firm FTX's Ownership of a U.S. Bank Raises Questions*, N.Y. TIMES (Dec. 6, 2022), [https://perma.cc/N5JZ-XM4N]; Moonstone Bank, *FBH Corp. Raises $11.5M in Private Equity Funding from Alameda Research Ventures*, CISION PR NEWSWIRE (Mar. 7, 2022, 9:24 PM), [https://perma.cc/D8P8-9ZD8].

17. *The Curious Case of FTX and Farmington State Bank, aka Moonstone*, *supra* note 15.

18. Gandel, *supra* note 16.

19. Press Release, Fed. Deposit Ins. Corp., FDIC Acts to Protect All Depositors of the Former Silicon Valley Bank, Santa Clara, California (Mar. 13, 2023), [https://perma.cc/R3MC-AFMB].

20. Karl Russell & Christine Zhang, *The Second-Biggest Bank Failure*, N.Y. TIMES (Mar. 10, 2023), [https://perma.cc/FN3X-4Y9Z]; David Hayes, *SVB, Signature Racked Up Some High Rates of Uninsured Deposits*, S&P GLOB. MKT. INTEL. (Mar. 14, 2023), [https://perma.cc/TV2P-U9NL].

the crypto industry, which created additional concerns about the bank's health; it operated a "24/7 payments network for crypto clients and had $16.5 billion in deposits from digital-asset-related customers."[21] Signature was put into FDIC receivership on Sunday, March 12, 2023, prompting bank board member and former congressman Barney Frank to claim that "regulators wanted to send a very strong anti-crypto message."[22] However, the New York Department of Financial Services—they took possession of Signature and appointed the FDIC as a receiver—said that the decision to close Signature "had nothing to do with crypto."[23] On March 20, 2022, the FDIC entered into a purchase and assumption agreement with Flagstar Bank for most deposits and certain loan portfolios of Signature.[24] Flagstar did not bid on Signature's crypto deposits, and the FDIC announced they would send roughly $4 billion of Signature Bank deposits held by crypto businesses back to its customers.[25] As of this writing, the FDIC is still attempting to find a buyer for Signature's crypto payments network.[26]

The runs on these crypto-friendly banks, following the crypto-winter of 2022, raise an interesting question: Can exposure to crypto activities undermine depositors' trust and public confidence in banks? Although a causal relationship has yet to be established, it certainly appears likely. As evidence, Silvergate started losing deposits after FTX—a large depositor—failed.[27] When the bank announced they were "less than well

21. Hugh Son, *Why Regulators Seized Signature Bank in Third-Biggest Bank Failure in U.S. History*, CNBC (Mar. 13, 2023, 8:37 PM), [https://perma.cc/PH8E-T5FP].

22. *See id.*

23. Hannah Lang & Pete Schroeder, *Signature Bank's Closure Had 'Nothing to Do with Crypto'—New York Regulator*, REUTERS (Mar. 14, 2023, 12:53 PM), [https://perma.cc/2B6L-PPTE].

24. Press Release, Fed. Deposit Ins. Corp., Subsidiary of New York Community Bancorp, Inc., to Assume Deposits of Signature Bridge Bank, N.A., from the FDIC (Mar. 20, 2023), [https://perma.cc/L26S-2KFB].

25. Jesse Hamilton, *FDIC Gives Deadline of Next Week for Crypto Depositors Stranded by Signature Failure*, YAHOO FIN. (Mar. 8, 2023, 5:07 PM), [https://perma.cc/MMS5-C956].

26. *See* Vicky Ge Huang & Hannah Miao, *FDIC to Sell Signature Bank's Crypto Payment Network*, WALL ST. J. (Mar. 29, 2023, 3:02 PM), [https://perma.cc/R3J2-Y7GW].

27. *See* Mitchell Martin, *Silvergate Throws in the Towel, Crypto Bank Will Wind Up Business After Customers Flee*, FORBES (Mar. 8, 2023, 6:00 PM), [https://perma.cc/C4EW-4LSL].

capitalised" in early March 2023, several of the bank's crypto clients (Coinbase and Galaxy Digital) pulled their business, which hastened Silvergate's collapse.[28] At the same time, the bank ended its operation of the popular Silvergate Exchange Network—a seamless platform that provided instant transfers between a crypto wallet and a traditional bank account.[29] Taken as a whole, the bankruptcies of several large crypto firms, these firms' lack of transparency and internal controls,[30] a liquidity crunch in crypto markets, and crypto's uncertain regulatory status, led to fear that crypto-exposed banks may not survive. Of course, such fear can, and did, become a self-fulfilling prophecy, and it remains to be seen whether banks can have even modest crypto exposure without negatively affecting counterparty and market trust.

The potential for crypto's problems to spill into the banking sector and erode trust in crypto-exposed banks was on policymakers' minds prior to the demise of Silvergate, SVB, and Signature. In December 2022, Senators Elizabeth Warren (D-MA) and Tina Smith (D-MN) sent letters to the heads of the Federal Reserve, FDIC, and OCC, expressing their concern over "ties between the banking industry and cryptocurrency firms" and asking detailed questions regarding banks' exposure to crypto-assets and how each agency "evaluate[s] banks' relationships with crypto firms and . . . crypto-related activities."[31]

In addition, budding bank-crypto connections and the crypto -asset sector's "significant volatility and vulnerabilities over the

28. Dan Milmo, *Crypto Bank Silvergate Announces Liquidation amid Sector Turmoil*, GUARDIAN (Mar. 9, 2023, 9:45 PM), [https://perma.cc/Z7QT-FLN3].

29. *See* Hannah Lang & Akriti Sharma, *Silvergate Suspends Crypto Payments Network; Shares Fall After-Hours*, REUTERS (Mar. 4, 2023, 7:32 AM), [https://perma.cc/HLX6-UYHA]; *see also Factbox: Silvergate Crisis: Crypto Industry Majors Drop Embattled Lender*, REUTERS (Mar. 6, 2023, 2:16 PM), [https://perma.cc/G5HB-3EXK].

30. *Bankrupt FTX's New CEO Outlines Fund Abuses, Untrustworthy Records*, REUTERS (Nov. 17, 2022, 8:04 PM), [https://perma.cc/Q7DK-CSGS].

31. The letter also mentioned several other banks that were exposed to the crypto sector, including: Deltec Bank, Provident Bancorp Inc., Metropolitan Commercial Bank, Signature Bank, and Customers Bancorp Inc. *See* Letter from Elizabeth Warren, U.S. Sen., and Tina Smith, U.S. Sen., to Jerome Powell, Chair, Bd. of Governors of the Fed. Rsrv. Sys., Martin J. Gruenberg, Acting Chair, Fed. Deposit Ins. Corp., and Michael J. Hsu, Acting Comptroller, Off. of the Comptroller of the Currency (Dec. 7, 2022), [https://perma.cc/3S9A-L3R7].

past year"[32] prompted the federal banking agencies to issue a Joint Statement on Crypto-Asset Risks to Banking Organizations on January 3, 2023 ("Joint Statement").[33] The Joint Statement lists eight "key risks associated with crypto-assets and crypto-asset sector participants that banking organizations should be aware of" and reinforces previously issued guidance by each agency that requires supervised firms to inform their respective regulators of any crypto-related activities they wish to engage in or are currently involved in.[34] However, the Joint Statement uses more "forceful" language and "calls into question the safety and soundness practices of those engaging in crypto-assets, including banks with concentrated exposure to the crypto assets sector."[35] Furthermore, the Joint Statement includes language that suggests banks are not permitted to hold crypto assets on their balance sheet (custody excluded): "Based on the agencies' current understanding and experience to date, the agencies believe that issuing or holding as principal crypto-assets that are issued, stored, or transferred on an open, public, and/or decentralized network, or similar system is *highly likely to be inconsistent with safe and sound banking practices*."[36]

The Joint Statement signals a new era of intense regulatory scrutiny of *any* bank involvement in crypto-asset activity. Still, there remains the question: where should regulators draw the line? There are multiple ways for banks to engage in crypto-asset activities, including trading and clearing crypto-asset derivatives, providing custodial services for crypto assets, providing banking services to crypto-asset firms, and "outright holdings and

32. Joint Press Release, Bd. of Governors of the Fed. Rsrv. Sys., Fed. Deposit Ins. Corp., and Off. of the Comptroller of the Currency, Agencies Issue Joint Statement on Crypto-Asset Risks to Banking Organizations (Jan. 3, 2023), [https://perma.cc/GLG5-EUWR].

33. *Joint Statement on Crypto-Asset Risks to Banking Organizations*, BD. OF GOVERNORS OF THE FED. RSRV. SYS., FED. DEPOSIT INS. CORP & OFF. OF THE COMPTROLLER OF THE CURRENCY (Jan. 3, 2023), [https://perma.cc/THD7-RZMV].

34. *Id.* at 1-2.

35. CTR. FOR REGUL. STRATEGY, DELOITTE, BANKING REGULATORS REINFORCE WALL FOR BANK INVOLVEMENT IN CRYPTO-ASSETS 2 (2023), [https://perma.cc/7ZUE-YRL6].

36. *Joint Statement on Crypto-Asset Risks to Banking Organizations*, *supra* note 33, at 2 (emphasis added).

investments in crypto assets."[37] While the banking agencies have wide latitude to prohibit any activity they consider incapable of being conducted in a safe and sound manner, it would be difficult to argue that all crypto-asset activities threaten safety and soundness. For those activities that are permitted, what should be their prudential treatment from a capital and liquidity perspective?

This Article summarizes the limited publicly available data on banks' exposure to crypto assets and offers several specific examples of how U.S. banks engage in crypto-related businesses. It then examines past guidance issued by U.S. bank regulators and explains why this guidance lacks sufficient detail to clarify the prudential requirements associated with the various crypto-related activities in which banks are engaged. The Article then assesses the adequacy of the Basel Committee on Banking Supervision's final prudential standard for crypto-asset exposures, issued in December 2022, and finds that the measure fails to adequately address the unique risks various crypto-asset activities pose to banks. We conclude by offering recommendations U.S. bank regulators can quickly implement to dimension the scale of banks' crypto-asset exposure and mitigate the associated risks.

II. BANK EXPOSURE TO CRYPTO ASSETS

A. Summarizing Available Data on Banks' Crypto-Asset Exposure

Bank regulators have little visibility into the nature and extent of banks' exposure to crypto assets. One of the few authoritative data sources on the subject comes from the Basel Committee on Banking Supervision (BCBS), which launched a voluntary crypto-asset data collection template based on 2021 year-end data.[38] Only nineteen internationally active banks reported data from 182 banks in the Basel III monitoring

37. For a complete list of potential bank crypto-asset exposures, see Renzo Corrias, *Banks' Exposures to Cryptoassets—A Novel Dataset*, *in* BASEL III MONITORING REPORT 104 (2022), [https://perma.cc/HX7W-GFLE].

38. *Id.* at 101.

exercise.[39] The BCBS acknowledges that not all nineteen reporting banks "consistently applied the same approach to classifying any exposures."[40] Nonetheless, the collected data still illustrates how banks gain exposure to crypto assets, even if the total exposure remains unknown.

The nineteen banks reported total crypto-asset exposure of €9.4 billion, representing "0.14% of total exposures on a weighted average basis across the sample of banks reporting crypto asset exposures."[41] Of this exposure, Bitcoin constituted 31%, Ether 22%, and "a multitude of instruments with either Bitcoin or Ether as the underlying" asset constituted 25% and 10%, respectively.[42] These exposures spanned a variety of different bank activities: "Custody/wallet/insurance and other services" (50.2%); "Clearing, client and market-making services" (45.7%); and "Crypto holdings and lending" (4.2%).[43]

B. Summarizing U.S. Banks' Exposure to and Engagement with Crypto-Asset Activity

In the United States, banks' engagement in crypto-related activities has increased since the OCC released a series of interpretive letters in 2020 and early 2021 that clarified the ability of national banks to provide crypto custody services on behalf of customers,[44] hold dollar deposits backing stablecoins,[45] and use new technologies, including blockchain and stablecoins to conduct banking activities, such as payments.[46] While not an exhaustive list of crypto-related banking activities, we categorize banks' exposure to crypto assets into four categories: (1) providing custody and management of stablecoin reserves and crypto assets; (2) issuing stablecoins and tokenized deposits for

39. *Id.*
40. *Id.*
41. *Id.* at 102.
42. Corrias, *supra* note 37, at 103.
43. *Id.* at 104-05.
44. Interpretive Letter #1170, OFF. OF THE COMPTROLLER OF THE CURRENCY (July 22, 2020), [https://perma.cc/PE72-5UR3].
45. Interpretive Letter #1172, OFF. OF THE COMPTROLLER OF THE CURRENCY (Sept. 21, 2020), [https://perma.cc/D6PY-DP8A].
46. Interpretive Letter #1174, OFF. OF THE COMPTROLLER OF THE CURRENCY (Jan. 4, 2021), [https://perma.cc/2S3K-SG4H].

payment purposes; (3) offering crypto-linked investment products; and (4) providing blockchain-enabled platforms for exchanging and transferring crypto assets.

Table 1

Type of Banking Institution	**Crypto-related Activities**	**Examples**
Full-service national banks (i.e., commercial banks)	Issuing stablecoins and tokenized deposits on DLT platforms, providing custody services for crypto assets and private cryptographic keys.	JPMorgan's JPM Coin, USDF, and BNY Mellon.
Limited-purpose national banks (i.e., trust banks)	Offering trading and lending platforms, issuing tokens for payment purposes, and providing crypto-asset custody services.	Anchorage, Protego, and Paxos secured conditional approval from the OCC for a national trust bank charter.
Limited-purpose state banks	Issuing payment tokens (for instance, stablecoins and tokenized dollars) and offering deposit accounts backed by dollar reserves.	Wyoming-chartered special purpose depository institutions (SPDIs) focus on digital assets such as cryptocurrencies, digital securities, and digital consumer assets.

Table 1: Crypto-Related Activities Carried Out by Banks[47]

47. This table is modified by the authors based on a 2021 Congressional Research Service brief. For the original version, see Andrew P. Scott, CONG. RSCH. SERV., IF11997, BANK CUSTODY, TRUST BANKS, AND CRYPTOCURRENCY (2021), [https://perma.cc/D3X2-524Q]. The examples in the third column are supplied by the authors based on information from the following sources: *What JPMorgan Is Doing in Blockchain and Crypto*,

C. Custody of Cryptocurrencies and Management of Stablecoin Reserves

In Interpretative Letter 1170, the OCC delineated three ways a bank can provide crypto custody services to its customers.[48] First, a bank can take "possession of the cryptographic access keys" to a customer's crypto assets.[49] Second, a bank may offer to store copies of the customer's cryptographic access keys while the customer retains their copy.[50] Third, a bank may act as a custodian for cryptocurrencies for investment advisers on behalf of their clients.[51] In Interpretative Letter 1172, the OCC clarified that banks are also permitted to hold cash reserves backing stablecoins issued by crypto-asset companies (e.g., USDC and Tether).[52] Most stablecoins "are backed by cash-equivalent reserves such as bank deposits, Treasury bills, and commercial paper."[53]

Several big banks have begun offering crypto-asset custodial services. In 2021, U.S. Bank—the fifth largest retail bank in the United States—began offering crypto-asset custody services that "help investment managers store private keys for bitcoin, bitcoin cash and litecoin with assistance from sub-custodian NYDIG."[54]

BLOCKDATA (Sept. 7, 2022), [https://perma.cc/6UJC-4UQ8]; *Introducing the USDF Consortium*, USDF CONSORTIUM, [https://perma.cc/W45Q-WQWK] (last visited Mar. 8, 2023); *BNY Mellon Launches New Digital Asset Custody Platform*, BNY MELLON (Oct. 11, 2022), [https://perma.cc/7BJQ-54JZ]; Nikhilesh De & Ian Allison, *Anchorage Becomes First OCC-Approved National Crypto Bank*, COINDESK (Jan. 13, 2021, 2:36 PM), [https://perma.cc/57YD-U44V]; John Reosti, *OCC Approves Trust Charter for Second Crypto Firm*, AM. BANKER (Feb. 5, 2021, 4:46 PM), [https://perma.cc/VYL5-QA9D]; *OCC Conditionally Approves National Bank Charter Application for Crypto Firm Paxos*, ABA BANKING J. (Apr. 23, 2021), [https://perma.cc/U5PB-CUSG]; and *Special Purpose Depository Institutions*, WYO. DIV. OF BANKING, [https://perma.cc/BRC8-U8N7] (last visited Mar. 9, 2023).

48. Interpretive Letter #1170, *supra* note 44, at 4-5.

49. *Id.* at 5.

50. *Id.* at 8 n.37.

51. *Id.* at 8.

52. Interpretive Letter #1172, *supra* note 45, at 1; *see also* Guy Ovadia, *Turning the Stables: Tether Vs. USDC, Which Will Be the Best Stablecoin?*, MONEYMADE (Nov. 16, 2022), [https://perma.cc/8TYJ-SVGY].

53. GORDAN Y. LIAO & JOHN CARAMICHAEL, BD. OF GOVERNORS OF THE FED. RSRV. SYS., INT'L FIN. DISCUSSION PAPER NO. 1334, STABLECOINS: GROWTH POTENTIAL AND IMPACT ON BANKING 1, 3 (2022), [https://perma.cc/J7P9-4LAW].

54. Hugh Son, *US Bank Launches Bitcoin Custody Service as Institutions Race to Cater to Crypto Demand*, CNBC (Oct. 5, 2021, 4:07 PM), [https://perma.cc/H3UR-N62Q].

More significantly, on October 11, 2022, BNY Mellon, the world's largest asset custodian, went live with its Digital Asset Custody platform in the United States, allowing select institutional clients to hold and transfer Bitcoin and Ether.[55] In the press release announcing the move, BNY Mellon noted that they were working with "Fireblocks and Chainalysis to integrate their technology in order to meet the present and future security and compliance needs of clients across the digital asset space."[56] BNY Mellon had previously invested in Fireblocks,[57] a company "that helps financial institutions protect digital assets from theft or hackers."[58] Chainalysis is a blockchain analytics platform that helps financial institutions comply with know-your-customer and anti-money laundering requirements in crypto assets.[59]

The decisions from name-brand banks to offer crypto-asset custody may sound innocuous; after all, banks have provided basic custodial services for hundreds of years. However, the risks involving crypto-asset custody are numerous and unique, largely due to the novel distributed ledger technology (DLT) that powers most crypto assets.[60] Without a central authority or third-party intermediary in any DLT-enabled infrastructure, the private key plays a crucial role in crypto custody services.[61] The private key dictates consumers' right to exercise control over their crypto and send it to a third party.[62] Hence, if a private key is compromised (e.g., theft and fraud), banks and customers can permanently lose control over crypto assets.[63] Additionally, any transaction relating

55. *BNY Mellon Launches New Digital Asset Custody Platform*, *supra* note 47.

56. *Id.*

57. *BNY Mellon Invests in Cryptocurrency Storage Firm Fireblocks*, REUTERS (Mar. 18, 2021, 7:04 AM),[https://perma.cc/NZ89-5LJ7].

58. *About Fireblocks*, FIREBLOCKS, [https://perma.cc/PQ99-GCES] (last visited Mar. 9, 2023).

59. *See Watch the Overview*, CHAINALYSIS, [https://perma.cc/VX7Q-RF6A] (last visited Mar. 9, 2023).

60. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT'L SETTLEMENTS, CONSULTATIVE DOCUMENT: SECOND CONSULTATION ON THE PRUDENTIAL TREATMENT OF CRYPTOASSET EXPOSURES 4 (2022), [https://perma.cc/C6TR-AKKL].

61. A private key is a secure code that enables the holder to make cryptocurrency transactions and prove ownership of their holdings. *See What Is a Private Key?*, COINBASE, [https://perma.cc/JX28-U6X7] (last visited Mar. 10, 2023).

62. *See id.*

63. The unique risks posed by crypto custody prompted the Securities and Exchange Commission to propose amending "rule 206(4)-2, the Commission's custody rule, under the

to cryptocurrency and other crypto assets involves financial risks associated with the initiation and verification process embedded in DLT-based infrastructure. For instance, unlike traditional banking activities, any crypto-asset transaction, once verified by the network, cannot be refunded in case of an error, security breach, or fraud.[64]

In addition, "[r]eserves held by asset-backed stablecoins are subject to market, credit and liquidity risks."[65] Crypto-asset companies often misrepresent to banks, and the public, the sufficiency of the dollar reserves backing their stablecoins (e.g., the CFTC's enforcement action against Tether).[66] Holding stablecoin reserves exposes banks to significant counterparty and liquidity risks.[67] If stablecoin holders have reason to doubt the quantity and quality of stablecoin reserves, they may sell their holdings en masse to get dollars, thereby triggering a classic "run" that results in stablecoin issuers withdrawing their reserve deposits from banks to meet redemption requests.

Finally, as the examples of BNY Mellon and U.S. Bank demonstrate, banks rely on new technology vendors to aid them in providing crypto-asset custody.[68] Fireblocks, Chainalysis, and NYDIG, are all young companies that operate outside the bank regulatory perimeter.[69] Should there be any operational risk event

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Investment Advisers Act of 1940." Press Release, Sec. & Exch. Comm'n, SEC Proposes Enhanced Safeguarding Rule for Registered Investment Advisers (Feb. 15, 2023), [https://perma.cc/L5EV-2LEX]. "The proposed rules would exercise Commission authority under section 411 of the Dodd-Frank Act by broadening the application of the current investment adviser custody rule beyond client funds and securities to include any client assets in an investment adviser's possession," including cryptocurrency. *Id.*

64. *See Can I Cancel a Cryptocurrency Transaction?*, COINBASE, [https://perma.cc/KJM3-HQG6] (last visited Feb. 13, 2023).

65. Cameron Dark, Eleanor Rogerson, Nick Rowbotham & Peter Wallis, *Stablecoins: Market Developments, Risks and Regulation*, RSRV. BANK AUSTL. BULL., Dec. 2022, at 43, 46 tbl.1, [https://perma.cc/4HY6-RAC8].

66. *See* U.S. COMMODITY FUTURES TRADING COMM'N, RELEASE NO. 8450-21, CFTC ORDERS TETHER AND BITFINEX TO PAY FINES TOTALING $42.5 MILLION (2021), [https://perma.cc/E9P9-9YGG].

67. *See* Evan Weinberger, *Crypto Stablecoin Plummet Sparks Call for Banks to Keep Distance*, BLOOMBERG L. (May 18, 2022, 5:00 AM), [https://perma.cc/E9JU-VMRE]; *What Is Counterparty Risk?*, EXODUS, [https://perma.cc/6GHG-22FJ] (last visited Mar. 10, 2023).

68. *See supra* notes 54-56 and accompanying text.

69. *See About Fireblocks*, *supra* note 58; *About us*, NYDIG, [https://perma.cc/N4SP-6AYE] (last visited Feb. 20, 2023); *Introducing Chainalysis Storyline: The First Blockchain*

at these entities, bank customers' crypto assets may be in jeopardy? Bank regulatory agencies all have third-party risk management guidelines that require banks to manage and evaluate the risks associated with each third-party relationship and give bank regulators the authority to examine third parties.[70] Given the novelty of crypto assets and their underlying technology, bank regulators may not have sufficient experience or expertise to properly assess the risks posed by new fintech vendors.

D. Stablecoins and Tokenized Deposits

Aside from asset-backed stablecoins circulating on permissionless DLT networks, banks have also developed reserve-backed stablecoins for various payment-related activities. Known as "tokenized deposits," these tokens, issued on private and permissioned DLT networks, represent a digital version of commercial bank deposits.[71] In 2019, JPMorgan Chase introduced JPM Coin, its own stablecoin, that allows "J.P. Morgan clients to transfer U.S. Dollars held on deposit with J.P. Morgan within the system."[72] Wells Fargo implemented a similar system in 2019 "for internal cross-border money transfers."[73] And

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Analysis Tool Designed for Web3, CHAINALYSIS (May 18, 2022), [https://perma.cc/N8FR-V5BJ].

70. *See* DIV. OF BANKING SUPERVISION & REGUL. & DIV. OF CONSUMER & CMTY. AFFS., BD. OF GOVERNORS OF THE FED. RSRV. SYS., SR LETTER 13-19/CA LETTER 13-21, GUIDANCE ON MANAGING OUTSOURCING RISK (2021), [https://perma.cc/GY8B-GSYU]; FED. DEPOSIT INS. CORP., FIL-44-2008, GUIDANCE FOR MANAGING THIRD-PARTY RISK (2008), [https://perma.cc/UY6J-PFCZ]; OFF. OF THE COMPTROLLER OF THE CURRENCY, DEP'T OF THE TREASURY, OCC BULL. 2013-29, THIRD-PARTY RELATIONSHIPS: RISK MANAGEMENT GUIDANCE (2013), [https://perma.cc/8EL4-3LSX]; OFF. OF THE COMPTROLLER OF THE CURRENCY, DEP'T OF THE TREASURY, OCC BULL. 2020-10, THIRD-PARTY RELATIONSHIPS: FREQUENTLY ASKED QUESTIONS TO SUPPLEMENT OCC BULLETIN 2013-29 (2020), [https://perma.cc/8MS8-ZSY2]. The OCC also issued foreign-based third-party guidance, which supplements this proposed guidance. *See* OFF. OF THE COMPTROLLER OF THE CURRENCY, DEP'T OF THE TREASURY, OCC BULL. 2002-16, BANK USE OF FOREIGN-BASED THIRD-PARTY SERVICE PROVIDERS: RISK MANAGEMENT GUIDANCE (2002), [https://perma.cc/9ENW-E5SP].

71. BANK FOR INT'L SETTLEMENTS, ANNUAL ECONOMIC REPORT 94 (2022), [https://perma.cc/4W8G-ZJG6].

72. *About Coin Systems*, ONYX BY J.P. MORGAN, [https://perma.cc/ZD4K-CWNK] (last visited Mar. 10, 2023).

73. Ian Allison, *Wells Fargo's Stablecoin 'Faster, Cheaper' Than SWIFT, Says Exec*, COINDESK (Sept. 13, 2021, 6:28 AM), [https://perma.cc/7QUW-97MK].

in 2022, a group of FDIC-insured regional and community banks formed the USDF Consortium to issue a bank-minted tokenized deposit that is "redeemable [for U.S. dollars] on a 1:1 basis from Consortium member banks."[74]

E. Crypto-Linked Exchange-Traded Products (ETPs)

Crypto-linked ETPs are vehicles for institutional investors to invest in the crypto world without investing in crypto directly.[75] In Europe, an increasing number of crypto-linked ETPs are listed on the SIX exchange in Switzerland[76] and the Deutsche Böerse's Xetra market in Germany.[77] Institutional investors and hedge funds in the United States now use U.S. banks to access crypto ETPs approved by European regulators. In 2021, Bank of America's prime brokerage unit began clearing and settling crypto-linked ETPs for its hedge-fund clients.[78] In addition, many large U.S. banks are now offering their clients access to CME-listed Bitcoin and Ether future contracts, despite being initially hesitant due to concerns that the products were too volatile and unsuitable for their clients.[79] Finally, Goldman Sachs launched a cryptocurrency trading desk in May 2021 to trade crypto derivatives, a move that will be closely followed and likely emulated by their competitors.[80]

74. Rob Morgan, *Why I'm Joining USDF*, USDF CONSORTIUM (July 5, 2022), [https://perma.cc/2S4C-NE94].

75. *What Are Crypto Exchange Traded Products?*, FICAS AG, [https://perma.cc/H788-PMNJ] (last visited Mar. 10, 2023).

76. Bilal Jafar, *Helveteq Announces Listing of Crypto ETPs on SIX Swiss Exchange*, FIN. MAGNATES (Nov. 4, 2022), [https://perma.cc/NX2H-GFGQ].

77. *Crypto ETNs on Xetra: Growing Variety on a Regulated Trading Venue*, XETRA, [https://perma.cc/M85U-RDKP] (last visited Mar. 10, 2023).

78. Tanzeel Akhtar & Will Canny, *Bank of America Is Clearing Crypto ETPs for Hedge Funds in Europe: Sources*, COINDESK (Feb. 9, 2023, 7:22 AM), [https://perma.cc/7D2E-JD54].

79. *See* Dakin Campbell, Sonali Basak & Laura J. Keller, *Inside Banks, Bitcoin Futures Are Riling Trading Executives*, BLOOMBERG (Dec. 8, 2017, 9:03 AM), [https://perma.cc/K9HT-LLQP].

80. Hugh Son & Natasha Turak, *Goldman Sachs Internal Memo Unveils New Cryptocurrency Trading Team*, CNBC (May 7, 2021, 2:09 PM), [https://perma.cc/55KA-ULLN].

III. EXISTING GUIDANCE

A. The Office of the Comptroller of the Currency's Crypto Guidance

Under President Trump the OCC adopted a favorable disposition toward financial technology, including cryptocurrency. This was largely due to the appointment of Brian Brooks, who, before joining the OCC, was the chief legal officer of U.S.-based cryptocurrency exchange Coinbase.[81] Brooks served as Acting Comptroller from May 29, 2020, to January 14, 2021. During that time, the OCC made several positive statements regarding cryptocurrency and released three interpretive letters that gave national banks and federal savings associations the legal authority to provide certain cryptocurrency-related services.[82] While serving as Acting Comptroller, Brooks (2020) wrote: "Powered by distributed ledger technology (DLT), the blockchain is to the financial system what the Internet was to libraries."[83]

Upon taking over as Acting Comptroller on May 10, 2021, Michael Hsu began reviewing the OCC's previously issued crypto-related guidance, which resulted in the release of Interpretive Letter 1179 in November 2021.[84] The new interpretive letter reaffirmed that national banks are legally permitted to engage in the activity addressed in the three prior crypto-related letters, "*provided* the bank can demonstrate, to the

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81. Jonathan Shieber, *Former Coinbase Exec Is Now Down with OCC (the Office of the Comptroller of the Currency)*, TECHCRUNCH (Mar. 16, 2020, 5:56 PM), [https://perma.cc/S8SE-DDGC].

82. Press Release, U.S. Dep't of the Treasury, Brian P. Brooks to Become Acting Comptroller of the Currency (May 21, 2020), [https://perma.cc/KLF7-9TH6]; Off. of the Comptroller of the Currency, U.S. Dep't of the Treasury, News Release 2021-7, BRIAN P. BROOKS TO STEP DOWN, BLAKE PAULSON TO BECOME ACTING COMPTROLLER OF THE CURRENCY ON JANUARY 14, 2021 (2021), [https://perma.cc/JAH5-CMMB]; Interpretive Letter #1170, *supra* note 44; Interpretive Letter #1172, *supra* note 45; Interpretive Letter #1174, *supra* note 46.

83. Brian P. Brooks, *How Unbundling and Decentralization Are Reshaping Banking and Financial Services*, INT'L BANKER (Dec. 3, 2020), [https://perma.cc/UW8S-5M32].

84. *Michael J. Hsu, Acting Comptroller of the Currency*, OFF. OF THE COMPTROLLER OF THE CURRENCY, [https://perma.cc/UA5Y-9Y8D] (last visited Mar. 11, 2023); Interpretive Letter #1179, OFF. OF THE COMPTROLLER OF THE CURRENCY (Nov. 18, 2021), [https://perma.cc/H97D-V57A].

satisfaction of its supervisory office, that it has controls in place to conduct the activity in a safe and sound manner."[85] However, Interpretive Letter 1179 requires a national bank to "notify its supervisory office, in writing, of its intention to engage in any" crypto-related activities and refrain from engaging in them "until it receives written notification of the supervisory office's non-objection."[86] The letter goes on to "explain[] the process by which a bank may demonstrate that it will engage in the activities in a safe and sound manner."[87]

B. The Federal Reserve and Federal Deposit Insurance Corporation Release Crypto Guidance

On the same day, the OCC released Interpretive Letter 1179 (November 23, 2021), the FDIC, Fed, and OCC released a joint statement summarizing the work of recently conducted "policy sprints" focused on crypto assets and announcing "a roadmap of future planned work."[88] The initial sprints focused on developing a common vocabulary, identifying key risks, and "analyzing the applicability of existing regulations" to crypto activities, and the results informed supervisory letters released by the FDIC and the Federal Reserve in April and August 2022.[89]

The Federal Reserve and FDIC guidance largely adheres to the substance of OCC Interpretive Letter 1179, but unlike the OCC, neither agency addressed the legal permissibility of any specific crypto-related activity.[90] Both the Federal Reserve and

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85. Interpretive Letter #1179, *supra* note 84, at 1.

86. *Id.*

87. *Id.* at 3.

88. *Joint Statement on Crypto-Asset Policy Sprint Initiative and Next Steps*, BD. OF GOVERNORS OF THE FED. RSRV. SYS., FED. DEPOSIT INS. CORP. & OFF. OF THE COMPTROLLER OF THE CURRENCY (Nov. 23, 2021), [https://perma.cc/7U5D-74AE].

89. *Id.*; DIV. OF SUPERVISION & REGUL. & DIV. OF CMTY. AFFS., BD. OF GOVERNORS OF THE FED. RSRV. SYS., SR LETTER 22-6/CA LETTER 22-6, ENGAGEMENT IN CRYPTO-ASSET RELATED ACTIVITIES BY FEDERAL RESERVE-SUPERVISED BANKING ORGANIZATIONS (2022) [hereinafter ENGAGEMENT IN CRYPTO-ASSET ACTIVITIES], [https://perma.cc/PJ6Y-MRRD]; FED. DEPOSIT INS. CORP., FIL 16-2022, NOTIFICATION OF ENGAGING IN CRYPTO-RELATED ACTIVITIES (2022), [https://perma.cc/TG9B-FVV7].

90. This is largely because neither the Federal Reserve nor FDIC had ever expressed a view on the legal permissibility of any crypto-related activity. *See* ENGAGEMENT IN CRYPTO-ASSET ACTIVITIES, *supra* note 89, at 2 n.4; FED. DEPOSIT INS. CORP., *supra* note 89.

FDIC note that crypto's novelty poses risks to consumers, safety and soundness, and financial stability.[91] As such, the agencies require that any entity under their supervision currently engaged in, or considering engaging in, crypto-related activities first notify the respective agency.[92] Both agencies pledge to provide supervisory feedback, as appropriate, but they do not go as far as the OCC in requiring a written non-objection before the bank can engage in the activity in question.[93]

On January 23, 2023, the Federal Reserve Board of Governors issued a policy statement that provides additional clarity on the types of crypto-asset activity state member banks can engage in.[94] The statement notes, "[T]he Board will presumptively exercise its authority to limit state member banks to engaging as principal in only those activities that are permissible for national banks," and provides "Supplementary Information" that clarifies that state member banks are not permitted to hold crypto assets as principal.[95] The practical effect of the Fed's policy statement is to align state member banks' permissible activities with those of national banks.

C. Additional Agency Guidance on Crypto and Liquidity Risks

On February 23, 2023, the federal bank regulatory agencies once again joined forces in response to large deposit outflows at several crypto-focused banks and issued the "Joint Statement on Liquidity Risks to Banking Organizations Resulting from Crypto-Asset Market Vulnerabilities."[96] The new joint statement

91. *See* ENGAGEMENT IN CRYPTO-ASSET ACTIVITIES, *supra* note 89, at 1; FED. DEPOSIT INS. CORP., *supra* note 89.

92. *See* ENGAGEMENT IN CRYPTO-ASSET ACTIVITIES, *supra* note 89, at 2; FED. DEPOSIT INS. CORP., *supra* note 89.

93. *See* ENGAGEMENT IN CRYPTO-ASSET ACTIVITIES, *supra* note 89, at 3; FED. DEPOSIT INS. CORP., *supra* note 89; Interpretive Letter #1179, *supra* note 84, at 1.

94. Policy Statement on Section 9(13) of the Federal Reserve Act, 88 Fed. Reg. 7848 (Feb. 7, 2023), [https://perma.cc/9V5M-HGX8].

95. *Id.* at 7848, 7850.

96. Joint Press Release, Bd. of Governors of the Fed. Rsrv. Sys., Fed. Deposit Ins. Corp., and Off. of the Comptroller of the Currency, Agencies Issue Joint Statement on Liquidity Risks Resulting from Crypto-Asset Market Vulnerabilities (Feb. 23, 2023), [https://perma.cc/9AWL-Z3AR].

reiterates existing liquidity risk management principles while highlighting liquidity risks to banks that rely on funding from crypto-asset-related entities.[97] These risks are "due to the unpredictability of the scale and timing of deposit inflows and outflows."[98] The statement goes on to list "effective practices" banking organizations should follow to monitor the liquidity risks from crypto-related entities.[99]

D. U.S. Banking Agencies Need to Provide Additional Clarity

By the end of summer 2022, the federal banking agencies were broadly aligned in their view on cryptocurrency and the permissibility of banks to engage in crypto-asset activities. However, the agencies are also aware that their guidance lacks detail and leaves considerable ambiguity as to what specifically banks are allowed to do and the prudential requirements associated with such activity. In fact, in the November 2021 policy sprint announcement, the agencies expressed intent to "provide greater clarity on whether certain activities related to crypto-assets conducted by banking organizations are legally permissible, and expectations for safety and soundness, consumer protection, and compliance with existing laws and regulations" throughout 2022.[100] Specifically, the agencies singled out the following activities as warranting further clarity:

- Crypto-asset safekeeping and traditional custody services.
- Ancillary custody services.
- Facilitation of customer purchases and sales of crypto-assets.
- Loans collateralized by crypto-assets.
- Issuance and distribution of stablecoins.

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97. *Id.*

98. *Joint Statement on Liquidity Risks to Banking Organizations Resulting from Crypto-Asset Market Vulnerabilities*, BD. OF GOVERNORS OF THE FED. RSRV. SYS., FED. DEPOSIT INS. CORP. & OFF. OF THE COMPTROLLER OF THE CURRENCY (Feb. 23, 2023), [https://perma.cc/C84M-QKDE].

99. *Id.* at 2.

100. *Joint Statement on Crypto-Asset Policy Sprint Initiative and Next Steps*, *supra* note 88, at 2.

- Activities involving the holding of crypto-assets on [the] balance sheet.[101]

The policy sprint statement also noted that the agencies were "continu[ing] to engage with the [BCBS]" around their crypto-asset consultative process,[102] which partially explains the delay in further clarity. The BCBS did not issue final prudential standards for banks' exposures to crypto assets until December 2022,[103] after issuing an initial consultation in June 2021[104] and a second consultation in June 2022.[105] Now, U.S. banking agencies must carefully review the final standards and decide whether to implement them as is or make adjustments that address their concerns around crypto assets.

E. Basel Committee on Banking Supervision Releases Prudential Standards

The Basel Committee on Banking Supervision (BCBS or "Committee") is "the primary global standard setter for the prudential regulation of banks and provides a forum for regular cooperation on banking supervisory matters."[106] The Committee first raised concerns about banks' crypto-asset exposure in 2019, noting at the time that crypto assets "present a number of risks for banks, including liquidity risk; credit risk; market risk; operational risk (including fraud and cyber risks); money laundering and terrorist financing risk; and legal and reputation risks."[107] In response, the Committee began formulating a prudential standard for banks' exposure to crypto assets. The

101. *Id.*
102. *Id.*
103. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT'L SETTLEMENTS, PRUDENTIAL TREATMENT OF CRYPTOASSET EXPOSURES 1 (2022), [https://perma.cc/LWR4-FV74].
104. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INT'L SETTLEMENTS, CONSULTATIVE DOCUMENT: PRUDENTIAL TREATMENT OF CRYPTOASSET EXPOSURES 1 (2021), [https://perma.cc/TK9L-FCSR].
105. BASEL COMM. ON BANKING SUPERVISION, *supra* note 60, at 1.
106. *The Basel Committee—Overview*, BANK FOR INT'L SETTLEMENTS, [https://perma.cc/A2NU-NAUU] (last visited Mar. 11, 2023).
107. *See Statement on Crypto-Assets*, BANK FOR INT'L SETTLEMENTS (Mar. 13, 2019), [https://perma.cc/PC94-9AMZ].

final standard was released in December 2022, and member jurisdictions are expected to implement it by January 1, 2025.[108]

Based on the classification conditions, the final crypto-asset standards recommend that banks classify crypto assets into two classes: Group 1 and Group 2.[109] The classification conditions sub-categorize Group 1 crypto assets into Group 1a and Group 1b.[110]

Group 1a includes tokenized traditional assets, which are "digital representations of traditional assets" issued on a DLT or blockchain platform.[111] Under this framework, a Group 1a asset must have the same legal rights (i.e., ownership, claims in insolvency, and claim on deposits) as the traditional or non-tokenized asset.[112] If the legal rights are contingent on the redemption or conversion of the Group 1a assets into the non-tokenized asset, they no longer belong to Group 1a.[113] In addition, Group 1a crypto assets have the same degree of credit and market risks as traditional assets.[114] For example, any bonds, cash, and securities with traditional assets as a reference value can qualify as a Group 1a crypto asset.[115] Group 1b asset class consists of crypto assets with effective stabilization mechanisms, like fiat-backed stablecoins.[116] Although the BCBS does not define what constitutes "effective stabilization mechanisms" and which traditional assets qualify to be an underlying reference asset of a stablecoin, the standard indicates that a stable "peg value" can be an indicator for a Group 1b asset's stabilization mechanism.[117] For instance, if a stablecoin is redeemable for a

108. BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 1.

109. *Id.* at 1, 6.

110. *Id.* at 1.

111. *Id.* at 6. For an overview of what constitutes traditional asset class, see JARROD W. WILCOX & FRANK J. FABOZZI, FINANCIAL ADVICE AND INVESTMENT DECISIONS: A MANIFESTO FOR CHANGE app. A at 275 (2013) (categorizing traditional asset classes into common stocks, bonds, real estate, and cash or cash equivalents).

112. BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 6.

113. *Id.* at 7.

114. *Id.* at 6.

115. *See id.*; *supra* note 111 and accompanying text.

116. The Committee defines tokenized assets as "[d]ematerialised securities (securities that have been moved from physical certificates to electronic book-keeping) that are issued through DLT or similar technologies." BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 5-6.

117. *Id.* at 7.

"predefined" amount of U.S. dollar or gold, it qualifies to be a Group 1b asset class.[118] According to this standard, banks are under no obligation to limit their exposure to Group 1 crypto assets. The Basel framework regulates the prudential treatment of a bank's exposure to Group 1 assets and minimum capital requirements.[119]

Any crypto assets that do not meet the classification conditions fall into Group 2 asset class.[120] Depending on the presence of hedging recognition criteria,[121] Group 2 crypto assets are divided into two sub-classifications: Group 2a and Group 2b.[122] The Committee noted that Group 2 assets "pose additional and higher risks;" therefore, Group 2 exposures are assigned a 1250% risk weight and are subject to an absolute exposure limit of 2% of a bank's Tier 1 capital, although the Committee notes that "Group 2 crypto assets should not generally be higher than 1% of . . . Tier 1 capital."[123] Table 2 summarizes the final standard.

Table 2

Class-ification	**Sub-classification**	**Definition**	**Examples**	**Limit on exposure**	**Capital requirements**
Group 1	*Group 1a*	Tokenized traditional assets—digital representations of traditional assets.	Tokenized bonds, loans, commodities, cash.	None.	Based on the risk weights of the underlying exposure as per the existing Basel Framework.
	Group 1b	Any crypto assets with stabilization mechanisms.	Asset-backed stablecoins.		

118. *Id.*
119. *Id.* at 1.
120. *Id.*
121. According to the BCBS hedging recognition criteria, (1) a bank's crypto asset exposure must meet any of the conditions set out in clause 60.55(1), (2) the crypto exposure is highly liquid; and (3) sufficient information is available regarding the crypto exposure's price, trading volume, and market capitalization. *See* BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 17-18.
122. *Id.* at 1.
123. *Id.* at 1, 21, 28.

<table>
<tr><td rowspan="2">Group 2</td><td>Group 2a</td><td>Crypto assets with a limited degree of hedging recognition (for instance, offsetting long and short positions).</td><td>Unbacked crypto assets.</td><td rowspan="2">Aggregate exposure of 1% of a bank's tier 1 capital; more conservative capital requirements are imposed if a bank breaches the 2% exposure limit.</td><td rowspan="2">1250% risk-weight applies; additional capital requirement if a bank breaches the 1% limit; if 2% exposure limit is breached, the whole class will be subject to Group 2b capital requirements.</td></tr>
<tr><td>Group 2b</td><td>Crypto assets with no hedging recognition.</td><td>All other crypto assets (e.g., Bitcoin, Ether).</td></tr>
</table>

Table 2: Classification of Crypto Assets and Their Capital Requirement Standards[124]

The final standard is less stringent than the second consultation, which was less stringent than the first consultation, reflecting intense lobbying by banks and crypto-asset firms.[125] As evidence, the final standard eliminates a fixed infrastructure risk add-on to risk-weighted assets of 2.5% of total Group 1 exposure, which was included in the second consultation because of the Committee's concerns "that the [DLT] infrastructure on which cryptoassets are based is still new and evolving and may pose various unforeseen risks."[126] The final standard scraps the fixed add-on in favor of "a more flexible approach," deferring the authorities and discretion on a bank to impose and increase added risk measures "based on any observed weaknesses in the infrastructure" or technology platform used to issue a specific

124. The table is modified by the authors. For reference, see BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 1, 2, 6, 7, 21, 28.

125. A review of the submitted comment letters on the Committee's first and second consultative document reveals that the majority of letters were submitted by crypto-asset firms or traditional financial institutions that are starting to engage in crypto-asset activities. *See Comments Received on the Consultative Document "Prudential Treatment of Cryptoasset Exposures,"* BANK FOR INT'L SETTLEMENTS, [https://perma.cc/72E9-4CHM] (last visited Mar. 11, 2023); *Comments Received on the Consultative Document "Prudential Treatment of Cryptoasset Exposures—Second Consultation,"* BANK FOR INT'L SETTLEMENTS, [https://perma.cc/J4SS-NHWX] (last visited Mar. 11, 2023). Notably, no comments were submitted by public interest or consumer groups.

126. *Compare* BASEL COMM. ON BANKING SUPERVISION, *supra* note 60, at 4, *with* BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 2.

crypto asset.[127] Another big change from the second consultation is the elimination of the requirement for banks to seek prior supervisory approval before finalizing their crypto assets classification. The final standard "agrees with feedback to the consultation" that this requirement is "unnecessarily burdensome" and replaces the pre-approval requirement with a requirement to notify supervisors of a bank's classification decisions; supervisors can then "override these decisions if they disagree with a bank's assessment."[128]

IV. CONCLUSION

Basel standards are designed to be minimum standards. Member jurisdictions are free to implement more stringent requirements, and the United States has done this with many elements of Basel III, a practice referred to as "gold-plating."[129] Given the crypto skepticism expressed by the U.S. banking agencies in the Joint Statement from January 2023 and the fact that the final Basel standard was repeatedly watered down despite risks in the crypto sector becoming more apparent over that same time, the United States will likely gold-plate the final Basel standard for crypto-asset exposures. This would be prudent considering the risks and interconnections revealed in the wake of FTX's failure. In fact, some commenters have called for a "Glass-Steagall 2.0" that would completely separate banking and crypto, but this is beyond the agencies' ability to implement and would require congressional action.[130] As the Joint Statement notes, "Banking organizations are neither prohibited nor

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127. BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 1-2.

128. *Id.* at 3. The final proposal also eliminated the basis risk test for stablecoins, which was part of the second consultative document. The basis risk test aimed "to ensure that the holder of a cryptoasset can sell it in the market for an amount that closely tracks the peg value." *Id.* However, to be counted in Group 1, stablecoins will still have to pass the redemption risk test to ensure that the reserve assets are sufficient to enable the stablecoin's redemption "at all times, including during periods of extreme stress." *Id.*

129. *See Basel III Endgame and the Cost of Credit for American Business*, BANK POL'Y INST. (Jan. 10, 2022), [https://perma.cc/D742-ER5L].

130. *See Crypto Crash: Why the FTX Bubble Burst and the Harm to Consumers: Hearing Before the S. Comm. on Banking, Hous. & Urb. Affs.*, 117th Cong. 12 (2022) (statement of Hilary J. Allen, Professor of Law, American University Washington College of Law), [https://perma.cc/9LEA-D2GF].

discouraged from providing banking services to customers of any specific class or type, as permitted by law or regulation."[131] Provided cryptocurrency and its progeny, like stablecoins, are legal in the United States, banks are free to conduct business with crypto firms. However, bank regulators have the authority to impose additional prudential requirements on such activity, and they would be wise to do so.

One problem with the final Basel standard is that it only addresses exposure to crypto assets themselves; the standard is relatively silent on the issue of exposure to crypto-related firms. For example, the final standard notes that the liquidity coverage ratio (LCR) and net stable funding ratio requirements for crypto-asset exposures "must generally follow a treatment that is consistent with existing approaches for traditional exposures with economically equivalent risks."[132] This means there is nothing in the final standard that requires banks to attach a higher LCR outflow rate for dollar deposits from cryptocurrency exchanges or stablecoin issuers.[133] As the experience at Silvergate demonstrates, deposits from crypto firms are extremely flighty, and U.S. regulators should consider attaching a 100% LCR outflow rate to deposits from any crypto-related firm.

U.S. banking agencies should also consider increasing the prudential standards around crypto-asset custody or even whether crypto-asset custody can be provided in a safe and sound manner. Historically, assets held in custody on behalf of customers have held off the balance sheet and, therefore, are exempt from any capital and liquidity requirements.[134] The Basel standard follows this approach by noting that "custodial services involving the safekeeping or administration of client cryptoassets on a segregated basis . . . do not generally give rise to credit, market or

131. *Joint Statement on Crypto-Asset Risks to Banking Organizations*, *supra* note 33, at 2.

132. BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 24.

133. "The LCR is designed to ensure that banks hold a sufficient reserve of high-quality liquid assets (HQLA) to allow them to survive a period of significant liquidity stress lasting 30 calendar days." FIN. STABILITY INST., BANK FOR INT'L SETTLEMENTS, LIQUIDITY COVERAGE RATIO (LCR)—EXECUTIVE SUMMARY (n.d.), [https://perma.cc/LQ3E-W2M6].

134. *See* THE CLEARING HOUSE, THE CUSTODY SERVICES OF BANKS, at v-vi (2016), [https://perma.cc/9SEV-49X6].

liquidity requirements."[135] However, as noted previously, the custody of crypto assets is very different from the custody of traditional assets, which is why the U.S. Securities and Exchange Commission (SEC) released Staff Accounting Bulletin (SAB) No. 121 in March 2022.[136] SAB 121 acknowledges that crypto-asset custody "arrangements involve unique risks and uncertainties not present in arrangements to safeguard assets that are not crypto-assets, including technological, legal, and regulatory risks and uncertainties."[137] Because these risks can impact an "entity's operations and financial condition," SEC staff believe that an entity providing crypto-asset custody "should present a liability on its balance sheet to reflect its obligation to safeguard the crypto-assets held for its platform users" as well as "an asset at the same time that it recognizes the safeguarding liability, measured at initial recognition and each reporting date at the fair value of the crypto-assets held for its platform users."[138]

The SEC's treatment of crypto-asset custody means that SEC-registered banks will have to hold capital against the crypto assets of which they take custody on behalf of clients. This, in turn, will make it more expensive for banks to engage in crypto-asset custody, which is why Caroline Butler, BNY Mellon's CEO of custody services, said the SEC's accounting guidance is "something we see as restricting our ability to scale our offering fully."[139] This concern was echoed by Congressman Patrick McHenry and Senator Cynthia Lummis in a letter they sent to the banking agencies on March 2, 2023.[140] They note that SAB 121

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135. After the release of the second consultation, many thought that the Basel Committee wanted banks to hold capital and liquidity for crypto-asset custodial services, but in the final standards, the Basel Committee clarified that "[t]his was not the intention of the standard." *See* BASEL COMM. ON BANKING SUPERVISION, *supra* note 103, at 3-5.

136. SEC Staff Accounting Bulletin No. 121, 87 Fed. Reg. 21015, 21016 (Apr. 11, 2022), [https://perma.cc/43C4-KY7T].

137. *Id.*

138. *Id.* at 21016-17.

139. Yueqi Yang, *Wall Street Courts Crypto Custody, but with Fingers Crossed*, BLOOMBERG (Oct. 27, 2022, 4:00 PM), [https://perma.cc/XA35-UURE].

140. Letter from Cynthia M. Lummis, U.S. Sen., and Patrick McHenry, U.S. Rep., to Michael Barr, Vice Chair for Supervision, Bd. of Governors of the Fed. Rsrv. Sys., Michael Hsu, Acting Comptroller, Off. of the Comptroller of the Currency, Marty Gruenberg, Chairman of the Board, Fed. Deposit Ins. Corp., and Todd Harper, Chairman of the Board, Nat'l Credit Union Admin. (Mar. 2, 2023), [https://perma.cc/8FE4-XTCD].

requires banks providing crypto-asset custody services to hold "massive" amounts of capital and that policymakers should be "encouraging prudentially regulated financial institutions, like banks and credit unions, to provide digital asset services precisely because they are subject to the highest standards of capital, liquidity, recovery and resolution, custody, cyber-security, and risk management."[141] In their letter, Representative McHenry and Senator Lummis ask the banking agencies if they have told the institutions under their supervision that they must comply with SAB 121 and whether SAB 121 conflicts with BCBS's prudential standard for crypto-asset exposure.[142] Their inquiry highlights why it is important for banking agencies to independently determine prudential requirements for custodial activity. Should the SEC ever rescind SAB 121, banks providing crypto custody will suddenly have to hold less capital, and regulators will be left scrambling to determine if this is an acceptable outcome given crypto's unique risks.

Before the banking agencies work through the technical details of prudential requirements for crypto-asset exposure, they first need to understand the breadth and depth of this exposure. Bank regulators are surely gathering some of this information through the standard continuous monitoring process, but recent events suggest that a more robust effort is needed. The banking agencies should continue their close coordination on crypto assets by conducting a horizontal exercise that comprehensively measures every bank's exposure to the crypto-asset sector, the nature of the exposure, and the banks' ability to manage the risk exposure. This exercise would conceptually resemble the Federal Reserve's Comprehensive Capital Analysis and Review, including public disclosure.[143]

History repeatedly shows that markets—be they traditional financial markets or nascent crypto-asset markets—abhor

141. *Id.* at 2.

142. *Id.* at 3.

143. *See Risk Glossary: Comprehensive Capital Analysis and Review (CCAR)*, RISK.NET, [https://perma.cc/LHQ4-L9GQ] (last visited Mar. 11, 2023) ("The Comprehensive Capital Analysis and Review is a stress-test regime for large U.S. banks. It aims to establish whether lenders have enough capital to cope with a severe economic shock, and assesses their risk modelling practices.").

uncertainty. The collapse of the cryptocurrency exchange FTX revealed multiple banks were more exposed to the crypto sector than previously realized. Now there is uncertainty as to how exposed these banks are and whether there are other banks with similar exposure. U.S. banking agencies have been rightly skeptical of crypto assets from the beginning, but this skepticism must now be channeled into quick action. For most of crypto's short history, banks have been sitting on the sidelines, mainly due to regulatory concerns. But this hesitancy is fading fast. Sensing a profit opportunity, U.S. banks are quickly and quietly wading into the crypto waters. Bank regulators must develop clear and comprehensive standards governing banks' crypto-asset exposures before the next FTX turns into a real Lehman moment.