a16z crypto

January 12, 2024

BY E-MAIL

Department of Financial Protection and Innovation
Clothilde V. Hewlett
Commissioner
One Sansome Street, Suite 600
San Francisco, CA 94104-4428

Re: Invitation for Comments on Proposed Application-Related Rulemaking Under the Digital Financial Assets Law (PRO 02-23)

Dear Commissioner Hewlett:

Andreessen Horowitz ("a16z") appreciates the opportunity to respond to the California Department of Financial Protection and Innovation's (the "Department") invitation for comments, dated November 20, 2023 (the "Consultation"), regarding the licensing requirements of the Digital Financial Assets Law (the "DFAL").[1] We appreciate the Department's commitment to soliciting information from the public through a transparent process, and we look forward to working with the Department as it considers promulgating rules to facilitate the implementation of the DFAL.[2] In addition to the comments provided below, we would welcome an opportunity to meet with you and your staff to answer any questions that you may have and discuss our comments below in more detail.

I. Executive Summary

In our comments, we have focused on those topics where our experience is directly relevant, and we believe that we have useful insights to share as you consider potential rulemaking and guidance. Our comments and observations are summarized below.

- A "commercially reasonable" standard should guide the Department's determinations of amounts and value for surety bonds, trust accounts, and capital minimums.
- The "reasonable expectation or belief" standard under Section 3601(b)(3) should be clarified.
- A formal approval process should be established for algorithmic stablecoins under Section 3603(b).

[1] Dep't Fin. Prot. & Innovation, *Invitation for Comments on Proposed Application-Related Rulemaking Under the Digital Financial Assets Law* (Nov. 20, 2023), https://dfpi.ca.gov/wp-content/uploads/sites/337/2023/11/DFAL-Invitation-for-Comments-11-20-2023.pdf.

[2] Assem. Bill 39, 2023 Reg. Sess., ch. 792 (Cal. 2023), https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202320240AB39. In signing the DFAL, Governor Gavin Newsom stated that "ambiguity of certain terms and the scope of this bill will require further refinement in both the regulatory process and in statute to provide clarity to both consumers, regulators and businesses subject to this licensure framework." Press Release, Office of the Governor, Signing Message (Oct. 13, 2023), https://www.gov.ca.gov/wp-content/uploads/2023/10/AB-39-Signing-Message.pdf.

- The definition of "digital financial asset" in Section 3102(g) should not be interpreted to include all NFTs.
- The exemptions for "digital financial asset business activity" under Section 3103 should be extended to video game companies and other activities.
- The definition of "control" in Section 3102(c) should not be interpreted to include developers who have limited emergency authority over a protocol.
- The minimum revenue requirements under Section 3211 that trigger audited financial statement reporting requirements should be raised.

II. About a16z

A16z is a venture capital firm that invests in seed, venture, and late-stage technology companies, focused on bio and healthcare, consumer, crypto, enterprise, fintech, and games. A16z currently has more than $35 billion in committed capital under management across multiple funds, with more than $7.6 billion in crypto funds. In crypto, we primarily invest in companies using blockchain technology to develop protocols that people will be able to build upon to launch Internet businesses. Our funds typically have a 10-year time horizon, as we take a long-term view of our investments, and we do not speculate in short-term crypto-asset price fluctuations.

At a16z, we believe we need an Internet that can foster competition and mitigate the dominance of large technology companies, unlock opportunities in the innovation economy, and enable people to take control of their digital information. The solution is web3 — the third generation of the Internet — a group of technologies that encompasses blockchains, digital assets, decentralized applications and finance, and decentralized autonomous organizations. Together, these tools enable new forms of human collaboration that can help communities make better collective decisions about critical issues, such as how networks will evolve and how economic benefits will be distributed. We are optimistic about the potential of web3 to strengthen trust in institutions and expand access to opportunity.

III. Comments in Response to the Department's Questions

A. Surety Bond or trust account (Fin. Code, § 3207, subd. (a)) and Capital (Fin. Code, § 3207, subd. (b) & (c)).

1. A "commercially reasonable" standard should guide the Department's determinations of amounts and value for surety bonds, trust accounts, and capital minimums.

In determining the amount or value of surety bonds, trust accounts, and capital minimums, we recommend that the Department issue guidance stating that it will consider what is "commercially reasonable" for individual applicants under the circumstances.[3] We also recommend that the Department consider commercial reasonableness in requiring a licensee to increase the amount of any such securities under Section 3207(a)(4).

[3] We intend to provide more concrete details on the "commercially reasonable" standard if and when the Department engages in formal rulemaking relating to the DFAL.

We believe that a commercial reasonableness standard would ensure a level playing field for applicants and licensees. We expect that the Department will encounter a wide range of applicants and licensees from across the blockchain ecosystem that operate in vastly different industries. What is economically rational in one industry may be fiscally prohibitive in another, and per the Department's suggestion in the Consultation, we believe that it would make sense to vary required amounts and values based on types of activity or business of the applicant or licensee. For example, we suggest that the Department only require surety bonds or trust accounts from applicants if they engage in services akin to fractional reserve banking (i.e., where the business holds only a fraction of customer deposits or assets on hand). In contrast, businesses that do not provide such services and hold all customer assets, like digital asset custodians, could be rendered uneconomical with the requirement of surety bonds or trust accounts. For these applicants, a better regulatory and economic outcome would be for the Department to prescribe insurance requirements. In addition, capital minimums should be set on a percentage basis depending on the size of an applicant's business portfolio. While we appreciate that the DFAL requires the Department to consider the composition of a licensee's total assets and liabilities under Section 3207(b)(1) and (2), more concrete requirements based on percentages could help market participants assess the DFAL's requirements before engaging in the licensure process.

If the Department believes it to be within its regulatory authority, we also recommend that it provide licensees with 90 days to deposit additional security in the event that the licensee receives a notice of a required increase, instead of 30 days.[4] Thirty days is a short period of time for licensees to raise capital, especially if the capital amount is in the millions of dollars. Additional time would help licensees ensure compliance with the DFAL.

B. Stablecoin approval process (Fin. Code, § 3603)

The DFAL provides the Department with significant discretion to license stablecoin issuers, but it does not provide specific guidance on the issuance of algorithmic stablecoins. As explained below, algorithmic stablecoins are an emerging technology in the blockchain ecosystem, and we believe that the Department has an opportunity to spur innovation in this sector while also protecting consumers. We provide background information on stablecoins, with a particular emphasis on algorithmic stablecoins below, and then we address possible paths to licensure for algorithmic stablecoin issuers under the DFAL.

A stablecoin is a type of cryptocurrency whose value is tied, or pegged, to the value of an outside asset, such as another currency like the U.S. dollar. While many stablecoin projects are fiat-backed, which means that the stablecoin issuer holds reserve assets to maintain the value of the coins against the pegged asset,[5] algorithmic stablecoins are generally backed by digital assets, like bitcoin and ether, and rely on a network of users and mathematical algorithms to maintain their stability. Algorithmic stablecoins have a number of highly beneficial characteristics. For

[4] DFAL, Section 3207(a)(4) ("The department may require the licensee to increase the amount of security deposited under this section, and the licensee shall deposit the additional security not later than 30 days after the licensee receives notice in a record of the required increase.").
[5] An example of a fiat-backed stablecoin is USDC. *See* Circle, https://www.circle.com/en/usdc.

example, because algorithmic stablecoins rely on assets that exist natively on a blockchain, they are generally free from off-chain counterparty risks that can arise from custodying assets with third parties, like banks.[6] Without third parties, algorithmic stablecoins can achieve true decentralization and provide users with alternative payment instruments. There are also important risks associated with algorithmic stablecoins. We address such characteristics and risks in Section III(B)(2) below and provide recommendations to the Department on the optimal way to address them.

While the DFAL does not take an explicit position on algorithmic stablecoins, we understand that it includes at least three provisions that are relevant to their issuance. The first, Section 3601(a)(2), is the most problematic because it suggests a de facto ban on algorithmic stablecoins.[7] It does not allow issuers to use digital assets as collateral reserves for outstanding stablecoins, which is a core component of algorithmic stablecoin projects.[8] Two other provisions, however, suggest exceptions to this general prohibition. Section 3601(b)(3) excludes from the definition of "stablecoins" instruments that are not "marketed in a manner that intends to establish a reasonable expectation or belief among the general public that the instrument will retain a nominal value that is so stable as to render the nominal value effectively fixed." Section 3603(b) provides the Commissioner with discretionary authority to approve stablecoins that do not meet the requirements of Section 3601.[9] Both of these carveouts could provide opportunities for developing compliant algorithmic stablecoins, but need further refinement from the Department in order for market participants to have sufficient certainty to rely on them.

1. **The "reasonable expectation or belief" standard under Section 3601(b)(3) should be clarified.**

As noted above, the DFAL exempts from the definition of "stablecoin" instruments that are not "marketed in a manner that intends to establish a reasonable expectation or belief among the general public that the instrument will retain a nominal value that is so stable as to render the nominal value effectively fixed."[10] Based on our conversations with drafters of the DFAL, we understand that the "reasonable expectation or belief" standard was drafted with the intent to moderate the de facto general ban on algorithmic stablecoins in Section 3601(a)(2), and instead, only ban particular methods of marketing stablecoins. While we appreciate the positive intentions behind this language, the standard is not precise, and market participants cannot depend on it without guidance as to what sort of marketing oversteps its boundaries. To that end,

[6] The effect of third-party counterisk was evident in the collapse of Silicon Valley Bank, which temporarily caused stablecoin USDC to de-peg from the U.S. dollar. *See* Chainalysis Team, *Here's What On-Chain Data Tells Us About Crypto's Reaction to the Demise of Silicon Valley Bank And Its Impact on USDC*, Chainalysis Blog (Mar. 16, 2023), https://www.chainalysis.com/blog/crypto-market-usdc-silicon-valley-bank/.

[7] We note that the language in Section 3601 is more restrictive than that in proposed federal stablecoin legislation, which does not regulate algorithmic stablecoins and instead proposes a study of them.

[8] DFAL, Section 3601(a)(2) ("The issuer of the stablecoin at all times owns eligible securities having an aggregate market value computed in accordance with United States generally accepted accounting principles of not less than the aggregate amount of all of its outstanding stablecoins issued or sold.").

[9] DFAL, Section 3603(b)(1) ("The commissioner may approve a stablecoin for exchange, transfer, or storage by a covered person, or for issuance pursuant to digital financial asset administration, if the commissioner determines that the stablecoin does not compromise the interests of residents who may use the stablecoin as a payment for goods and services or as a store of value.").

[10] DFAL, Section 3601(b)(3).

it would be helpful if the Department provided guidance on the sorts of disclosures, warnings, or other marketing tools that would be sufficient for an instrument to fall outside of the definition of "stablecoin," such that members of the general public would not be left with a "reasonable expectation or belief" regarding an instrument that renders the issuer noncompliant. Without further guidance, this standard alone will not provide a viable path for algorithmic stablecoin issuance.

2. A formal approval process should be established for algorithmic stablecoins under Section 3603(b).

We commend the Department for seeking guidance on what "other factors" the Commissioner should consider in determining whether to approve the issuance of stablecoins that do not meet the requirements of Section 3601. Although the "reasonable expectation or belief" standard discussed above in Section III(B)(1) could, with more guidance, provide a viable path for compliant algorithmic stablecoins, we believe that a much better alternative is formal rulemaking that establishes an approval process for issuance under the Section 3603(b) "other factors" analysis. If an algorithmic stablecoin project meets the parameters of this analysis, we believe that the Commissioner should have limited discretion to reject the algorithmic stablecoins associated with the project.[11] As discussed below, those parameters should focus on collateralization requirements that set minimum standards for types and amounts of digital assets that issuers can use as collateral, types of allowable liquidation, redemption, and settlement mechanisms, and safety regulations, like code audits.

From the outset, we note that our recommendations below are based on an analysis of algorithmic stablecoin projects that continued to function uninterrupted during the recent downturn in the crypto markets. Based on our analysis of the downturn, we have significant insight into what features do and do not work for algorithmic stablecoin projects. As explained below, stablecoins do not generally fail as a result of the use of an algorithm, but rather due to collateral design. In addition to the observations that follow, we also recommend that the Department implement a study on algorithmic stablecoin projects during this period and the features that made them successful.

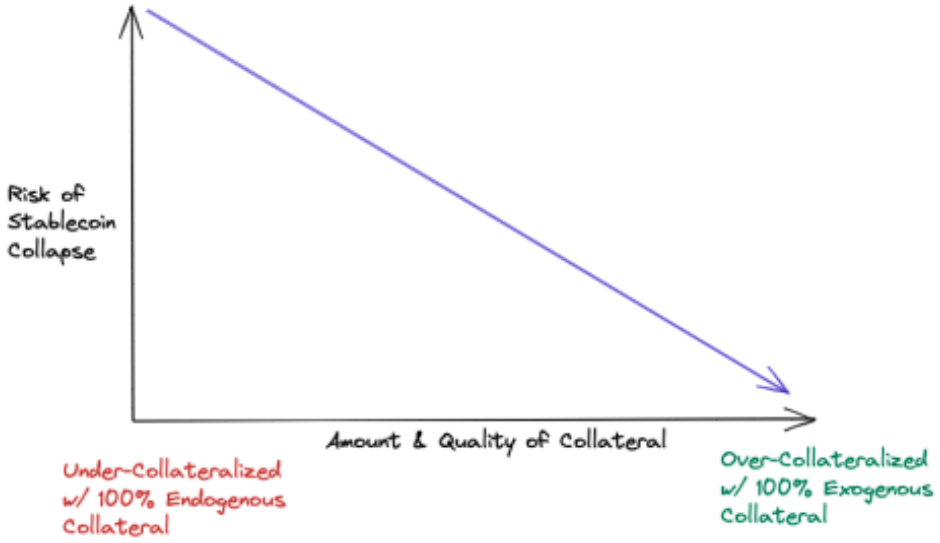
Our first observation is that adequate collateralization requirements are key to safe algorithmic stablecoin projects. There are two components to collateralization requirements: the type and amount of collateral (i.e., the collateralization ratio). As written, Section 3601(a)(2) includes collateralization requirements, but it limits the types of collateral to "eligible securities," which include only cash, U.S. bonds, and other traditional securities, while excluding digital assets. While we appreciate the California legislators' desire to protect consumers through robust collateralization requirements, we believe that the overly restrictive list of "eligible securities" is not commensurate with actual risks of other assets, including certain digital assets, if coupled with adequate amount requirements. Furthermore, use of these traditional assets necessitates that custodians be used to hold them, which introduces additional risks that are not present with decentralized protocols that utilize digital assets as collateral. For example,

[11] Industry's concerns about the breadth of the Department's discretion to approve stablecoin issuances that fall outside the parameters of Section 3601 could easily be alleviated with basic rulemaking that establishes clear parameters for an algorithmic stablecoin approval process.

algorithmic stablecoins that require overcollateralization using high quality digital asset collateral like bitcoin and ether remained stable and functioned uninterrupted throughout the recent downturn. Examples include RAI[12] and LUSD.[13]

In contrast, the shared features of most failed algorithmic stablecoins are significant undercollateralization and the use of endogenous collateral. The Terra Luna project's collapse is instructive in this regard. Setting aside the high likelihood that Terra Luna was a fraudulent project that should never have been considered an algorithmic stablecoin, the project failed because it was undercollateralized and it relied on "endogenous" collateral.[14] Endogenous collateral consists of digital asset collateral that is native to the issuing protocol and whose value is dependent on the success or failure of the stablecoin protocol. For example, the collateral supporting TerraUSD's peg to the U.S. dollar largely consisted of LUNA, the native governance token of the Terra Protocol on which TerraUSD was minted. Using endogenous collateral is risky as "bank runs" result in the value of the collateral declining, thereby leading to further redemptions. Stablecoins utilizing endogenous collateral are also particularly dangerous because they are capable of explosive growth. As a protocol's native governance token increases in value, users holding the native governance token can mint more stablecoins with no external cost, and the reflexive relationship compounds. But when the price of the native governance token declines after such explosive growth, the resulting run can be disastrous. We believe that the Department has an important interest in preventing such breakdowns and can do so through collateral requirements that do not allow undercollateralization or endogenous collateral. On the other hand, exogenous collateral consists of collateral external to the issuing system and whose value is not dependent on the success or failure of the stablecoin protocol (e.g., where a stablecoin protocol uses bitcoin and ether as collateral for the issuance of its stablecoin). If algorithmic stablecoin projects overcollateralize and use well-established cryptocurrencies, like bitcoin and ether, as exogenous collateral, we would recommend that the Department approve them, if the other recommendations below are met. The following diagram illustrates the spectrum of risks that exist for algorithmic stablecoins:

[12] *See* Reflexer, https://reflexer.finance/.
[13] *See* Liquity, https://www.liquity.org/.
[14] Miles Jennings, *In defence of stablecoins*, Financial Times (Aug. 7, 2022), https://www.ft.com/content/39681aa2-aa01-4d60-b399-8ecb236c627e.



We also recommend limited additional rules that could bolster consumer protection without impeding the decentralization of algorithmic stablecoin projects. First, we recommend that the Department provide rules relating to allowable liquidation, redemption, and settlement mechanisms. We learned in the recent market downturn that it was precisely the blockchain programmability of certain projects that created key risk control mechanisms, which provided far more protection to users than a manual process would have. This was true with each of RAI and LUSD. A better understanding of these controls could help guarantee increased safety for consumers. Second, we recommend that the Department require algorithmic stablecoin issuers to implement code security audits on all major new initial releases. A number of industry groups have dedicated themselves to developing such code audits with significant success.[15] With respect to code audits, we further recommend that the Department permit them to be satisfied via transparent code, with no ongoing responsibilities of the issuer. Each of these recommendations would strengthen the robustness of algorithmic stablecoin projects.

At the same time, we respectfully caution against rules from the Department that could impede decentralization. One of the central value propositions of algorithmic stablecoins is the freedom from traditional third-party counterisks. Decentralization obviates this risk, and it also ensures users that centralized parties will not be able to change the rules that govern their digital assets.[16] While regulating algorithmic stablecoins is critical for consumer protection, ongoing regulatory obligations could have the unintended effect of leaving algorithmic stablecoin issuers with no choice but to remain centralized or to re-centralize in order to remain compliant, reimposing the very same risks on Californians that algorithmic stablecoins seek to abrogate. Obligations beyond those mentioned in this section could have that effect on consumers, and therefore, we strongly recommend against them.

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[15] The Enterprise Ethereum Alliance has been at the forefront of such efforts, as it established the EthTrust Security Levels Working group in 2020. In 2022, the group announced the publication of the first version of its framework for smart contract security audits. *See* Enterprise Ethereum Alliance Advances Smart Contract Security with EthTrust Specification, Enterprise Ethereum Alliance (Aug. 2022), http://tinyurl.com/5fre5yrz.

[16] Chris Dixon, *Why Decentralization Matters*, Medium (Feb. 18, 2018), https://onezero.medium.com/why-decentralization-matters-5e3f79f7638e.

To summarize, we recommend that the Department formalize the following recommendations as rules under its "other factors" analysis: (1) collateralization requirements that address type and amount of digital assets and recognize the unique nature of algorithmic stablecoins, (2) programmable liquidation, redemption, and settlement mechanism requirements, and (3) code security audit requirements for major new initial releases and ongoing satisfaction of audit requirements through transparent code. If an algorithmic stablecoin project meets all of the requirements under these rules, we believe that the Commissioner should limit its discretion to reject the application. This would ensure that the Department will continue to play a fundamental role in protecting California's consumers from risky algorithmic stablecoin projects, while algorithmic stablecoin issuers will have increased confidence about how to structure their businesses to receive Department approval. It will also encourage algorithmic stablecoin issuers to do business in California, increase the availability of algorithmic stablecoins for Californians, and lead to more competition within the stablecoin markets that will in turn provide more choice for consumers.[17]

C. Additional Comments

1. The definition of "digital financial asset" in Section 3102(g) should not be interpreted to include all NFTs.

Non-fungible tokens ("NFTs") are a core component of many non-financial use cases in the emerging blockchain ecosystem. While it is true that certain NFTs could be associated with rights or assets that are financial in nature, and we discuss those instances below, most NFTs represent "images, provenance, access passes, in-game items, licenses, and property titles."[18] Based on our conversations with drafters of the DFAL, we understand that NFTs were generally not intended to be captured by the definition of "digital financial asset" under Section 3102(g). Yet, as written, the DFAL's definition of "digital financial asset" could be interpreted to include all NFTs, regardless of whether a true financial component exists. As a result, market participants could be confused as to which NFTs fall within the scope of the "digital financial asset" definition. To prevent such confusion, we recommend that the Department issue guidance clarifying that NFTs that do not represent a financial asset fall outside of the scope of the DFAL licensing regime.

As an initial matter, NFTs are identifiable data units within a data infrastructure environment (blockchain). Each NFT has a unique token ID and almost always links to a URL that contains NFT metadata, usually in JSON format. That metadata may also include one or more URLs to a digital file, such as an image. If the NFT links to an image, it is usually the "face" of the NFT when it is displayed by applications that assist users to explore NFTs. As the NFT "lives" on a blockchain, its provenance and history are recorded, and if the blockchain is a public blockchain, this information is transparent to the public. NFTs can be transferable or

[17] In contrast, we note that a less robust "other factors" analysis would drive algorithmic stablecoin projects out of California, lessening competition and leading to worse consumer outcomes. For example, there is currently only one stablecoin issuer that can likely comply with California's licensing regime, which would effectively mean that the DFAL regime would provide that issuer with a de facto monopoly.

[18] Jason Schwartz, *Misconceptions Around NFTs*, 179 Tax Notes Federal 300 (Apr. 10, 2023).

non-transferable. The NFT metadata and any linked digital file are populated by the NFT creator. Together, they can certify authenticity, convey ownership or licensing rights, serve as a credential or identity verification, provide redemption rights for intangible or tangible things, and more. The potential categories and use cases for NFTs are endless, much like a blank piece of paper carries almost infinite possibilities. To illustrate, the following categories are common examples of NFTs:

- **Digital Art NFTs**: Broadly, digital art NFTs are associated with all types of digital images, including drawings, paintings, graphic art, photography, video art, and generative art.
- **Trading Card/Fan NFTs**: Trading card NFTs feature a digital image of individual athletes, teams, or fictional figures (e.g., popular cartoons). Similarly, there are NFTs associated with commemorative memorabilia that allow fans/supporters of a particular athlete, team, or figure to own and display the memorabilia.
- **Music NFTs**: Artists can associate an NFT with content by linking to a digital audio file and adding metadata, such as the name of the artist or band, the song title, and the genre.
- **Redeemables (e.g., Fashion, Luxury Goods, Beauty)**: Some NFTs can be redeemed for a physical item. For example, an NFT may give its owner the right to claim a pair of sneakers or a bottle of wine.
- **Domain Name NFTs**: NFTs can serve as a "vanity plate" or domain name for a user's crypto wallet address, such that that ownership of the NFT in a particular wallet means the crypto wallet address will specifically be associated with that domain name (similar to a URL redirect).

As written, the definition of "digital financial asset" in Section 3102(g) does not distinguish between these different use cases. It instead casts a wide net and includes any "digital representation of value that is used as a medium of exchange, unit of account, or store of value, and that is not legal tender, whether or not denominated in legal tender."[19] The DFAL does include three exceptions to the definition, but none of them purport to cover NFTs.[20] For that reason, whether or not an NFT falls within the definition of "digital financial asset" depends on how the Department interprets the term "representation of value." Varied interpretations of the term "representation of value" could raise the following concerns for California market participants.

First, it is not clear whether "representation of value" refers to an NFT or to the right or asset with which the NFT is associated. As explained above, NFTs are unique digital identifiers of underlying rights or assets with which an NFT is associated. Those rights or assets could be financial in nature or not, but the NFT in and of itself does not have intrinsic qualities. It could be helpful to think of an NFT like a deed to a home; the deed to the home represents ownership rights to the home, but it is a unique instrument that is separable from the home itself. The NFT, likewise, represents ownership of a linked right or asset, but is not part of the right or asset itself. Many regulators have recognized this important distinction and have issued guidance suggesting that regulatory treatment depends on the underlying right or asset, rather than the NFT itself. For example, the Internal Revenue Service (the "IRS") issued a notice suggesting that it would use a

[19] DFAL, Section 3102(g).
[20] DFAL, Section 3102(g)(2)(A)-(C).

"look-through" analysis — which mandates "looking through" the NFT to the underlying right or asset — to determine the tax treatment of NFTs as collectibles under Section 408(m)(2) of the Internal Revenue Code.[21] In addition, the Financial Action Task Force (the "FATF") defines a "virtual asset"[22] as "a digital representation of value that can be digitally traded or transferred and can be used for payment or investment purposes," but it excludes from the definition certain "[d]igital assets that are unique, rather than interchangeable, and ... are in practice used as collectibles rather than as payment or investment instruments."[23] Such regulatory guidance is very helpful for market participants, as it allows them to better understand which NFTs are subject to regulatory requirements. We recommend that the Department similarly issue guidance clarifying that whether an NFT falls within the definition of "digital financial asset" depends on the right or asset with which the NFT is associated.

Second, it is also not clear what constitutes "value" for the purposes of Section 3102(g). While the overarching term "digital *financial* asset" suggests that the term "value" should relate to a financial instrument or asset, NFT developers could construe the term to include items that simply have value, i.e., a market price at which others are willing to purchase them. From a substantive perspective, this conclusion would be illogical, but it could prevent developers from entering the NFT market. To illustrate, NFTs are frequently associated with collectibles and artwork, which have value because people are willing to purchase them, but are not financial instruments or assets. Because the collectibles and artwork are not financial assets themselves, despite sometimes having significant value,[24] the mere fact that they may utilize blockchain technology does not by itself change their economic use case. This is not to say that this standard should apply broadly to all NFTs. NFTs that are, in fact, used to represent ownership over true financial assets or instruments, like stocks, bonds, and other financial contracts, should likely fall within the DFAL regime. The same is true for NFTs that can be used for payment purposes (like currency) when they are redeemable for or serve as a store of value or medium of exchange. While there are currently not many active use cases for NFTs that fall within these categories, we do appreciate that the Department has an interest in requiring licensure for them. But the Department does not need to subject all NFTs to the requirements of the DFAL regime in order to achieve this outcome. We recommend that the Department issue guidance clarifying that "value" refers to true financial instruments and assets and that other NFTs fall outside of the scope of the definition.

2. The exemptions for "digital financial asset business activity" under Section 3103 should be extended to video game companies and other activities.

The DFAL's definition of "digital financial asset business activity" is overbroad and imprecise, such that it could scope in non-financial activities. This is a major concern for California companies that are using or are expecting to use web3 technologies, but have no

[21] *Request for Comments: Treatment of certain nonfungible tokens as collectibles*, Notice 2023-27 (Mar. 22, 2023), 2023-15 I.R.B. 634, https://www.irs.gov/pub/irs-drop/n-23-27.pdf.
[22] Certain regulators use the term "virtual asset" instead of "digital asset," but the meaning is the same.
[23] FATF, Updated Guidance for a Risk-Based Approach: Virtual Assets and Virtual Asset Service Providers (Oct. 2021), http://tinyurl.com/37cycp4v.
[24] Artwork can have significant value. In 2014, the Los Angeles County Museum of Art received a collection of art valued at $500 million. Neal Broverman, *The Three Most Thrilling Pieces from LACMA's $500 Million Art Infusion*, Los Angeles Magazine (Nov. 7, 2014), http://tinyurl.com/5ffb55x.

intention or interest in providing financial services, much less being regulated as financial institutions. While appropriate regulations for these California businesses may still be desirable, imposing ill-fitting regulations that are tailored to financial services will not result in increased consumer protection, but rather will cause these businesses to leave the state. One way that the Department can alleviate such unfortunate and, we believe, unintended consequences would be for the Commissioner to use her discretionary authority under Section 3103(c) to exempt certain classes of persons or transactions from the rule.[25]

Video game companies are a prime example of a category of businesses that should be exempt from the DFAL's licensure requirements, absent the provision of actual financial services. At this time, many California video game companies are experimenting with or have used web3 technologies to build a new generation of games that provide users with interoperable game assets, meaning that assets in one game can be recognized, used, or represented in another game, independent of who created or published such games. Web3 video games also offer users true ownership of in-game digital assets (e.g., cosmetic skins, armor, and resources), which amounts to control over the sale, trade, and usage of those assets.[26] Although this is a paradigm shift from previous generations of video games, which restricted users to single platforms with no in-game property rights, the law has not kept pace with emerging technology. Specifically, under the DFAL, the single exception to licensure requirements for video game companies offering digital assets applies only if digital assets are "used solely within an online game, game platform, or family of games sold by the same publisher or offered on the same game platform"[27] — precisely the state of affairs that web3 video games are intended to disrupt. In the new world of web3 video games, the DFAL's enumerated exception for gaming is insufficient.

Importantly, it would be unprecedented to regulate video game companies in the same manner as providers of financial services, and doing so is both unnecessary and incorrect as a substantive matter. In general, companies that develop web3 video games do not offer financial services, i.e., sell financial assets, engage in asset or investment management, etc., within games or outside of them. What these companies do is integrate blockchain technology into video game designs, such that each digital in-game asset's proof of ownership is recorded on the blockchain. While in-game assets have existed within games for decades, the blockchain provides users with a novel manner to secure true ownership over those assets. These in-game assets, like physical real-life assets, are not necessarily financial in nature. For example, in-game swords that appear in many well-known video games are not financial assets, in the same way that real-life physical swords are not financial assets. As noted above in Section III(C)(1), the fact that an in-game sword utilizes blockchain technology does not by itself change the economic use case of the sword. For that reason, it would make little sense to regulate that sword like a financial asset simply because it appears in a web3 video game. Taking the sword analogy one step further, it

[25] DFAL, Section 3103(c) ("The commissioner may, by regulation or order, either unconditionally or upon specified terms and conditions or for specified periods, exempt from all or part of this division any person or transaction, or class of persons or transactions, if the commissioner finds such action to be in the public interest and that the regulation of such persons or transactions is not necessary for the purposes of this division.").
[26] IMX Knowledge Base, *Blockchain Gaming: The Ultimate Guide to Gaming's Evolution*, Immutable Blog (Nov. 7, 2023), https://www.immutable.com/blog/blockchain-gaming-the-ultimate-guide-to-gamings-next-evolution.
[27] The definition of "digital financial asset" does not include: "A digital representation of value issued by or on behalf of a publisher and used solely within an online game, game platform, or family of games sold by the same publisher or offered on the same game platform." DFAL, Section 3102(g)(2)(B).

would be unlikely, if not unthinkable, that the California legislature would require physical dealers of swords to register as financial services providers. The same logic should apply to web3 video games.

That said, we do appreciate that certain video game companies could offer in-game digital financial assets, and that such companies should not be exempt from licensure requirements. A licensing regime for companies offering digital assets that are truly financial in nature may result in increased consumer protection. But the DFAL's one-size-fits-all approach with respect to video games is not necessary to achieve this worthwhile goal. As written, the DFAL regime effectively prevents game developers from being able to utilize blockchain technology without transforming themselves into financial services providers, regardless of the type of digital asset offered within the game.[28] This is not the optimal regulatory outcome, and we recommend that the Department provide express exemptive relief for video games.

In addition to video games, the definition of "digital financial asset business activity" could include other non-financial activities that are critical to the technical functioning of the blockchain ecosystem. While we appreciate that Section 3103(b)(7) already includes three activities of this kind, we recommend that the Commissioner also exempt the following persons and businesses that:

- Compile network transactions, or relay, search, sequence, validate, or act in a similar capacity with respect to a digital asset.
- Provide computational work, operate a node, or procure, offer, or utilize network bandwidth, or other similar incidental services with respect to a digital asset.
- Provide a user-interface that enables a user to read and access data about a blockchain system, send messages, or otherwise interact with a blockchain system.
- Develop, publish, constitute, administer, maintain, or otherwise distribute a blockchain system.
- Develop, publish, constitute, administer, maintain, or otherwise distribute software or systems that create or deploy a hardware or software wallet or other system facilitating an individual user's own personal ability to keep, safeguard, or custody the user's assets or related private keys.

We also recommend that the Commissioner use her exemptive authority to expand Section 3103(b)(7)(B) to cover all services. As written, the exemption covers persons that provide "data storage or security services," but not the many critical non-financial services that arguably still fall within the scope of the rule. For example, we do not believe that the California legislature intended to require licensure for businesses that provide accounting services to companies engaged in "digital financial asset business activity." A broader exemption will provide relief for such companies.

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[28] This result could be particularly harmful in California, where the video game industry has at times generated more than $50 billion in annual economic output. With web3 video games alone nearing almost a million daily users and 600 active games worldwide, California stands to lose major industry players without clean-up legislation on this point. Press Release, Entertainment Software Association, Report: California Ranks #1 in Nation for Economic Impact from Video Game Industry With $51.8 Billion Annual Output (Dec. 3, 2020), http://tinyurl.com/yc46pkf2.

3. The definition of "control" in Section 3102(c) should not be interpreted to include developers who have limited emergency authority over a protocol.

The DFAL's definition of "control" includes overbroad language that runs counter to the goal of increasing consumer protection in California. Specifically, the definition of "control" includes the power to "prevent indefinitely a digital financial asset transaction."[29] The problem with this definition is that developers regularly program code into smart contracts that allows them to take limited emergency actions in the event of a hack or other attack on a protocol without otherwise retaining material control over the smart contracts. Typically, this power is limited to an ability to "pause" the smart contract to prevent an attacker from withdrawing the smart contract's funds, and it does not extend to enabling the developer to withdraw the actual funds. Thus, this protection is solely to benefit consumers without subjecting them to additional risk. However, because of the broad language in Section 3102(c), developers may instead purposefully deploy fully immutable smart contracts to remain outside the ambit of the DFAL. This result would make it difficult, if not impossible, to defend a protocol from malicious hacks — paradoxically lessening user protection.[30]

We recommend that the Department issue guidance clarifying that the power to "prevent indefinitely a digital financial asset transaction" does not include smart contract developers who deploy smart contract code that allows them to retain the limited power to temporarily halt the execution of the smart contracts in the event of a malicious hack. It is important to note that this exemption would not include developers who retain the power to manipulate transactions, reverse them, or do anything other than temporarily suspend operations of the smart contracts. This reasonable design feature would encourage safer outcomes, mitigate risks in the event of a hack or other malicious attack, and increase consumer protection.

4. The minimum revenue requirements under Section 3211 that trigger audited financial statement reporting requirements should be raised.

If the Department believes it to be within its regulatory authority, we recommend that it raise the minimum revenue requirements under Section 3211 that trigger audited financial statement reporting requirements. Two million dollars in revenue is an extremely immaterial amount when compared to all of the requirements that the bill applies, particularly as this measurement is in revenue and not profit. Audited financial statements alone can cost a company two million dollars per year. In addition, using revenue and not profit would be a significant burden on startups and could substantially hinder innovation.

[29] DFAL, Section 3102(c)(1) ("When used in reference to a transaction or relationship involving a digital financial asset, power to execute unilaterally or prevent indefinitely a digital financial asset transaction.").
[30] Of note, the value of these pause functionalities has been recognized in recent international efforts to develop rules for smart contracts, including in the EU Data Act. *See, e.g.*, Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonised rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (Data Act) (2023) Official Journal L, p. 62.

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We greatly appreciate the opportunity to provide comments on these matters, and we look forward to continued engagement with the Department.

Respectfully submitted,

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