

MODEL LAW FOR DECENTRALIZED AUTONOMOUS ORGANIZATIONS (DAOs)



COALITION OF AUTOMATED LEGAL APPLICATIONS

**MODEL LAW FOR DECENTRALIZED
AUTONOMOUS ORGANIZATIONS
(DAOS)**



2021

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**MODEL LAW FOR DECENTRALIZED
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Executive Summary

New models of blockchain-based organizations, often referred to as Decentralized Autonomous Organizations (DAOs), face significant legal uncertainty that can be detrimental to their development and utilization. This Model Law (ML) aims to create uniformity and legal certainty, while, unlike other regulatory frameworks for DAOs, still accommodating flexibility for further innovation by not imposing formal registration requirements.

The drafters and contributors to the ML have sought to consciously address the vertical (principal-agent), horizontal (majority-minority principals) and firm-stakeholder agency problems that can be seen in corporate entity forms irrespective of jurisdiction, while still being sensitive to, and retaining, the particular features of DAOs and crypto-economic systems that make these forms of organization and coordination unique and valuable as emergent social and commercial vehicles. States are encouraged to adopt or transpose the ML's provisions into their domestic law. In a State that has transposed or adopted the ML into their domestic legal system, a DAO that is constituted according to the requirements of the transposed or adopted legal rules will qualify and be recognized as a legal entity by that State. This will result in the DAO being granted legal personality in any State that has adopted or transposed the ML, which is essential to guarantee the legal effect of the DAO's action. If the ML's provisions are complied with, the DAO's Members will additionally enjoy limited liability. To allow for DAOs to qualify as legal entities in the maximum number of States, the ML provides a minimum level of rights, duties and protections that are generally recognized in legislation on analogous corporate entities in major jurisdictions. In addition, if a DAO qualifies as a legal entity in a particular jurisdiction, the legal effects of its actions and the protections offered to its Members, Participants, Legal Representatives and Administrators may be more easily recognized in other jurisdictions that have not adopted or transposed the ML under private international law principles.

As many unregistered DAOs will fail to comply with existing corporate rules by nature of their intrinsic operation, and will not be able to implement all of the necessary legal requirements formally articulated in existing corporate rules, the ML strives to achieve functional and regulatory equivalence through specific provisions of the ML. Functional equivalence allows the establishment of equivalence between an object already within the realm of a legal rule and another object not yet encompassed by it. For instance, the UNCITRAL Model Law for

Electronic Commerce establishes functional equivalence between a paper-based document and an electronic document. As this Model Law demonstrates, this approach is useful for simplifying the regulation of DAOs. For example, instead of introducing new corporate rules specifically applicable to ‘tokenized’ shares, shares that are recorded on a blockchain-based system could be regarded as valid titles to a share, transferable via a blockchain-based registry. Regulatory equivalence relies on the same technique, but identifies the object or purpose of any given regulation as goal. It allows for the establishment of equivalence between the function of a legal rule and the function of a technology. A pertinent example of regulatory equivalence is the relationship between registration requirements for corporate entities and the deployment of a DAO on a Permissionless Blockchain. The deployment of a smart contract on a blockchain with relevant data about a DAO is not functionally equivalent to registration into a corporate registry, but the policy objectives of publicity and certainty are fully achieved. Following a public announcement of the Public Address of the DAO, the deployment is verifiable by anyone, as it is inscribed on a Permissionless Blockchain.

In view of the above objectives, the ML consists of the following Chapters:

Chapter 1 sets out the broad range of economic and social activities that DAOs can engage in, the rights and obligations that DAOs can enjoy as a separate legal person, and important definitions used in the ML.

Chapter 2 sets out the eleven technical and governance requirements that a DAO needs to meet to benefit from legal personality, and for its Members to receive limited liability protection.

Chapter 3 sets out the potential actions that may lead to Members forfeiting limited liability protection, namely fraud and failure to comply with binding arbitral awards or court orders. This is intended to limit the grounds on which a Member may be jointly liable with a DAO, while not precluding the possibility that a Member may be personally liable (*e.g.*, under tort law principles). The chapter also clarifies that minimum capital requirements are not mandatory for DAOs, as is increasingly the case with traditional corporate entities, while still acknowledging that some DAOs may wish to voluntarily introduce reserve funds and insurance schemes to enhance public confidence in their ability to meet their debts to third party creditors. The remainder of the chapter is devoted to governance rights, providing considerable leeway to DAOs to create multiple classes of participation and diverse voting rights structures, as well as the possibility to protect minorities and appoint proxies.

Chapter 4 builds on the question of how a DAO under the ML is to be governed. It seeks to allow individual DAOs to have considerable flexibility in how their internal

organization and procedures take place, without being bound by the same constraints that a number of corporate entities are subject to (*e.g.*, in-person, physical meetings). The ML enables management by consensus as well as the appointment of Administrator(s). It recognizes that, irrespective of how the DAO is managed, the DAO may need to have representation off-chain for certain purposes and activities. This chapter therefore provides a procedure for appointing a Legal Representative with narrowly-defined powers that can interact with territorially bound national jurisdictions. In the spirit of contractual freedom, DAOs are permitted to appoint fiduciaries if they wish, but the ML makes clear that merely holding a position with a particular title and having certain potentially discretionary decision-making power (*e.g.*, core Developer, Administrator, Member) should not be in itself sufficient to imply fiduciary status.

The provisions of Chapters 1-4 are akin to most corporate law statutes and address the aspects of DAOs that are similar to other business organizations. Chapter 5, in contrast, recognizes that DAOs have technical features that raise new questions that merit specific treatment. This Chapter, therefore, includes specific articles that concern the consequences of Contentious Forks, modifications, upgrades and migrations on the legal personality of a DAO (as well as its claims and assets) and the limited liability of its Members. Moreover, there may be Failure Events that are specific to DAOs, which under this chapter may lead to the liability of Persons who are grossly negligent or acting in manifest bad faith in making a decision, but will not attach to those not involved in the decision.

Chapter 6 is the final part of the ML and includes two important miscellaneous provisions that are necessary in creating a coherently complete legal framework for DAOs. First, it specifies when general business organization law should be applied to DAOs by a jurisdiction that adopts the ML. Only lacunae in the by-laws and the ML should be filled by domestic general business organization law, and if there is any ambiguity arising from this gap-filling function, it should be resolved in a manner that upholds the objectives and letter of the ML. Second, it establishes the recognition of DAOs as pass-through entities for tax purposes, so as to simplify the process of taxation for DAOs which are non-territorial and transnational by their nature, and instead make Members and Participants responsible for tax compliance.

Model Law for Decentralized Autonomous Organizations (DAOs) with Explanatory Comments

Preamble¹

Introduction

Decentralized Autonomous Organizations (DAOs) can be classified into two distinctive categories: registered DAOs, i.e. DAOs that are organized according to the laws of a State and that are registered in a corporate registry, and unregistered DAOs, i.e., DAOs that are created outside of the legal frameworks defined by national laws and are not registered in a corporate registry. The vast majority of existing DAOs are unregistered DAOs and their legal status is currently uncertain: they are *alegal*.² The result is a great deal of legal uncertainty, which can be detrimental to the development and utilization of this new model of social and business organization. Since DAOs are inherently transnational in nature, the drafters and contributors to the DAO Model Law (“Model Law”) believe that it would be desirable to adopt a uniform, model set of rules that could be implemented

¹ The Preamble provides the legal foundations of ‘regulatory equivalence’ and ‘functional equivalence’, as well as a discussion of the widespread recognition of certain forms of transnational private legal ordering and, in particular, the work on creating model laws for new corporate/organizational forms.

² *Alegality* is a concept that is useful for understanding actions that are currently not seen by the legal system, and that might potentially challenge the boundaries of the legal order, and the distinction between legal and illegal. Arguably, some of the activities undertaken on a public, permissionless blockchain could be regarded as *alegal*, either because they are not (yet) encompassed by the law, or because they stand outside of its reach. For instance, the decentralized nature of public blockchain networks makes them virtually impossible to shut down, even if one or more states shut down nodes within their jurisdiction. Moreover, because smart contract applications are run and executed in a decentralized fashion, any smart contracts or DAOs deployed on a public blockchain will continue to operate independently of the will of the parties deploying them, and will also be impossible to shut down. This brings them into the *alegal* realm. This is not to say, however, that the law cannot reconstitute its boundaries in order to accommodate their existence and to influence their operations. Yet, this requires a conscious intervention from the legislator in order to recognize them under the law so as to bring them within the scope of *legality* or *illegality*, depending on the circumstances. The adoption of the DAO Model Law by existing governments is a way for them to reconstitute their legal boundaries to accommodate the regulation of DAOs within their existing legal framework in a harmonized fashion. For more information on *alegality*, see Hans Lindahl, *Fault Lines of Globalization: Legal Orders and the Politics of A-legality* (Oxford University Press, 2013); Hans Lindahl, ‘Border Crossings by Immigrants: Legality, Illegality, and Alegality’ (2008) 14 Res Publica 117; Hans Lindahl, ‘The Opening: Alegality and Political Agonism’, in Andrew Schaap (Ed.), *Law and Agonistic Politics* (Ashgate 2009); Vanja Hamzić, ‘Alegality: Outside and beyond the legal logic of late capitalism’ in Honor Brabazon (Ed.), *Neoliberal Legality: Understanding the Role of Law in the Neoliberal Project* (Routledge 2017); Carys Hughes, ‘Action Between the Legal and the Illegal: A-Legality as a Political–Legal Strategy’ (2019) 28 Social & Legal Studies 470.

internationally to provide legal certainty for DAOs and their members and participants. The Model Law is designed as a best practice guide for DAOs and States are encouraged to adopt or transpose its provisions into their domestic law. States should hew as closely as possible to the letter and objectives of the Model Law to avoid regulatory fragmentation and provide a consistent foundation for the legal status of DAOs on a transnational basis.

Objective

The objective of the Model Law is to bridge the gap between the multiple existing and potential activities of unregistered DAOs—those that have not been wrapped in a corporate form in any jurisdiction—and the regulatory frameworks in the many jurisdictions within which unregistered DAOs already operate. The Model Law provides legal rules that can be effectively applied, while taking into account technical constraints and opportunities of these novel forms of organization. It is essential that the legal rules are flexible enough to accompany and encourage the development of DAOs. The rules proposed in the Model Law seek to strike a balance between the need for legal certainty and the need for DAO developers, administrators, members and participants to retain the freedom necessary to enable the technology to evolve. Recognizing the importance of legal protections and a sound regulatory framework, as well as the importance of experimental freedom in technological development and innovation, the Model Law provides a framework for the effective regulation of DAOs without being unduly burdensome. It achieves this by, first, using a principle-based approach to identify the policy objectives and principles underlying provisions of corporate law in major jurisdictions. Second, the Model Law seeks to implement these objectives and principles by limiting its scope to DAOs that meet specific technical and governance standards and by providing rules that recognize that these DAOs’ technological features offer satisfactory protections and meet purposes in a manner that is equivalent to existing law.

Scope

The Model Law provides uniform rules of law that can serve as a model for national legislators who wish to adopt substantive national law rules on DAOs. In a State that has transposed or adopted the Model Law into their domestic legal system, a DAO that is constituted according to the requirements of the transposed or adopted legal rules will qualify as a legal entity. This will result in the DAO being granted legal existence and legal personality in any State that has adopted or transposed the Model Law, which is essential to guarantee the legal effect of its actions.

The Model Law contributes to an emerging international consensus on the legal situation of DAOs. It is therefore desirable that the rules of the Model Law be adopted by as many States as possible so that the legal scope of DAOs corresponds to their transnational nature. To allow for DAOs to qualify as legal entities in the maximum number of States, it provides a minimum level of rights, duties and protections that is generally recognized in legislation on corporate entities in major jurisdictions. In addition, when a DAO qualifies as a legal entity in a particular jurisdiction, its status in other jurisdictions that have not adopted or transposed the Model Law may be more easily established under private international law principles.³ The contributors to the Model Law have sought to consciously address the vertical (principal-agent), horizontal (majority-minority principals) and firm-stakeholder agency problems that can be seen in corporate entity forms irrespective of jurisdiction, while still being sensitive to, and retaining, the particular features of DAOs and crypto-economic systems that make these forms of organization and coordination unique and valuable as emergent social and commercial vehicles. For example, many of the issues concerning the protection of minority shareholders, creditors and other stakeholders are addressed through the conferral of exit rights and disclosures, on the principle of ‘participant beware’.

Format

This document is drafted in the form of a Model Law containing substantive and procedural rules that can be adopted by States in their national law in order to draft their own legislation concerning DAOs. It provides commentary on some of the articles in order to explain their intended meaning and practical scope. Additionally, it may serve as a foundational document for the development of best practices for developers, administrators, members and participants of DAOs.

Important Concepts

Functional equivalence allows the establishment of equivalence between an object already within the realm of a legal rule and another object not yet encompassed by it. Through functional equivalence, the “means” by which a regulated process, procedure or activity will be considered as compliant with the

³ This understanding draws on, among other things, the principle laid down by the US Supreme Court in *Bank of Augusta v. Earle*, 38 US 519 (1839) that though a legal entity (such as a corporation) is an artificial creature of national law and only exists because of that law, “it does not by any means follow that its existence there will not be recognised in other places; and its residence in one state creates no insuperable objection to its power of contracting in another.” Also see, Katharina Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton University Press, 2019), 68.

law can be broadened. For instance, the UNCITRAL Model Law for Electronic Commerce⁴ establishes functional equivalence between a paper-based document and an electronic document; similarly, certain electronic signatures that comply with specific requirements are held to be functionally equivalent to a handwritten signature.⁵ It thus conceptualizes both legal rules and technologies as means to an end, or instruments that can fulfill a particular purpose. This includes, but is not limited to, protective purposes, preventive purposes, and punitive purposes. For functional equivalence to be established, one has to identify a policy objective or a purpose and then demonstrate that this objective or purpose could be achieved either by the enforcement of a legal rule or by relying on a particular application of a technology. As this Model Law demonstrates, this approach is useful for simplifying the regulation of DAOs. For example, instead of introducing new corporate rules specifically applicable to ‘tokenized’ shares, shares that are recorded on a blockchain-based system could be regarded as valid titles to a share, transferable via a blockchain-based registry.

Regulatory equivalence relies on the same technique, but identifies the object or purpose of any given regulation as goal. It allows for the establishment of equivalence between the function of a legal rule and the function of a technology.⁶ Through regulatory equivalence, the realm of processes and procedures for achieving a policy objective of any given law can be broadened. The first step is the identification of the policy objective of a regulation and then, in a second step, the consideration of processes and procedures that can be deemed to fulfill this purpose. In our conceptualization of regulatory equivalence, there is then a third step in which we assess how this objective, and the consequent processes and procedures, can be achieved through the use of a particular technology. The goal is to achieve traditional objectives of corporate law by relying on technological means where possible. The advantage of this approach is that it allows for the incorporation of new technologies into the existing legal framework without necessitating large-scale legal reforms, preventing the fragmentation of the regulatory field and the creation of ever more specialized laws for the regulation of a particular technology.

A pertinent example of regulatory equivalence is the relationship between registration requirements for corporate entities and the deployment of a DAO on a blockchain. Registration requirements are driven by the objective of publicity and

⁴ United Nations Commission on International Trade Law. UNCITRAL Model Law on Electronic Commerce, with Guide to Enactment, 1996: with Additional Article 5 Bis as Adopted in 1998.

⁵ See, e.g., Regulation (EU) No. 910/2014 of 23 July 2014 on electronic identification and trust services for electronic transactions in the internal market and repealing Directive 1999/93/EC [2014] OJ L 257/73, art 25(2).

⁶ Regulatory equivalence in its most common use refers to the equivalence of the regulatory regime of two different jurisdictions, often in the context of trade or financial regulations.

reliability, which is underwritten by the trust that people have in public authorities. The deployment of a smart contract on a blockchain with relevant data about a DAO is not functionally equivalent to registration into a corporate registry, but the policy objectives of publicity and certainty are fully achieved. Following a public announcement of the address of the DAO, the deployment is verifiable by anyone, as it is inscribed on a public blockchain. Thus, even if unregistered DAOs do not fully comply with existing legal requirements, the features of the technology meet some of these requirements through a different process or procedure. Registration is one of many such examples considered in this Model Law.

Many unregistered DAOs will fail to comply with existing corporate rules and will not be able to implement all of the necessary legal requirements. The Model Law identifies the extent to which some DAO features can be held to be functionally equivalent, and therefore compliant with various legal requirements. We also identify the extent to which their technical features, while not functionally equivalent, achieve the same policy objectives. As a result, DAOs should benefit from legal personhood and at least some of the various rights and obligations of the existing frameworks of corporate law, even if they do not use an entity form under the law.

The adoption of this Model Law by States, and thus the recognition of features of functional and regulatory equivalence of DAOs, would encourage DAO developers, administrators and members to implement these features into their DAOs so as to benefit from legal personality.⁷ Bringing DAOs into a regulatory framework would, in turn, increase legal certainty from the perspective of members, participants, administrators and developers of DAOs, as well as from the perspective of regulators and third parties, including the general public. In addition, it leaves room for DAO developers, administrators, members and innovators to experiment and propose sound technological solutions that could be later recognized by regulators as being either functionally or regulatorily equivalent to existing corporate law rules and formalities.

⁷ Note that some jurisdictions have adopted a different approach than our Model Law by creating new types of registered DAO forms (*e.g.*, Malta, Wyoming) rather than providing a legal framework where unregistered DAOs qualify as legal entities if they meet certain conditions such as those outlined in the Model Law. In our opinion these approaches are limited in that they do not properly leverage the technological and crossborder characteristics of blockchain technology.

Chapter 1

General Provisions

Article 1. NATURE—

- (1) The DAO is a legal entity that can be used for commercial, mutualistic, social, environmental or political purposes, the nature of which will be specified in its By-Laws.

Commentary

The aim of the Model Law is to allow a DAO that has not registered as a for-profit corporate entity or a non-profit entity to benefit from equivalent standing as a domestic limited liability company or limited liability cooperative. Most jurisdictions no longer require limited liability companies to have an object/purpose clause. Instead, many jurisdictions allow them to engage in any legal activity. The *ultra vires* doctrine has also fallen out of favor in several advanced corporate law jurisdictions.⁸ A common exception to this trend is charitable organisations, which is regularly explained by their special tax status. The Model Law does not aim to secure any special tax status for DAOs and accordingly has not taken into account the prevailing requirement for charitable organisations to have an object/purpose clause. As such, this Article does not preclude DAOs from engaging in social, environmental or philanthropic activities alongside its economic activities. Specifically, the Model Law acknowledges that a DAO may not only be a for-profit entity but may be used for multiple non-commercial purposes. DAOs have already been used for non-commercial purposes.⁹

⁸ See, e.g., Lorraine Talbot, 'Critical Corporate Governance and the Demise of The Ultra Vires Doctrine' (2009) 38 Common Law World Review 170.

⁹ Early examples included "Hutten-DDO" (formed to support collaborations between a group of Siemens employees, such as their charitable donations), "YangDAO" (formed to support decentralized content creation for former US Presidential candidate Andrew Yang) and "OrochiDAO" (formed to coordinate around the creation of side events at blockchain conferences).

Article 2. LEGAL PERSONALITY—

- (1) A DAO within the scope of this Model Law will be deemed a legal entity separate and distinct from its Members. A DAO will, by its own name, be capable of:
 - (a) suing and being sued;
 - (b) acquiring, owning, holding and developing or disposing of property, both movable and immovable; and
 - (c) doing and suffering such acts and things as bodies corporate may lawfully do and suffer.
- (2) A DAO within the scope of this Model Law must meet its liabilities through its On-Chain and Off-Chain Assets.
- (3) The validity of an action by a DAO within the scope of this Model Law may not be challenged on the ground that the DAO lacks power to act.

Commentary

The core public policy goal of legal personality is entity shielding. Attaining legal personality allows an entity to operate as a single contracting party distinct from those owning or managing the firm, with a single pool of assets distinct from the other assets of those owning and managing the firm.¹⁰ The entity's pool of assets may not be attached by the personal creditors of those owning or managing the firm, but only by the creditors of the entity itself. The latter are usually granted priority over the owners of the firm to the entity's assets. To protect the entity from forced liquidation, entity shielding usually also entails rules that prevent the owners of the entity from withdrawing their share of assets at will.¹¹ Through this Article, the same rationale is extended to DAOs, so as to separate the assets and liabilities of Members and Participants from that of the DAO.

The Model Law stipulates that jurisdictions should recognize a DAO to have legal personality so long as they are able to meet the same policy goals underlying

¹⁰ Reinier Kraakman and others, *The anatomy of corporate law: a comparative and functional approach* (Oxford University Press 2009) section 1.2.1.

¹¹ *ibid.*

corporate law, as reflected in this Model Law. In order for this principle to stand, all jurisdictions should adopt the same criteria for legal personality as prescribed in the Model Law, otherwise the legal scope of a particular DAO could be fragmented and unpredictable.

Article 3. DEFINITIONS—

- (1) **“Accreditation Authority”** means any public or private authority that a jurisdiction which adopts or transposes the Model Law recognizes as legitimate to ensure compliance with one or more Articles of the Model Law.
- (2) **“Administrator”** means a Person, irrespective of title, that is appointed in a manner specified in the By-Laws to take discretionary decisions, either individually or collectively with other Administrators, with regard to specific, predefined operations of the DAO.
- (3) **“Airdrop”** means a free distribution of Tokens initiated by a DAO to a Public Address, but does not include distributions of Tokens for which a person must execute a function to redeem the distributed Tokens.
- (4) **“Asset”** includes both On-Chain assets and Off-Chain assets.
- (5) **“By-Laws”** means the rules and regulations that govern the procedures followed by a DAO and the interaction of its Members and Participants, which must be set out in plain language, in text or sound, visual or audiovisual recording.
- (6) **“Contentious Fork”** means a Hard Fork that results in two divergent and potentially competing blockchains.

- (7) **“Decentralized Autonomous Organization” (DAO)** refers to *smart contracts* (i.e. blockchain-based software) deployed on a public Permissionless Blockchain,¹² which implements specific decision-making or governance rules enabling a multiplicity of actors to coordinate themselves in a decentralized fashion. These governance rules must be *technically*, although not necessarily *operationally*, decentralized.

- (8) **“Developer”** means a person involved in the development or maintenance of the DAO, whether through the contribution of software code, design, business, legal or ancillary support.

- (9) **“Dispute Resolution Mechanism”** means an On-Chain alternative dispute resolution system, such as arbitration, expert determination, or an On-Chain alternative court system, which enables anyone to resolve their disputes, controversies or claims with, arising out of, or in connection with, a DAO. Any such award, decision or judgment will be accorded the same status and treatment as an international arbitral award.

- (10) **“Externally Owned Account”** means a Public Address controlled by a private key and that has no associated code.

- (11) **“Failure Event”** means a DAO encountering a technical bug or exploit which renders the DAO unoperational or fundamentally changes the expected operation of the DAO.

- (12) **“GUI”** means a graphical user interface, publicly accessible by all DAO Members and Participants, whether hosted via centralized or decentralized means, through which users interact with computer software via visual indicator representations. This can include, but is not limited to, a web interface or standalone application.

¹² This definition shall also apply to any layer 2 solutions.

- (13) **“Hard Fork”** means a blockchain software upgrade that is not compatible with previous versions of the blockchain software, and therefore requires all users to upgrade.
- (14) **“Jurisdiction”** means a territory that is under a defined legal authority.
- (15) **“Legal Representative”** means a Person who is appointed in a manner specified in the By-Laws to perform procedural functions Off-Chain.
- (16) **“Majority Chain”** means the version of the chain accepted by more than 50% of the blockchain’s validators following a Hard Fork.
- (17) **“Meeting”** means a synchronous or asynchronous event for the purpose of discussing and acting upon DAO-related matters by Members or Participants.
- (18) **“Member”** means any person or DAO who has governance rights in a DAO.
- (19) **“Minority Chain”** means the version of the chain that is not the Majority Chain following a Hard Fork.
- (20) **“Model Law”** means this DAO Model Law.
- (21) **“Off-Chain”** means any action or transaction that is not On-Chain.
- (22) **“On-Chain”** means any action or transaction that is recorded and verified on a blockchain.
- (23) **“On-Chain Contribution”** refers to any Token segregated and locked in one of the DAO’s Smart Contracts for the purpose of Member buy-in to the DAO and the provision of withdrawable capital.

- (24) **“Open-Source Format”** means the Open Source Initiative’s definition of open source.¹³
- (25) **“Participants”** means any person interacting with or holding native tokens in a DAO other than Members.
- (26) **“Permissionless Blockchain”** means a public distributed ledger, allowing any entity to transact and produce blocks in accordance with the blockchain protocol, whereby the validity of the block is not determined by the identity of the producer.
- (27) **“Person”** means an individual, a company or any other body of persons.
- (28) **“Proposal”** means a suggestion for actions to be taken by the DAO, to be decided on in accordance with the By-Laws of the DAO.
- (29) **“Public Address”** means a unique, durable identifier that person(s) can transact with on a Permissionless Blockchain.
- (30) **“Public Forum”** means a freely accessible online environment that is commonly used for the exercise of speech and public debate.
- (31) **“Public Signaling”** means a declaration authorised by way of Proposal by the DAO in a Public Forum.
- (32) **“Quality Assurance”** means that the code of the DAO has undergone security review according to industry standards, namely: (1) the completion of professional software security audit with an audit report available to the public with no significant security risks remaining, as well as the completion of a public bug bounty; (2) a formal verification by means of a mathematical proof-based methodology in which the Smart Contract’s bytecode is directly checked as correct-by-construction to show the full functional

¹³ Open Source Initiative, “The Open Source Definition” (*The Open Source Definition* | Open Source Initiative, March 22, 2007) <<https://opensource.org/docs/osd>> accessed May 8, 2021.

correctness of security-critical properties of the Smart Contract; or
 (3) any other process recognized as meeting the same security standards.

- (33) **“Smart Contract”** is code deployed in a blockchain environment. It is made of a set of *predefined* and *deterministic* instructions executed in a distributed manner by the nodes of the underlying blockchain network, if and when the underlying conditions are met. Execution of a Smart Contract will produce a change in the blockchain state.
- (34) **“Token”** means a record on a Permissionless Blockchain, typically representing an Asset, participation right, or other entitlement.
- (35) **“Transaction”** means a new entry in a Permissionless Blockchain, often but not exclusively, recording a change in ownership of an Asset or participation in a DAO.

Commentary

With respect to Administrator (Article 3(2)), common terms used for Administrators may include ‘Directors’, ‘Trustees’ or ‘Committee Members,’ depending on the preference of the DAO in question.

With respect to Decentralized Autonomous Organizations (Article 3(7)), the definition distinguishes between Smart Contracts that qualify as DAOs for the purpose of this Model Law and those that do not qualify as DAOs, based on the technical design and implementation of their governance structure. The governance of a DAO is always *technically*—although not necessarily *operationally*—decentralized. From a purely technical perspective, the DAO must provide at least the potential of decentralized governance. For example, a Smart Contract that is controlled by an Externally Owned Account will not qualify as a DAO within the scope of this Model Law, because one single entity can unilaterally affect the operation of said Smart Contract. This holds true even if the actions of said single entity are determined by a distributed governance system operating outside of the blockchain. Conversely, a Smart Contract whose governance is based

on a Token-based system will most likely qualify as a DAO, even if a single entity could theoretically control a majority of these tokens.

With respect to Smart Contract (Article 3(33)), the reference to “predefined conditions” means that all terms are explicitly fixed and immutable, whereas “deterministic conditions” means that for any valid input provided, the same result is returned regardless of when the function is executed.

With respect to Person (Article 3(27)), we follow the approach of the OECD Model Tax Convention (2017), which defines a person as “an individual, a company and any other body of persons”.¹⁴ The OECD Report on the Application of the OECD Model Tax Convention (1999), clarifies that this term also covers foundations and partnerships.¹⁵

¹⁴ OECD Model Tax Convention 2017, art 3(1)(a).

¹⁵ OECD Report on the Application of the OECD Model Tax Convention 1999, paras 29-30.

Chapter 2

Formation and Proof of Existence

Article 4. FORMATION REQUIREMENTS—

- (1) In order for a DAO to benefit from legal personality, it must fulfill the following requirements:
 - (a) The DAO must be deployed on a Permissionless Blockchain;
 - (b) The DAO must provide a unique Public Address through which anyone can review the DAOs' activities and monitor its operations;
 - (c) The whole software code of the DAO must be in Open-Source Format in a Public Forum to allow anyone to review it;
 - (d) The software code of the DAO must have undergone Quality Assurance;
 - (e) There must be at least one GUI that will allow a layperson to read the value of the key variables of the DAO's smart contracts and monitor all transactions originating from, or addressed to, any of the DAO's Smart Contracts. The GUI will also specify whether Members are able to redeem their Tokens without restrictions and if not, the GUI will clearly mention the restrictions that are in place;
 - (f) The DAO must have By-Laws that are comprehensible to a layperson. The By-Laws must be publicly accessible via a GUI or a Public Forum. Sensitive information may be redacted from the By-Laws before their publication, if those redactions are necessary to protect the privacy of individual Members or Participants in the DAO;

- (g) The governance system of the DAO must be technically decentralized, although not necessarily operationally decentralized, as per Article 3(7).
 - (h) Independent of the chosen governance system, there must always be at least one Member of the DAO at any given time;
 - (i) There must be a publicly specified mechanism that allows a layperson to contact the DAO. All Members and Administrators of the DAO must be able to access the contents of this communication mechanism;
 - (j) The DAO must refer to or provide a Dispute Resolution Mechanism that the DAO, Members and Participants will be bound by;
 - (k) The DAO must refer to or provide a Dispute Resolution Mechanism to resolve any disputes with third parties that, by their nature, are capable of being settled by alternative dispute resolution.
- (2) The DAO will, upon meeting the formation requirements in Article 4(1), have limited liability by default, subject to the provisions of Article 5.
- (3) Concurrent fulfillment of the requirements in Article 4(1), and an announcement by the DAO that it has fulfilled those requirements is deemed conclusive evidence of the DAO's recognition under this Model Law and does not require certification from, or registration by, an Accreditation Authority.
- (4) A jurisdiction adopting the Model Law may authorize an Accreditation Authority to monitor whether a DAO continues to meet the requirements for legal personality under the Model Law.
- (5) A DAO may request confirmation from an Accreditation Authority, if such an authority exists, to determine whether the DAO complies with the requirements for legal personality under the Model Law.

Commentary

As the objective of the Model Law is to bridge the technical and legal gap between the multiple existing and potential activities of DAOs and traditional regulatory frameworks that have yet to adapt to the new social organizations enabled by permissionless participation, the Model Law applies only to DAOs operating on Permissionless Blockchains. Permissionless Blockchains enable a multiplicity of participants to coordinate on a decentralized basis, in which control of the DAO is established among various actors via a Token-based system, and such permissionless participation is the foundational basis of DAOs. These emergent forms of social and economic coordination require updates to traditional corporate legal frameworks to apply public policy mechanisms in a manner that takes technical realities into account. New political and legal economies that can be gained from the technical functionalities afforded by DAOs require this kind of cautious and effective adaptation of corporate law frameworks to DAOs.

Permissionless Blockchains can be distinguished from permissioned blockchains, in which blockchain software is deployed by a narrow subset of pre-defined actors by a series of predefined accounts and can therefore be considered centrally controlled and coordinated. Permissioned blockchains are more akin to a traditional private corporation or foundation in terms of having centralized governance,, and, as such, applications on permissioned blockchains do not require new legal frameworks to operate.

DAOs deployed on Permissionless Blockchains raise the possibility of interacting with persons and entities one does not know. In the late 1770s, in writing about penal law, Bentham posed the question: “Who are you, with whom I have to deal?”¹⁶ This question strikes at the heart of the problem of being able to accurately and truthfully identify a stranger. At the time, the lack of standardization of proper names provided numerous opportunities to deceive counterparties. As Fichte noted soon after, this lack of identifiability compromised policing.¹⁷ While both had the identifiability of natural persons in mind,¹⁸ the need to know *who* one is dealing with is also essential for legal persons.

¹⁶ Jeremy Bentham, “Principles of Penal Law” in John Bowring (ed), *The Works of Jeremy Bentham*, vol 1 (William Tate 1838) part 3, chapter 12, problem 9, 557.

¹⁷ Johann Gottlieb Fichte, *Foundations of Natural Right: According to the Principles of the Wissenschaftslehre* (Frederick Neuhouser ed, Michael Baur tr, Cambridge University Press 2000) 295.

¹⁸ Colin Koopman, *How We Became Our Data: A Genealogy of the Informational Person* (University of Chicago Press 2019) 29.

In a majority of jurisdictions, this identifiability requirement is met by giving a company a unique name that distinguishes it from other companies, a unique identification number and a registered office address, which can be used to find the company in a business register. A search of such a business register usually provides the name of at least one of the directors of said company. Through the formation requirements mentioned in this Article 4, we strive for regulatory equivalence by meeting this identifiability objective, while also acknowledging the unique properties of DAOs and the implicit goal of DAOs to conduct transactions digitally and maintain the pseudonymity of Administrators, Members and Participants.

An example of this is Article 4(1)(b), which requires the specification of a Public Address. Any DAO has—by technical requirement—at least one unique Public Address. The Public Address usually reveals the blockchain the DAO is based on, although this is not so in the case of a Hard Fork. The public policy goal requiring a company to have a name to distinguish one company from another is met by the identification of a Public Address of a DAO, which may be considered its default name in the absence of a unique name communicated by Public Signaling. This Public Address is communicated publicly as part of the requirement in Article 4(1)(c) to have the whole software code of the DAO published in Open Source Format.

As mentioned above, in most jurisdictions, a legal person must have a physical, registered address. While there are varied policy goals behind this requirement, we consider (1) the need of stakeholders and third parties (*e.g.*, a national legal system) to communicate with a legal entity; and (2) the need to determine its *lex societatis* (*i.e.*, the national law that governs the entity), to be the two most important reasons for having a physical, registered address. In general, a physical, registered address—even if limited to a mailbox—is important due to the need for Persons or the legal system to serve legal documents. While service of documents by e-mail or fax is already possible in several jurisdictions for civil proceedings (*e.g.*, England & Wales),¹⁹ it is not universally the case (*e.g.*, in the Netherlands).²⁰

¹⁹ European Union, ‘Service of Documents - England & Wales’ (*European e-Justice Portal - Cooperation in civil matters* June 25, 2018) <https://e-justice.europa.eu/content_service_of_documents-371-ew-en.do?member=1#toc_6> accessed May 8, 2021.

²⁰ European Union, ‘Service of Documents- Netherlands’ (*European e-Justice Portal - Cooperation in civil matters* June 25, 2018) <https://e-justice.europa.eu/content_service_of_documents-371-nl-en.do?member=1#toc_6> accessed May 8, 2021.

A jurisdiction that adopts the Model Law should also permit the electronic service of legal documents by any communication mechanism publicly specified by a DAO (Article 4(1)(i)), such as a secure website which the authorities of a jurisdiction can post notice to and from which it can receive cryptographically signed acknowledgement. Courts in both India and the United Kingdom have recently indicated support for novel electronic means of serving legal documents, so long as the intended recipient can be correctly identified and there is an indication that they have been served (e.g., a “blue double tick” on Whatsapp).²¹ In the case of DAO Administrators or Members, identification would usually be enabled by their public address on the blockchain, not their name. For the sake of transparency and to avoid the maintainer of the communication mechanism being held inadvertently and individually responsible for the actions of a DAO, this publicly specified communication mechanism should be accessible by any Member of the DAO. At the same time, this communication mechanism should not permit a Member or Administrator to unilaterally delete or amend communications.

The second policy goal of determining the laws and procedures that govern a DAO is met by specifying a Dispute Resolution Mechanism for disputes arising among Members (Article 4(1)(j)) and for disputes with third parties that can be subject to alternative dispute resolution mechanisms (Article 4(1)(k)). In other words, we consider that compliance by the DAO’s software code with Article 4 of the Model Law satisfies the policy goals behind the traditional requirement of having a seat. Instead of requiring a DAO to submit to and physically establish a presence in every jurisdiction in which they operate, the Dispute Resolution Mechanism gives Members and other stakeholders means of redress against the DAO, should the need arise. Dispute Resolution Mechanisms with non-member third parties do not have to meet minimum standards of due process for the time being, as no on-chain ADR process currently meets such standards and is unlikely to do so in the foreseeable future. However, third parties who enter into agreements with DAOs should be informed upfront about the Dispute Resolution Mechanism the DAO has opted into and that it may not meet the standards of due process that they might expect in an Off-Chain dispute resolution process, such as court litigation. This gives the third party prior notice and option to avoid transactions with the DAO and, if they choose to enter into such transactions, they do so on the basis of ‘participant beware’. However, at a minimum, any final decision or settlement resulting from the Dispute Resolution Mechanism must be made public, after anonymizing the names and other personally identifiable information of the

²¹ ServeNow Staff, “Service of Process via WhatsApp” (*serve-now.com*, March 12, 2019) <<https://www.serve-now.com/articles/2580/service-of-process-via-whatsapp>> accessed May 8, 2021.

disputing parties, where relevant. Jurisdictions should recognise any final decision reached by the Dispute Resolution Mechanism. For matters that cannot be resolved by an ADR or binding arbitration procedure, a Legal Representative will be appointed (Articles 3(15), 14) to represent the interests of a DAO as a legal entity.

In many jurisdictions, the promoters assisting in the incorporation of a limited liability company must set authorized, subscribed and paid-in capital, along with the number of shares to be issued, the different classes of shares, their par value, and the terms and conditions on which the payment for their subscription will be made. We consider the overarching policy goal of this requirement to be ensuring that an entity has sufficient capital to meet its debts to creditors and to provide a structure for capital investments and tradability of shares. In the case of DAOs, the policy goal is automatically met by its technical reality: the funding situation, governance and any Token issuance may be read by anyone from the Permissionless Blockchain (Article 4(1)(a)). However, as only a minority of experts are able to reliably and accurately read the information from a blockchain directly, only DAOs that have a minimum of one publicly available GUI (Article 4(1)(e)) and have completed software Quality Assurance (Article 4(1)(d)) will be able to benefit from protection under the Model Law.

Similarly, a limited liability company is typically required to have a statute or constitution, often known as the Articles of Association or By-Laws, sometimes supplemented by or encompassed in an Operating Agreement or Membership Agreement, which include rules for the management of the affairs of the company, including its administrators and its representatives in relation to third parties, along with the names and powers of any such persons or entity(ies). A DAO's By-Laws are by default laid down in its software code. However, as only a minority of experts are able to reliably read the DAO's code, only DAOs providing for a one-to-one version of the rules in plain language on a GUI (Article 4(1)(f)) and a governance system with at least one Member (Article 4(1)(h)) will be able to benefit from protection under the Model Law.

Chapter 3

Limited Liability, Asset Subscription and Members' Rights

Article 5. LIMITED LIABILITY—

- (1) Except as set forth in Articles 5(3) and Article 5(4), Members will only be responsible for providing the On-Chain Contributions that they have committed to the DAO, as required by the By-Laws. If the DAO exhausts its Assets, the Members will not be liable for excess liability.
- (2) Except as set forth in Articles 5(3) and Article 5(4) of this Model Law, Members will not be held liable for any obligations incurred by the DAO, including, but not limited to, labor and tax obligations.
- (3) If the DAO refuses to comply with an enforceable judgment, order or award entered against it, the Members who voted against compliance will be liable for any monetary payments ordered in the judgment, order or award in proportion to their share of governance rights in the DAO.
- (4) Articles 5(1) to 5(4) will not affect the personal liability of a Member in tort for their own wrongful act or omission, but a Member will not be personally liable for the wrongful act or omission of any other Member of the DAO.

Commentary

Limited liability of shareholders, while being a defining and important feature of the modern corporation, has not always been an attribute of corporations. According to Harris, limited liability evolved since the 1600s over three distinct periods from a system of no limited liability (circa. 1600-1800) to a multiplicity of hybrid liability regimes (circa. 1800-1930) to ‘strong’ owner shielding in the twentieth century.²² It was only in this third period that creditors were granted legal priority over equity holders in claiming corporate assets.

There are several legal and economic grounds for why limited liability became a uniform attribute of the corporation. With the growth of large, complex corporations in the United States with dispersed shareholding structures, it became apparent that it was untenable for individual shareholders to have ‘moral culpability’²³ for the actions of corporations, as they lacked the power and control mechanisms to discipline errant management. At the same time, limited liability allows risk-averse persons to take business risks that they may have otherwise avoided, thereby enhancing the chances of gaining a lucrative return, as the risks of a poor investment are shifted onto creditors and other third parties.²⁴ Ordinarily, shareholders that enjoy limited liability only stand to lose what they have invested in the event of insolvency. As a consequence, shareholders are also able to invest in multiple corporations without having to closely monitor any of them.²⁵ This is a clear example of how corporate legal requirements evolved to address the inherent trade-offs underlying public policy goals to enhance or enable political and social economies afforded by implementation of such rules. Voluntary creditors are able to, however, protect themselves from the moral hazard of shareholders by imposing higher interest rates on any loans extended to the corporation and by negotiating limitations on actions that a corporation can take without creditor approval. Involuntary creditors, such as tort victims, may seek to pierce the corporate veil so as to satisfy the claims they may have against individual shareholders or parent companies, but globally such efforts at veil piercing are generally unsuccessful outside of cases of fraud.

²² Ron Harris, ‘A New Understanding of the History of Limited Liability: an Invitation for Theoretical Reframing’ (2020) 16 *Journal of Institutional Economics* 643, 644.

²³ Stephen Bainbridge and M. Todd Henderson, *Limited Liability: A Legal and Economic Analysis* (Edward Elgar Publishing 2016) 46.

²⁴ *ibid*, 49.

²⁵ *ibid*, 59.

As a corollary to this, there are legal and economic grounds for why unlimited liability is less favored by contemporary corporate entities, although certain corporate entities have unlimited liability as a mandatory rule (e.g., in general partnerships) or as a default rule (e.g., cooperative societies in some jurisdictions). While unlimited liability would offer voluntary and involuntary creditors some solace that shareholders would be jointly and severally liable for any claims that remain unsatisfied by the corporate entity, this would be poorly suited to the interests of members of an entity that has potentially thousands-if not millions-of anonymous members and aspires towards participatory governance, such as a DAO. It is the combination of these two attributes, among other things, that makes the governance of a DAO distinct from that of an archetypical Berle-Means corporation.

It could be argued that, as with other business organizations with unlimited liability, the ability of Members to participate in governance would be sufficient to ameliorate vertical (principal-agent) and horizontal agency problems (majority-minority principals). However, the fact that many of the other Members are unknown would, in principle, heighten the apprehension of Members that Tokens could be sold to poorer third parties and thereby increase their collective risk.²⁶ In other words, in the absence of limited liability, DAOs would have to adopt a rule similar to general partnerships, that to sell their membership-conferring Tokens on a secondary market would require unanimous consent of all Members²⁷—a requirement that would be cumbersome and costly for DAOs, as it would decrease the liquidity of their tokens. For voluntary and involuntary creditors,²⁸ joint and several liability may also lose its appeal when confronted with the reality that they would potentially have to pursue individual claims against several, dispersed Members. It is arguable that it is even unfair that creditors be able to arbitrarily pursue actions against individual Members, based on the accessibility of the Members' jurisdiction or wealth. At the same time, it creates social costs as it is society that has to bear the costs related to the public enforcement of these liability claims.

The above summarizes some of the main advantages of an entity having limited liability and the central disadvantages of having unlimited liability, so as to explain why the Members of a DAO should be extended limited liability. In addition to the

²⁶ On this risk with respect to shareholders of unlimited liability entities, see Richard Posner, *Economic Analysis of Law* (4th ed., Little, Brown and Company 1992) 394.

²⁷ Stephen Bainbridge and M. Todd Henderson, *Limited Liability: A Legal and Economic Analysis* (Edward Elgar Publishing 2016) 61.

²⁸ See in the context of *pro rata* shareholder liability, Henry Hansmann and Reinier Kraakman, 'Toward Unlimited Liability for Corporate Torts' (1991) 100 Yale Law Journal 1879, 1880.

aforementioned legal and economic benefits of limited liability, the absence of such protection for Members would discourage participation in a growing market and stymie the development of innovative financial and non-financial products. While limited liability can be privately ordered—for example, by having representatives of the entity negotiate contractual clauses where creditors agree to waive any claim on Members’ assets—this is an expensive exercise prone to moral hazard.²⁹ Instead, we seek limited liability to be *granted* to DAOs compliant with other requirements articulated in the Model Law, as it has been in the past with a multitude of other corporate entities³⁰ and as it has recently come into force in the State of Wyoming.³¹

Understandably, there may be concerns regarding the abuse of limited liability. This may be addressed by DAOs by introducing a requirement for Members to make a financial contribution to a reserve fund or towards the premiums of an appropriate insurance policy for the benefit of limited liability. Such a bond in exchange for limited liability has been advocated by Robert Rhee and Abraham Singer.³² Some DAOs may decide to sequester some of their On-Chain Assets in a specially designed Smart Contract, which will pay out in case of liability. Insurance customised to the needs of a DAO may be able to cover a larger share of potential future liabilities, however, the novelty and riskiness inherent in this sector make such coverage prohibitively expensive. Nonetheless, we have included this voluntary option with the view that insurance providers will gradually emerge to respond to the needs of this space, as can be seen with the example of Nexus Mutual.³³ In addition, the veil piercing option in Article 5(3) further mitigates risks of abuse of Members’ limited liability, while Article 5(3) ensures Members cannot simply refuse to pay a judgment against the DAO. Note that Articles 5(1) and (3) does not make Members liable for excess liability the DAO is unable to pay from its Assets, but only for an outright refusal by the DAO to respond to judgment against it.

²⁹ Henry Hansmann, Reinier Kraakman and Richard Squire, ‘Law and the Rise of the Firm’ (2006) 119 Harvard Law Review 1333, 1341.

³⁰ Anton Jäger, ‘State and Corporation in American Populist Political Philosophy, 1877-1902’, The Historical Journal (online first view), 9-10.

³¹ *Wyoming Decentralized Autonomous Organization Supplement*, Wyo. Stat. § 17-31-110 to 17-31-116. <<https://legiscan.com/WY/bill/SF0038/2021>> accessed 8 May 2021.

³² Abraham Singer, *The Form of the Firm: A Normative Political Theory of the Corporation* (Oxford University Press 2019) 185-186; Robert Rhee, ‘Bonding Limited Liability’ (2010) 51 William and Mary Law Review 1417, 1450-1453.

³³ Nexus Mutual, ‘FAQ’ (*Nexus Mutual Gitbook*, February 2021) <<https://nexusmutual.gitbook.io/docs/welcome/faq>> accessed 8 May 2021.

Article 6. ASSET SUBSCRIPTION AND PAYMENT—

- (1) No minimum capital requirements will apply to a DAO recognised by the Model Law. If the DAO wishes to maintain a minimum amount of capital, the By-Laws of the DAO will specify the rules for subscription and payment.
- (2) The By-Laws must specify the rules for exiting the DAO that address the consequences of voluntary and involuntary Member and Participant exit on subscriptions and payments they have made.
- (3) No Member will be able to compel the dissolution of the DAO for failure to return their On-Chain Contribution.

Commentary

The subscription of minimum capital, with a large amount paid up front before the commencement of business, has typically been a mechanism to prevent the abuse of the privilege of limited liability. The policy objectives of having a minimum capital requirement include protecting creditors, signaling the availability of certain assets to meet the claims of creditors (particularly involuntary ones who cannot bargain for better protections), preventing the frivolous formation of limited liability companies, demonstrating that a new business is credit-worthy and nudging directors to recapitalize an undercapitalized business.³⁴ However, as is current practice with private limited liability companies in several jurisdictions,³⁵ we do not see minimum capital subscription as being necessary for DAOs, due to its inadequacy in serving its main intended purpose: protecting creditors from members and fiduciaries siphoning assets.³⁶ In the European Union, the *Centros*

³⁴ Fritz Ewang, 'EU Minimum Capitalisation Requirement: An Analysis and Critique of the EU's Minimum Capitalisation Requirement' (2007) 15 <<http://ssrn.com/abstract=1015708>> accessed 8 May 2021.

³⁵ DLA Paper, 'Minimum Capital Requirement' (DLA Piper Intelligence.com, 2 April 2021) <<https://www.dlapiperintelligence.com/goingglobal/corporate/index.html?t=03-minimum-capital-requirement>> accessed 8 May 2021.

³⁶ Massimo Miola, 'Legal Capital and Limited Liability Companies: The European Perspective' (2005) 4 European Company and Financial Law Review, 413, 419.

judgment has made clear that companies are free to circumvent minimum capital rules by registering in a foreign jurisdiction which provides lower minimum capital requirements, given that there are other mechanisms to protect the interests of creditors.³⁷ The paying-up of a portion of minimum capital prior to the formation and operation of a business does not prevent the business from returning the cash of promoters as a salary, in exchange for goodwill or as a loan soon after it becomes operational.³⁸ Nor are the sums committed to these businesses typically sufficient to meet the claims of unsecured, involuntary creditors, such as employees. Voluntary creditors do not look towards minimum capital to determine the credit-worthiness of a business but instead concentrate on other metrics such as net worth or cash flow, as well as the business's ability to furnish security. Given existing market-based challenges and formation requirements imposed by this Model Law, we do not see a justification for creating an additional barrier to entry to small, under-resourced DAOs in the form of a minimum capital requirement, particularly where such a requirement is rapidly falling out of favor for the reasons discussed above.

Instead, as the inherent technical features of a Permissionless Blockchain and this Model Law require a DAO's software code, On-Chain Assets and transaction records to be publicly available (Article 4(1)(e)), the financial position of a DAO and the risks inherent in it are made transparent to any creditors. As such, the signaling functions of minimum capital requirements are achieved through technological means. Furthermore, DAOs have diverse mechanisms for entry and exit designed according to the needs of their Members, such as withdrawal of Tokens (akin to the withdrawal of shares in cooperatives in the UK) or the transfer of TTokens to third parties (akin to the transfer of shares in limited liability companies). We believe the law should allow for this flexibility to protect the interests of Members with minority Token holdings.

We anticipate that one of the critiques of not having a minimum capital and granting limited liability to DAOs will be that it will allow an insolvent or near-insolvent DAO seeking to exploit its undercapitalization and the limited liability of its Members to engage in risky ventures that could, among other things, lead to tort liability. Due to its poor financial position, such a DAO may not be able to meet tort claims, while shielding Members from liability. However, multinational corporations engage in such risk transfer practices on a regular basis. The financial position of a DAO will be transparent to all stakeholders due to the existence of a

³⁷ Case C-212/97 *Centros Ltd v Erhvervs- og Selskabsstyrelsen* [1999] ECR I-1459.

³⁸Fritz Ewang, 'EU Minimum Capitalisation Requirement: An Analysis and Critique of the EU's Minimum Capitalisation Requirement' (2007) 5, 17 <<http://ssrn.com/abstract=1015708>> accessed 8 May 2021.

GUI that can be used to examine its Assets (Article 4(1)(e)). To assuage concerns regarding economic credibility and creditworthiness, a DAO that seeks limited liability protection for its Members may consider maintaining relevant insurance coverage or reserve funds in escrow to satisfy such claims.

Article 7. CLASSES OF PERSONS PARTICIPATING IN THE DAO—

- (1) A DAO may have multiple classes of participation rights defined in, and granted in accordance with, its By-Laws.
- (2) Where the DAO has Tokens providing governance powers to the Token holder, the Token holder will be considered a Member of the DAO:
 - (a) From the time the ownership of the Tokens is established to be in the possession of an address, or
 - (b) From the time when ownership is first acknowledged by the Token holder through an On-Chain interaction with the DAO, through staking the Tokens, voting with the Tokens Off-chain whereby results are implemented On-Chain, submitting a Proposal or transferring the Tokens to another address, in the event that no action has been taken by a Token holder to acquire a Token, such as in an Airdrop.
- (3) This Article does not apply in the event of a Contentious Fork.
- (4) This Article does not apply to Airdrops.

Commentary

Participation rights in DAOs may take the form of tokenized governance powers, which may include the ability to propose, vote, and veto Proposals, as well as confer financial rights, which may include revenue and profit-sharing, bonding redemption rights, and service access rights, among others. Such participation rights and responsibilities, whether in the form of governance or financial powers, may be purchased, earned programmatically, granted through proposals, or distributed in any way defined in the DAO's By-Laws. The Model Law requires a DAO's software code, On-Chain Assets and transaction record to be publicly available and transparent to Members and Participants, so it does not impose a restriction on distributions, as with traditional non-profit companies or foundations. These 'non-distribution constraints' exist in such organizations to prevent fiduciaries and key employees siphoning valuable assets from the organization for personal gain, and to build trust in the organization's capacity to achieve their social, environmental or charitable purpose. The signaling function provided by the technological guarantees of a DAO, as well as the diverse mechanisms designed by Members to enter and exit a DAO, provide sufficient safeguards to dispense with the need for specific restrictions on distributions within a DAO.

In the traditional corporate form, governance and financial rights usually coincide, but this is not necessarily the case for DAOs. A DAO can delineate various governance and financial rights via its Token-based system and distinguish amongst its participants those Token-holders to whom governance powers have also been granted. This Model Law contemplates that only those persons holding governance rights should be considered Members of the DAO who determine the actions of the DAO, and thus hold a higher level of responsibility. An example of an important stakeholder in the DAO ecosystem who would not be classified as Members are persons who hold Tokens on centralized exchanges. In such situations, the user usually only has a claim on the centralized exchange, but doesn't have actual ownership of the Tokens, which is a prerequisite for membership. The lack of actual ownership of Tokens by users was well demonstrated in a dispute in 2020 over the Steemit platform.³⁹ In March 2020, centralized exchanges, including Binance, Poloniex and Huobi, used user deposits of STEEM, the native Token of the Steemit blockchain, to help oust all of Steemit's nodes known as "witnesses" that

³⁹ Yilun Cheng, 'Tron takeover? Steem community in uproar as crypto exchanges back reversal of blockchain governance soft fork' (*The Block*, 2 March 2020) <<https://www.theblockcrypto.com/post/57508/tron-steem-takeover-crypto-exchanges-governance-reversal-soft-for-k-blockchain>> accessed 8 May 2021.

secure the Steemit blockchain in favour of one single witness (node) controlled by Tron’s founder Justin Sun. The move was heavily criticized within the blockchain ecosystem, which has arguably resulted in more hesitant usage of user deposits by centralized exchanges. However, the matter highlights the discrepancy between legal ownership, possession and lack of actual control by users over Token deposits in centralized exchanges, which, therefore, should not qualify as conferring membership rights.

This Article does not apply to Contentious Forks (Article 16 and commentary). Blockchains can undergo hard forks, as defined in Articles 3(13) and 16. As such, multiple blockchain forks can coexist and which fork to use is a consensus-driven process that must be achieved without a definitive source of authority determining the result. Because these replications can occur without affirmative action on the part of Participants, this Model Law does not contemplate that governance responsibilities should be automatically conferred to Members of a DAO involuntarily subject to a Hard Fork. As described in Chapter 5, there are several factors to be considered in the determination of the majority fork. Ultimately, individual participants and market aggregations decide which fork emerges as the authoritative counterparty in transactions. In this Model Law, Article 7(2)(b) requires a Token holder to make an affirmative action or acknowledgement to be considered a Member participating in a DAO, and therefore the involuntary doubling of Tokens and associated governance and financial participation rights that occurs during blockchain forks are exempted from this Article.⁴⁰

Similarly, this Model Law exempts Airdrops (Article 3(3)) from Article 7. Airdrops occur when a DAO distributes tokens to Public Address without knowledge or consent from the owner of the Public Address. Due to the nature of blockchains, a Public Address cannot block incoming transactions. As such, Airdrop distributions confer Tokens and associated participation rights on Persons involuntarily, and are therefore exempt from Article 7. This Model Law requires that Token holders voluntarily and affirmatively engage in an On-Chain interaction with a DAO (Article 7(2)(b)) to be considered a Member of a DAO. Recently, many governance token distributions have been organised as so-called “merkle airdrops” (or merkledrops), which require the user whose Public Address received the merkledrop to actively redeem the Tokens and pay any associated transaction fees. The definition of Airdrops (see Article 3(3)) used in this Model Law does not encompass

⁴⁰ Additionally, this Model Law distinguishes a DAO split, in which members of a DAO affirmatively vote to separate a DAO’s assets, governance and financial rights, from a blockchain fork. A DAO split is analogous to a traditional private company contemplating divestment, demerger or hive down.

merkledrops, for which users must affirmatively and voluntarily accept the merkledrop and the associated participation and governance rights.

Article 8. VOTING RIGHTS—

The voting rights of Members will be distributed in the following manner:

- (1) The By-Laws must set out the distribution of voting rights of the classes of Members in a DAO. The method by which these voting rights are computed and distributed must be accurately set out in the By-Laws.

Commentary

Unlike modern corporations, DAOs do not need default voting rights because the distribution of voting rights must be proactively delineated when creating a DAO. Thus, there is there no need for a default rule for voting in the context of DAOs.

Article 9. PROXIES—

With respect to proxies:

- (1) The Members or Participants may represent themselves or be represented by a proxy.
- (2) Proxies may ask questions, vote and exercise all other rights of Members or Participants.

Commentary

In contrast to the rule in some jurisdictions that equity holders, such as shareholders and cooperative members, cannot be represented by proxy, the Model Law embraces the contemporary practice of allowing proxy representation and voting. Delegation of voting rights is already common in DAOs operating today. For example, in the case of compound.finance, any COMP holder may delegate their voting rights to another Public Address.⁴¹ Many compound.finance votes have been delegated to high profile ecosystem members.⁴²

Article 10. MINORITY PROTECTION—

In the interest of minority Members of DAOs:

- (1) The DAO must clearly state in its By-Laws whether it provides for any kind of minority rights protection.

Commentary

The protection of minority rights, such as those of minority shareholders, is an important principle in the corporate law of every jurisdiction. With respect to DAOs, the ease of entry and exit, in conjunction with the extensive disclosures inherent to such entities, act as a first line of protection for minorities against abuses by majorities. Furthermore, in line with the objective of using the DAO's Dispute Resolution Mechanism to resolve disputes among Members (Article 4(1)(j)), minority Members may raise a dispute through the mechanism that is specified at the time of DAO formation. DAOs may wish to provide even greater protections to minority DAO Members, particularly in the event of major or contentious decisions and transactions. The Model Law provides room for such protections to be introduced through the DAO's By-Laws (Article 10(1)). Several DAOs, for instance, have implemented “ragequit” features (e.g., MolochDAO, MCV), whereby Members unhappy with specific decisions may immediately exit the DAO with their proportional share of On-Chain funds.

⁴¹ Compound Finance, ‘Delegate’ (Compound Finance Docs, 2021) <<https://compound.finance/docs/governance#delegate>> accessed 8 May 2021.

⁴² Compound Finance, ‘Leaderboard’ (Compound Finance Governance, 8 May 2021) <<https://compound.finance/governance/leaderboard>> accessed 8 May 2021.

Chapter 4

Internal Organization and Disclosure

Article 11. INTERNAL ORGANIZATION—

- (1) The internal organization and procedures of the DAO must be set out in its By-Laws.

Commentary

The Model Law seeks to avoid being overly prescriptive about the internal organization of DAOs. Therefore, the founders, Administrators and Members of a DAO have considerable leeway in designing the internal organization and procedures of the DAO. This is akin to the flexibility afforded to LLCs in several US states, and to LLPs and private companies limited by shares in the United Kingdom. Given the nature of DAOs, several of these procedures will be part of the code of a DAO's Smart Contracts, but to maximize accessibility to laypersons, these internal rules and procedures should be accurately represented in the DAO's By-Laws as set forth in this Articles 11(1) and Article 4(1)(f).

Article 12. MEETINGS—

- (1) A DAO will not be required to convene a general Meeting, but Meetings may optionally be included in the By-Laws;
- (2) There will be no requirement to have physical, in-person Meetings, unless explicitly specified in the By-Laws;
- (3) If the By-Laws do include a requirement to have meetings, it must have an explicit, transparent mechanism of giving

notice of Meetings to Administrators, Members or Participants, as well as a defined time period for deliberating upon submitted Proposals. This Notice must be communicated through a GUI.

- (4) The quorum and majority requirements for Meetings of DAO Administrators, Members or Participants will be specified in the By-Laws.

Commentary

In contrast to the archetypical Berle-Means corporation, characterized by delegation to day-to-day management, frequent board meetings and annual general meetings of shareholders, the current technical reality of DAOs means that any decision for an action is taken by way of Proposal, such that all On-Chain interactions may be considered part of a continuously ongoing online general meeting. Questions may be asked at any time and Proposals can be submitted continuously. This form of direct participation makes the separate organization of a Meeting redundant and potentially cumbersome. However, there may be DAOs which may find it necessary to organize Meetings, between Administrators, between Members or Participants and between all three, a need that can be met through appropriate provisions in the By-Laws. The global and digital nature of DAOs, in addition to the desire to preserve the anonymity/pseudonymity of stakeholders, militates against the holding of physical Meetings. If such in-person Meetings are compulsorily held, this should be specified in the By-Laws.

If Meetings are required in a DAO, the requirement in Article 12(3) can be fulfilled through the practice of submitting a Proposal to a DAO as a suggestion for actions to be taken by the DAO, with this Proposal clearly visible on a GUI and open for a defined time period (*e.g.*, 2 weeks) for deliberation and voting. The Article 12(4) requirements as to quorum and majority voting requirements can be technically set to prevent a Proposal from passage with insufficient quorum or by less than majority support.

Article 13. ADMINISTRATORS—

With respect to the delegation of powers and duties to certain persons:

- (1) The DAO is not required to have Administrators, including a board of directors or a trustee, unless mandated in its By-Laws. In the absence of such a provision, all the powers and tasks of Administrators will be vested in the DAO Members as a class;
- (2) The voting mechanism for nominating and appointing Administrator(s) will be set out in the By-Laws.

Commentary

Article 13(1) makes horizontal, direct decision-making the default of DAOs, as opposed to the vertical, delegated management that can be seen in the typical Berle-Means corporation. The specific manner in which decision-making power and tasks are distributed is to be determined by the DAO itself in its By-Laws. This, naturally, can include opting for some form of delegated decision-making.

Where a DAO has appointed one or several Administrators(s) to represent the DAO, the Administrator(s) will be elected by the DAO Members according to a procedure agreed in the By-Laws of the DAO. The DAO's public documentation will explicitly state who the authorized Administrators(s) are.

Article 14. LEGAL REPRESENTATION—

With respect to the appointment of Persons to complete Off-Chain tasks:

- (1) A DAO may choose to have one or more Legal Representatives to undertake tasks that cannot be achieved On-Chain. Legal representation can be limited to specific tasks, or it can be generic to a broader category of tasks.
- (2) Legal representation of the DAO will be carried out by the Legal Representative in the manner provided in the By-Laws and as evidenced by an authorization displayed on a Public Forum, whose validity must be verifiable by cryptographic proof. The Legal Representative(s) may undertake and execute any and all acts and contracts included within the scope of such authorization.
- (3) There are no requirements as to the residence or seat of the Legal Representative(s).
- (4) A Legal Representative will not be personally liable for acts done on behalf of the DAO.

Commentary

The position of Legal Representative was created to enable DAOs to engage with Off-Chain systems and processes, which may be increasingly necessary as DAOs become involved in increasingly complex tasks and activities as well as engagement with traditional third party entities. As it cannot be expected that all foreseeable actors will interact with the DAO On-Chain, the appointment of a Legal Representative allows for DAOs to undertake specific tasks and activities—without leading to classification of such Persons as fiduciaries of DAOs.

To give third parties transacting with DAOs assurance that a person is authorized by the DAO as a Legal Representative, the continued validity of an authorization should be verifiable by cryptographic proof and simultaneous post in the Public Forum. If the authorization of a Legal Representative is withdrawn, it should be withdrawn in the Public Forum in which it was originally granted, as well as On-Chain, in order to prevent tampering. In this instance, an example of a Public Forum could be a website administered by a centralized operator or hosted in a decentralized manner. A cryptographic proof could be a plain text message cryptographically signed by a DAO multisig or individually by a quorum of signers.

Article 15. NO IMPLICIT FIDUCIARY STATUS—

With respect to Persons who make discretionary decisions in the interest of the DAO or specific stakeholders:

- (1) Developers, Members, Participants or Legal Representative of a DAO must not be imputed to have fiduciary duties towards each other or third parties solely on account of their role, unless:
 - (a) They explicitly hold themselves out as a fiduciary.
 - (b) Their fiduciary status is stipulated in the DAO's By-Laws.

Commentary

In broad terms, a fiduciary is a Person who is entrusted with the responsibility of acting in the best interest of another party and a fiduciary duty is a legal obligation that seeks to ensure said Person does in fact act in such a manner. Fiduciary duties are typically assigned ex ante on the basis of a specific role (director, trustee, etc.), or they are imputed ex post by a court to remedy for unconscionable conduct in a relationship of trust and confidence. Among examples of ex ante allocation of fiduciary duties is the corporate board members' fiduciary duty to a corporation and a trustee's fiduciary duties to the trust's beneficiaries. Thus, typically, a fiduciary is

aware of the fact that they are acting as fiduciaries on behalf of another party and will accept legal and ethical obligations that flow from holding such a fiduciary position. Fiduciary duties include the duties of good faith, care and loyalty, and as these duties are open textured, objective or subjective standards are used to assess whether such duties have been violated.

However, as breaches of fiduciary duty entail significant penalties for Persons held liable, only egregiously self-serving or negligent conduct by Persons with control and wide discretion over a particular asset, information or set of decisions are found guilty of such breaches. Ordinary errors or failures that occur as part of the operation of a business are sometimes protected by some version of a ‘business judgement’ rule. In short, courts are reluctant to intervene in run-of-the-mill commercial decisions.

Blockchain Developers, like most open source developers, make their code available for public inspection and use code repositories such as Github. They do not have control over the ways in which their code, once written, is used or modified, nor can they usually impose a particular code change onto the users of the software once released. Every blockchain node must willingly upgrade their software in order to incorporate a particular code change. Unlike service providers who can force changes into an online platform without the consent of their user base, blockchain Developers have no power to impose any code change on the blockchain nodes.

Similarly, and as opposed to many commercial cryptocurrency exchange operators or custodial wallet providers, individual DAO Members and Participants do not usually have full control over the operations of the DAO, although they might have different degrees of influence to the extent that they can participate in the DAO’s governance. It would be unfair to hold these Members and Participants collectively liable by default, for specific operations that they did not explicitly undertake or operations they did not agree to in the decision-making process.

Finally, the DAO’s Legal Representative, unless specified otherwise, is merely an agent with limited and narrow discretion, appointed for undertaking only specific administrative or procedural tasks mentioned in the By-Laws, as opposed to taking decisions on behalf of the DAO. The DAO’s Legal Representative should not be considered to hold any fiduciary duties towards any of the DAO Members or third parties affected by the operations of the DAO. Accordingly, to ensure that Developers, Members, Participants and Representatives of a DAO are not implicitly classified as fiduciaries arising from their conduct in relation to a DAO, the Model

Law clearly states that a fiduciary relationship does not arise solely on account of their role.

The Model Law acknowledges that there may be circumstances in which a DAO wishes to assign fiduciary duties to specific Administrators, Members, or Representatives, and therefore provides for such a fiduciary position to be created via the DAO's own By-Laws or through explicit action of the fiduciary (Articles 15(1)(a)-(b)). This Model Law does not circumscribe the power of a judicial authority to impute fiduciary duties on a Person *ex post* on account of *actual* unconscionable behaviour, as opposed to such duties being imposed on any Person who holds a particular role. By clarifying the nature of DAO stakeholders' responsibilities and powers, we seek to provide greater legal certainty to these stakeholders.

Chapter 5

DAO specific provisions

Chapter 5 acknowledges that DAOs present new opportunities but also challenges. These opportunities and challenges must be addressed explicitly in the Model Law, and therefore do not have a counterpart in traditional corporate law rules. We have included provisions on Contentious Forks in the underlying blockchain (Articles 3(6), 16), DAO restructuring (Article 17), and DAO failure events (Article 18).

As to Article 16, unlike corporations which can act as one authoritative counterparty in their dealings by way of their separate legal personality, DAOs can experience Hard Forks pursuant to which multiple blockchain forks coexist, assets are duplicated and multiple instantiations of a DAO are created on different chains. During a Contentious Fork, there is an absence of an authority that makes a definitive choice of a chain and thus, there is a lack of an authoritative counterparty for a DAO. This is a particularly acute problem when dealing with Off-Chain Assets and Persons, as the existence of a single, authoritative counterparty is routinely expected.

Considering Article 17, the technological infrastructure of a DAO is subject to continuous change as a result of upgrades, modifications and migrations. The Model Law requires that DAOs maintain certain minimum standards throughout these changes to ensure that ‘restructurings’ do not subvert the standards and protections provided by this Model Law. These standards were introduced so as to allow DAOs to continue to have legal personality and their Members to retain limited liability as the DAO evolves.

In the short history of DAOs, we have witnessed a series of Failure Events. In Article 18, we address potential technical failures of DAOs rendering DAOs unoperational or frustrating a DAO’s expected operation. Providing for legal personality and limited liability to DAOs under this Model Law, we consider it important to clarify that DAOs subjected to Failure Events do not lose such protections but only to the extent necessary to protect DAO Members and Participants from personal liability.

In contrast, there are standard provisions of business organization law that are deliberately not addressed by this Model Law. There are three main reasons for this.

First, as discussed in the Preamble, the technological infrastructure of DAOs recognized by this Model Law allow them to meet certain legal requirements and achieve certain policy objectives by way of functional and regulatory equivalence. Such legal requirements, which are often enshrined in provisions related to financial disclosures or share transfers, are automatically met by the technological guarantees provided by a blockchain-based system and do not need to be specified by law. For example, a corporate statute may include a provision that a share should be annotated with relevant information to trace ownership when the share is transferred to another entity (e.g., a trust), but the inscription of the transfer on a public, Permissionless Blockchain makes this information transparent by way of its ordinary functioning. This is a functionally equivalent outcome, as this inscription on a Permissionless Blockchain provides another means for tracing ownership other than an annotation on the face of a share or an electronic record update. As it is anticipated that a jurisdiction interested in adopting the Model Law will also facilitate such functional equivalence, such an example has not been addressed in this Model Law. At the same time, some of the articles in the Model Law strive to achieve regulatory equivalence, and might therefore introduce new regulatory requirements that may either complement or supplement traditional regulatory constraints. For instance, the article related to formation requirements (Article 4) seeks to achieve regulatory equivalence with typical corporate registration requirements.

Second, this Model Law provides a high degree of discretion to DAOs in how they establish their organizational, governance and capital structure (Chapter 4). As such, issues such as limitations on the transferability and negotiability of tokens, criteria by which Members are excluded from DAOs, internal and external dispute resolution mechanisms and threshold requirements for By-Law amendments, among other topics, are beyond the scope of this Model Law and left to the individual discretion of DAOs.

Third, there are typical provisions of corporate law that concern transactions that have yet to materialize with respect to DAOs. These include Members' agreements, the substantial sale of the DAO's Off-Chain Assets, conversions into DAOs, mergers with DAOs and liquidation and dissolution. New legislation, such as the State of Wyoming's legislation on decentralized autonomous organizations, addresses these

provisions in the context of the jurisdiction’s own corporate law.⁴³ However, at this juncture, without more concrete examples of these transactions—or at least, efforts at achieving the same—the drafting of model provisions would be a largely speculative exercise and may ultimately not support the ends that Participants and Members seek to achieve through these transactions.

Article 16. CONTENTIOUS FORKS IN THE UNDERLYING BLOCKCHAIN—

In the event of a Hard Fork in the underlying
Permissionless Blockchain:

- (1) By default, the legal representation of the DAO remains on the Majority Chain and any Off-Chain Assets will belong to the DAO on the Majority Chain.
- (2) The DAO may choose to maintain legal presence on a Minority Chain if it expresses its intent to do so by Public Signaling, and in that case any Off-Chain Assets will belong to the DAO on the selected Minority Chain.
- (3) The DAO may liquidate its On-Chain Assets following a Hard Fork in order to move those Assets to the chosen chain.
- (4) Alternatively, the DAO may choose to split into multiple legal entities, each on a separate chain, if it communicates by Public Signaling:
 - (a) its intent to do so, and
 - (b) there is a definitive distribution of Off-Chain Assets between the Majority and Minority Chain(s).

⁴³ *Wyoming Decentralized Autonomous Organization Supplement*, Wyo. Stat. § 17-31-110 to 17-31-116 (enters into force on 1 July 2021) <<https://legiscan.com/WY/bill/SF0038/2021>> accessed 8 May 2021.

Commentary

Blockchains can undergo Hard Forks, as defined in Article 3(11). Multiple blockchain forks can coexist and the decision concerning which fork to use is a consensus-driven process that must be achieved without a definitive source of authority making the decision for Members and Participants. Ultimately, individual Members and Participants can decide which fork to subscribe to.

This presents difficulties for interfacing with persons and entities outside of the given blockchain, which expect one authoritative counterparty for their dealings. Hard Forks could cause confusion because they create multiple possible counterparties, where different instantiations of the DAO reside on different chains. This is not an issue for On-chain Assets, because they will be replicated on both forks, and therefore can be managed and disposed of on the respective chains. However, with Off-Chain Assets, which are scarce, third parties (e.g., governments, property registers, custodians, brokers, potentially insolvency professionals) interfacing with the DAO need to have one definitive counterparty that is recognized as having legal ownership of Off-Chain Assets and liabilities, as well as identified Legal Representatives for that counterparty. For example, if two DAOs replicated on competing forks were both to make a claim on the same piece of real property, it can be difficult to ascertain which of the two has a genuine and legitimate claim over this property. This Model Law makes the Majority Chain the default choice, since Minority Chains without significant support are typically not considered to be authoritative representatives of the view of the community of the DAO.

Usually, the Majority Chain can be fairly and quickly identified immediately after the Hard Fork. However, in the case of Contentious Forks, it is possible that the Majority Chain may not be immediately determined from the moment of the Hard Fork. Caution should be exercised in this transition period. If the Majority Chain is not obvious after the Fork, the following factors may be taken into account in order to determine which fork should be regarded as the authoritative Majority Chain:

- *Security*: The blockchain with the greatest hashing power in the case of a proof of work, or with the highest amount of deposits in the case of a proof of stake.

- *Applications, Services and Service Providers*: The blockchain that is recognized and accepted by a majority of ancillary services and service providers (e.g, trading protocols, exchanges, wallet providers, oracles, data gateways), tokens and applications.
- *Market Capitalization*: The blockchain whose Token is the most valued by the market.
- *Community Recognition*: the blockchain recognized by the majority of developers, thought leaders, end users and other Members and Participants.
- *Trademark*: the blockchain that is formally recognized by the entity holding the trademark (e.g., the Ethereum Foundation holds the Ethereum trademark).

Article 17. DAO RESTRUCTURING—

- (1) In the event that there is not a Contentious Fork and a DAO's Smart Contract is restructured through modification, upgrade or migration, it will retain its legal personality and limited liability only to the extent that:
 - (a) The new code of the DAO continues to fulfill all the formation requirements of Article 4;
 - (b) In the event of migration, where the DAO has to be associated with a new unique Public Address, proper notice is provided by way of Public Signaling.

Failure to meet these requirements will result in a loss of legal personality and limited liability effective at the time of restructuring.
- (2) The DAO restructured in accordance with subsection (1) will be the universal successor of the original DAO and inherit its rights and obligations.

Commentary

A DAO may modify, upgrade or migrate its Smart Contracts to resolve a software bug, augment capabilities, change operating procedure, meet legal requirements or for technical maintenance. Modifications are simple changes to the data in the DAO's smart contract, such as modifications of voting majority thresholds. Upgrades can be made through an existing function (e.g., via a proxy contract). Finally, migrations involve more substantial coordination, as entirely new Smart Contracts may be deployed and migrated to. For example, a new DAO could be constituted with the same membership distribution, and then the old DAO would vote to move all funds and legal personality to the new DAO.

There is an important distinction between upgrades and modifications on the one hand, where the DAO can still be identified through its unique Public Address, and a migration on the other, where its identifying Public Address has changed. This distinction implies that within instances of modification or upgrades, there should not be any ambiguity as to the validity of the upgrade or modification, so long as the DAO continues to conform with the requirements of its legal status. However, if a DAO migrates to a different Public Address, the DAO must provide clear Public Signaling to move legal personality and all assets and liabilities to the new Public Address.

An example of Public Signalling to help interpret Article 17(1)(b): A DAO plans to migrate to a different Smart Contract with a different, unique Public Address, but maintaining an identical distribution of control and ownership rights among the same set of Members. The Members of the DAO then pass a Proposal to such effect. If the Proposal is passed and proper notice is given on the DAO's website and social media accounts, then the legal personality of the DAO will be deemed to have passed from the predecessor DAO to the successor DAO without interruption. The original DAO will be deemed to have passed all rights and obligations to its successor.

Article 18. FAILURE EVENT—

In the case of a Failure Event:

- (1) Legal personality and limited liability are maintained to the extent necessary to protect DAO Members and Participants from personal liability.
- (2) A Failure Event may trigger liability on the Person(s) deploying or upgrading the DAO if that Person(s):
 - (a) acted in manifest bad faith; or
 - (b) engaged in gross negligence.

Commentary

The Failure Event provisions are analogous to directors' liability under corporate law. They are intended to address situations in which a person with decision-making authority in a DAO acts in bad faith or, through gross negligence, causes a technical failure that harms Members, Participants, or the general public. As with director liability, there is not an expectation that a person's decisions or actions will be perfect, but they must be taken with the best interests of the DAO in mind and fall within a reasonable range of possible decisions or actions.

After a Failure Event, legal personality and limited liability will typically be maintained in order to protect the interests of the DAO Members and Participants. For example, in the case of a hack, a person who can be said to have acted in bad faith or through gross negligence may face liability for losses incurred in the Failure Event, but DAO Members and Participants who simply took part would still be shielded by the DAO's legal personhood and limited liability.

Chapter 6

Miscellaneous Provisions

Article 19. APPLICATION OF GENERAL BUSINESS ORGANIZATION LAW—

The DAO will be governed by:

- (1) The By-Laws;
- (2) The Model Law, as adopted or transposed into domestic legislation; and
- (3) To the extent that any lacunae remain, general business organization law of the State that recognizes the DAO. Any ambiguity resulting from this application will be resolved in a manner that upholds the letter and objectives of the Model Law.

Commentary

There may be a few instances in which the By-Laws of a DAO and the Model Law are not able to address all of the organizational and governance issues that arise from the operation of a DAO. In such circumstances, the general business organization law of the State that recognizes the DAO may be used to address these lacunae. However, as general business organization laws are generally drafted with centralized organizations in mind, applying these laws may present their own difficulties. As a consequence, any such application of general business organization laws must only be done if the By-Laws and Model Law cannot be applied and any resulting ambiguity must be resolved in a manner that upholds the letter and objectives of the Model Law. These objectives can be found in the Preamble of this Model Law.

Article 20. TAXATION OF DAOs—

The taxation of DAOs recognized by this Model Law will be based on the following principles:

- (1) By default, any DAO recognized by this Model Law will be treated as a pass-through entity for tax purposes, with no entity-level tax accruing to the DAO. Any realized gains will pass through to the DAO's Members in proportion to their Token holdings.
- (2) Where a Member itself is not a taxable entity, such as another DAO, the realized gains allocated to such Members will pass to the first taxable person in the same manner as specified in Article 20(1).

Commentary

With regards to their taxation treatment, the distinction between the internet and cyberspace, as outlined by Lawrence Lessig, provides a useful framework to characterize the unique attributes of DAOs vis-a-vis digital entities hosted in the cloud.⁴⁴ While transactions occurring over the internet typically entail a clear correspondence with those of taxable entities with a real-world existence, a DAO cannot be conventionally connected to an agent or location on Earth. This is primarily due to the fact that its processes and procedures are predefined and deterministic, carried out by code existing in cyberspace. Furthermore, the emergence of blockchain-based anonymization techniques and decentralized exchanges compromise the enforcement of a regulatory framework for taxation akin to that of cloud-based agents. In that sense, David Shakow acknowledges that "the pure blockchain form does not work well for an entity under the IRC [United States Internal Revenue Code]".⁴⁵

⁴⁴ Lawrence Lessig, *Code: And Other Laws of Cyberspace, version 2.0* (Basic Books, 2006), 5.

⁴⁵ David Shakow, 'The Tao of The DAO: Taxing an Entity That Lives on a Blockchain' (2018) 160 Tax Notes 929, 937. Insertion is ours.

Many questions regarding the taxation of DAO remain unaddressed by the tax laws of national jurisdictions. These questions, highlighted by Shakow, include the classification of DAOs as entities under tax law, the tax residence of DAOs, the level at which investments in DAOs should be taxed (entity-level or Member-level), the taxation of Members liquidating their investment, the filing of tax returns and the treatment of Hard Forks as taxable events for Token-holders who receive Tokens from the forked chain. In addition, Airdrops as defined in Article 3(4) pose additional unresolved complexity for the tax laws of national jurisdictions. Despite the difficulties in achieving regulatory equivalence, taxation is material for DAOs to recognize the social and environmental costs inherent in the operation of DAOs that, in the absence of taxation, would be imposed on other members of society.

As the tokenomics of DAOs imply that the value of a DAO is reflected in the value of the Token(s) issued by the DAO or governing the DAO, making DAOs pass-through entities for tax purposes seems to be the correct approach. As such, the responsibility of paying tax on gains should fall on Members and Participants, because in the case of unregistered DAOs, which this Model Law addresses, only Members and Participants are anchored in a jurisdiction. Accordingly, each Member or Participant is solely responsible for declaring their financial stake in a DAO, if required by the jurisdiction in which each Member or Participant is a tax resident. It should be the sole obligation of the Members or Participants to declare their capital gains on the disposition of DAO-related Tokens or similar transactions.

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