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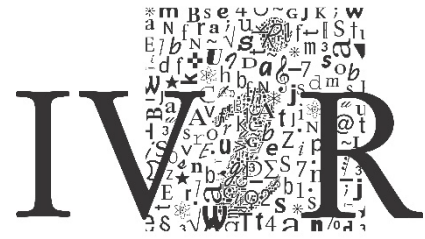
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UNIVERSITY OF AMSTERDAM



## DAOS: LEGAL AND EMPIRICAL REVIEW

Stefanie Boss

Amsterdam Law School Legal Studies Research Paper No. 2023-27

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# DAOS: LEGAL AND EMPIRICAL REVIEW

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## **Abstract**

The latest research on decentralized autonomous organizations (DAOs) revolved around the legal issues and the 'picture-imperfect' reality of DAOs. This article aims to address and go beyond those established problems by empirically reviewing the concept of DAOs and the necessity of a legal framework thereto. The first element of the article contains a critical review of the terms decentralized, autonomous, and organizations, which are not as absolute as they are presented to be. These discrepancies lead to the conclusion that there is no universally accepted definition for DAOs. The results lead to three recommendations for further definition development: (1) a definition that is based on the concepts of decentralization, autonomy, and organization, though be it in a way that corrects for the established discrepancies; (2) a negatively formulated definition that excludes organizations that do not meet a selection of criteria related to DAOs, or (3) a category-wise definition. The second element of the article builds upon those findings by displaying the needs and expectations of the DAO community for a legal framework. The findings suggest that there is a need for DAO-specific legislation to provide legal certainty and protection for DAOs, particularly for smaller DAOs. It identifies four rationales for legislation: operating in the traditional corporate world, legal protection, protection for smaller DAOs, and guidance for DAOs. It also highlights the different opinions on the extent of the legislation, ranging from no binding new legislation to new legislation with benefits for DAOs. Additionally, the article provides recommendations for the nature of (new) legislation, such as loose and future-proof legislation, and a solid and inclusive definition. Lastly, the article dives into the topics that the DAO community desires legislation on, which include tax, treasury and tokens, employment relations, dispute resolution, securities qualification, limited liability/legal personality, forking, voting, use of smart contracts, dissolution, disclaimer, and fiduciary status. It offers recommendations for these topics based on provisions from the COALA Model Law for DAOs and the DAO-specific legislation in Vermont, Wyoming, Tennessee, Utah, and the New Hampshire draft bill. These recommendations can inform the development of DAO-specific legislation, and provide guidance for DAOs on how they should shape themselves in accordance with legal requirements.

## INTRODUCTION

Little did the world know in 1983, that the introduction of the internet would lead to revolutionary changes in the way society functions. Nowadays, the internet has a significant influence on the means through which we communicate with other individuals. One prominent result of that influence is the advancement of the notion of autonomy and the (global) network society: a society that is constructed around personal and organizational networks powered by borderless digital networks and communicated by the internet. The internet and related technological developments form the infrastructure that is necessary to sustain this type of society, in the way that the electrical engine was necessary to sustain the industrial society back in time. Regarding individualism, this development does not necessarily imply the end of community or place-based interaction, but it implies a shift towards reconstructing social relationships. The aim is now to build community-like relationships that include strong cultural and personal ties based on individual interests, values and projects.<sup>1</sup>

Over the past years, these developments have reached further and have now entered the corporate domain. Technology and business have crossed paths in several ways, including those of online sales, online data storage, and working remotely, but the development did not end there. With blockchain technology entering the picture, the door opened for new manners of data storage, contracting and networking. It was now possible to store and record transactions on a medium that was more transparent and less susceptible to fraudulent behavior, because once something is recorded on the blockchain, it is public and difficult or even impossible to modify. This technology forms the basis of smart contracts: these are automated computer programs that are stored on a blockchain, that enable the terms of a contract to execute upon the occurrence of some event, without external intervention. Since these contracts execute themselves, they eliminate the need for a third party or human judgment in the execution phase, leading to unbreakable and unbreachable contracts. One important feature is that this rigid nature of these contracts does not mean that adjustment is not possible: the parties creating the contract can insert provisions that allow for the adjustments of terms by voting or through the occurrence of pre-programmed triggers.<sup>2</sup> This opens the door for organizations to base their contracting operations, or even their entire organizational structures on these 'contracts'. This is where the aforementioned social influences and the corporate world cross paths: through the emergence of decentralized autonomous organizations (i.e., DAOs). Over the past few years, DAOs have been subject to substantial growth: the number of DAOs increased from 700 organizations in May 2021, to 6000 organizations in June 2022. Furthermore, there were approximately 1.6 million holders of interest in DAOs in 2021, and the value of their (crypto) funds entailed around 16 billion US Dollars at that point in time.<sup>3</sup>

Decentralized autonomous organizations are – theoretically speaking - blockchain-based systems that enable people to coordinate and govern themselves mediated by a set of self-executing rules deployed on a public blockchain (smart contracts), and whose governance is decentralized (i.e.,

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<sup>1</sup> Manuel Castells, *The impact of the internet on society: a global perspective*, 19 CHANGE 127 (2014).

<sup>2</sup> MICHÈLE FINCK, BLOCKCHAIN REGULATION AND GOVERNANCE IN EUROPE (2018).

<sup>3</sup> Gail Weinstein, Steven Lofchie, & Jason Schwartz, *A Primer on DAOs*, HARVARD LAW SCHOOL FORUM ON CORPORATE GOVERNANCE (2022), <https://corpgov.law.harvard.edu/2022/09/17/a-primer-on-daos/>.

independent from central control).<sup>4</sup> Essentially, the smart contracts (the by-laws) replace the notary statutes in traditional organizations, so that these rules can be executed automatically, rather than through interference of a (central) management board. This implies autonomous function, because there is no intermediary required to have decisions executed. Furthermore, the feature within smart contracts that allow for adjustments thereto through voting, allows for a further decreasing necessity of a (central) management board. Any decision, whether it is a code adjustment or a choice to make a purchase, can now function through member voting. Whether or not the DAO uses voting as an addition to the automatized smart contract, the number of votes that every member has based on their membership, and whether voting directly takes place on the blockchain (i.e., on-chain), shall be established within the by-laws, so that the risk of arbitrary decision-making is minimized. This result can best be achieved by on-chain voting, because that way, every vote is recorded on the (public) blockchain, so that the process is fully transparent and eligible for verification by stakeholders. This can still be achieved through off-chain voting, but in that case, there is more reliance on the individual that converts the voting results to the blockchain. This democratic process implies decentralization: every member has the right to vote for any decision made by the organization, so that there is no centralized power within the network- at least, that is the perception.

One of the main drivers for setting up this type of organization, is to achieve a mutual goal together with a community. This is where the social aspect shines through the most: since every member has a vote in every decision made within the organization, they feel more (personally) valued and the trust within the business path of the organization grows. Furthermore, the use of tokens as membership definers allows for a phenomenon called rage quitting, which means that members can step aside and leave the organization whenever they want. This contributes to downside risk protection and a feeling of individualized control over the contributions that the individual makes toward a project.<sup>5</sup> Since it is possible to step away whenever the community's decisions or operations are not in line with the interests and values of the individual anymore, it rightly fits within the social developments set out above.

However, the first empirical results are showing some cracks within this picture-perfect, theoretical view of DAOs. In reality, such a democratic nature is less absolute, since members do not vote on every proposal that they can technically vote on.<sup>6</sup> This could diminish the idea of decentralization, and shall therefore be subject of further empirical exploration. Therefore, the first aim of this article is to empirically determine the current landscape of DAOs, in order to have a realistic view of this phenomenon before diving into the legal questions at hand: are they indeed as decentralized and autonomous as they claim to be? And if not, what are the motives? Are the motives justifiable, or are they problematic? And how can these findings affect the definition of DAOs, that then affect the legislation-related debate on DAOs?

This last question is directly tied to the second aim of this article: displaying the legal needs and expectations of the DAO community. This question stems from the clear message that current research entails, namely that DAOs encounter substantial risks due to legal uncertainty. Wright

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<sup>4</sup> Samer Hassan & Primavera De Filippi, *Decentralized autonomous organization*, 10 INTERNET POLICY REVIEW 1 (2021).

<sup>5</sup> Aaron Wright, *The rise of decentralized autonomous organizations: Opportunities and challenges*, 4 STAN. J. BLOCKCHAIN L. & POL'Y 1 (2020).

<sup>6</sup> Cristiano Bellavitis, Christian Fisch & Paul P Momtaz, *The rise of decentralized autonomous organizations (DAOs): a first empirical glimpse*, AVAILABLE AT SSRN (2022).

states that for DAOs to reach widespread (mainstream) adoption, they need to overcome legal challenges and limitations. A first concern is that without legal protection, DAO members face the risk of being jointly and severally liable for the DAOs' actions and debts. Furthermore, there are substantiated concerns about the qualification of DAO membership/governance tokens under securities laws: it is at this point often unclear whether these qualify as securities, and if so, as which type.<sup>7</sup> Researchers have already observed that some DAOs have tried to diminish these risks and uncertainties by using existing legal wrappers such as foundations or corporations. However, these do not always fit their modus operandi. A notable trend that followed was that of jurisdictions trying to address this issue by creating DAO-specific legislation: the most famous examples are the Vermont Blockchain-based LLC, the Wyoming DAO-LLC and the Tennessee DAO-LLC. These legal acts recognize DAOs as legal entities, providing them with the certainty that comes with limited liability.<sup>8</sup> There are also signs that there are different approaches to this trend: Utah, for instance, displayed a different type of legislation that is based on the COALA Model Law for DAOs, instead of trying to fit DAOs into an LLC-form.<sup>9</sup>

This article will explore which legal concerns are present under the DAO community, and what types of solutions thereto they desire. This is especially relevant in the light of the current legal landscape, where jurisdictions are using different approaches that address different needs and expectations. The empirical results include answers to why they desire legal clarity or legislation, to what extent it would be useful to them, what nature that legal clarity or legislation should have, and what topics they desire legal clarity or legislation on, and are generalizable for any jurisdiction. The last aim of this article is to address some of these results by proposing recommendations for legal provisions on these topics, through the use of examples from existing legislation and the COALA Model Law. The display of these results and recommendations function as a starting point for a critical review on the current legal frameworks, and potentially for the creation of a new frameworks.

The article is structured as follows. It will start off with a brief elaboration on the (empirical) methodology used (§I). Thereafter, the second chapter will provide a brief overview of the international legal horizon for DAOs (§II). The third chapter will dive into the empirical results on the current DAO landscape, and what a proper definition could look like (§III). The last empirical chapter will dive into the results on the desirability of a legal framework, and will present recommendations for legal provisions on the identified topics (§IV). This article will finish with conclusions in the form of a short recommendation list (§V).

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<sup>7</sup> Wright, *supra* note 5.

<sup>8</sup> Gail Weinstein, Steven Lofchie, and Jason Schwartz, *supra* note 3.

<sup>9</sup> The Model Law for DAOs is available at <<https://coala.global/reports/#1623963887316-6ce8de52-e0a0>>.

## I. METHODOLOGY

This article stems from a report on DAOs and their (Dutch) legal framework. Therefore, the methodology is based on the development of the said report, which was based on a combination of two qualitative research methodologies – expert interview-based empirical methodology and theoretical literature review. To perform an inductive analysis in the following phases have been followed:<sup>10</sup> (1) analyze literature on the definition of DAOs and desirability and effectiveness of a legal framework for DAOs; (2) conduct a first interview round on the desirability and effectiveness of a legal framework and analyze the empirical data to establish within- and cross-case patterns and themes; (3) conduct a second interview-round for definition development and analyze the resulting empirical data through the establishment of within- and cross-case patterns and themes; (4) Analyze literature in order to establish both the international and the Dutch legal framework; (5) conduct a third round of interviews to gather data on the Dutch Foundation; (5) analyze and synthesize the data and compare it to literature; (6) produce conclusions and recommendations.

Potential experts have been selected and approached based on an analysis of the listed DAOs and their respective members/founders on Crunchbase and comparable platforms. This search has been complemented by a LinkedIn inquiry. This search resulted in a list of twelve experts:

Expert	Role
1	Co-founder of a DAO, former consultant
2	DAO member and ambassador
3	Software developer and DAO member
4	Lawyer specialized in blockchain
5	Co-founder of a DAO
6	Blockchain tool designer and DAO member
7	DAO advisor with respect to governance and business development
8	Core contributor to a self-sovereign organization, software-engineer
9	Co-founder of a DAO
10	Co-founder of a DAO
11	Chief legal officer of a DAO
12	DAO governance and coordination specialist/advisor

*Table 1: Overview of DAO experts*

The empirical data has been gathered through open-ended expert interviews. The interviews were conducted based on open-ended questions, and lasted between 30 and 60 minutes. For each interview, confidentiality and consent for transcription have been established, whereafter the transcripts have been anonymized.

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<sup>10</sup> Kathleen M Eisenhardt, *Building theories from case study research*, 14 ACADEMY OF MANAGEMENT REVIEW 532 (1989).

## II. INTERNATIONAL LEGAL HORIZON

Before diving into the empirical results, it is relevant to paint a picture of the current (international) legal framework. A first observation is that it is far from coherent at this point in time. As observed in the introductory remarks, there are a few jurisdictions that have incorporated legislation that deals with DAOs, though they differ substantially. Furthermore, it is important to take note of other types of non-DAO-specific legal wrappers that are used to form DAOs. This chapter aims to provide a brief, non-exhaustive, overview of the commonly used legal structures that apply to DAOs.

### A. DAO-SPECIFIC LEGISLATION

A few U.S. states have introduced DAO-specific legislation. Vermont has taken the lead by introducing the Vermont Blockchain-based Limited Liability Company in 2018.<sup>11</sup> Somewhat later in time, Wyoming followed by introducing the Wyoming DAO Supplement in 2021.<sup>12</sup> Subsequently, Tennessee introduced its version of the DAO supplement in 2022, introducing some minor – but, relevant – modifications to the Wyoming version.<sup>13</sup> Most recently, Utah adopted the Decentralized Autonomous Organizations Amendments (H.B. 357, articles 48-5-101 to 48-5-406 of the Utah Code Annotated 1953), which will be effective from January 2024 onwards.<sup>14</sup> The road does not end here: New Hampshire is also working on a similar bill, though it is still in progress.<sup>15</sup>

### B. DAO MODEL LAW

In addition to enacted legislation, there is a model law that functions as an outline for future DAO legislation: the COALA Model Law for DAOs.<sup>16</sup> The provisions therein intend to define a flexible framework that is adapted to the characteristics of DAOs, so that any DAO that complies with the set of practices defined in the model law will be granted legal existence and acquire legal personality in the states that have this framework adopted.<sup>17</sup> The Model Law is currently gaining

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<sup>11</sup> V.S.A. (VT) s. 4171 – 4175 (U.S.).

<sup>12</sup> Decentralized Autonomous Organizations Supplement (WY) s. 17-31-106 (U.S.).

<sup>13</sup> Tennessee Code (TN) s. 48-250-104 (U.S.).

<sup>14</sup> Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-101 to 48-5-406 (U.S.).

<sup>15</sup> New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:1 to 301-B:20 (U.S.).

<sup>16</sup> The Model Law for DAOs is available at <<https://coala.global/reports/#1623963887316-6ce8de52-e0a0>>.

<sup>17</sup> Florence Guillaume & Sven Riva, *Dao, Code Et Loi-Le Régime Technologique Et Juridique De La Decentralized Autonomous Organization (DAO, Code and Law-The Technological and Legal*



importance, because the text of the Utah and New Hampshire DAO bills are showing high similarities with the text of this Model Law, therefore indicating that they are based thereon.

### C. OTHER APPLICABLE LEGISLATION

Apart from DAO-specific legal forms, DAOs also utilize other types of corporate forms. This entails a wide variety of possibilities, varying from basic LLCs in Delaware or the Marshall Islands to other constructions such as (offshore) foundations – often to be located in Switzerland, the Cayman Islands or Panama - associations, unincorporated nonprofit associations, ITA-schemes (Malta), algorithmic companies (Monaco), joint ventures or trusts.<sup>18</sup>

Furthermore, the relevance of other types of legislation should not be disregarded. Even though many authors focus on legislation on the legal structure of the DAO itself – which is, of course, the very start of the process – the next steps in the process regard legislation that applies to the functioning of the DAOs and their activities. This can concern general tax law, employment law, financial law, and legal frameworks for the recognition of smart contracts, among which the U.S. Lummis-Gillibrand Act (in progress) is highly relevant.

### D. THE AGENT-CENTRIC BUSINESS MODEL AS AN ALTERNATIVE

An alternative solution to the lack of a legal wrapper, is the use of the agent-based model. If a legal wrapper for the full organization has not been chosen by a DAO, it is possible to use separate legal entities for interaction with counterparties that do not want to interact directly with a DAO, or with smart contracts in general. These dedicated legal entities are considered agents. According to an expert, this is a viable solution, because the legal entity can be adapted to the use case in question.

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*Regime of Decentralized Autonomous Organizations*), REVUE DE DROIT INTERNATIONAL D'ASSAS (RDIA) (2021).

<sup>18</sup> Among which: Sven Riva, *Decentralized Autonomous Organizations (DAOs) in the Swiss Legal Order*, in YEARBOOK OF PRIVATE INTERNATIONAL LAW VOL. XXI-2019/2020 601 (2021); Salomé Bernhart, *Costs and Benefits: Thinking Through Legal Structures for DAOs*, PRIMEDAO (2022), [https://primedao.mirror.xyz/Ddzudtmg1wCd6H\\_EVg63V0QYwSUfkgLtGsJfV3\\_rvR0](https://primedao.mirror.xyz/Ddzudtmg1wCd6H_EVg63V0QYwSUfkgLtGsJfV3_rvR0); Biyan Mienert, *How Can a Decentralized Autonomous Organization (DAO) Be Legally Structured?*, LEGAL REVOLUTIONARY JOURNAL LRZ (2021); Gail Weinstein, Steven Lofchie, and Jason Schwartz, *supra* note 3.

### III. PRELIMINARY THOUGHTS: EMPIRICAL EVIDENCE OF DAOS

In order to be able to understand the needs and expectations of the DAO community, one must first understand the landscape of DAOs. Due to the emergent and broad nature of the concept, there has been a lot of debate on what the term 'DAO' actually entails. Since several experts addressed this fundamental pain point as well – without understanding DAOs, it is difficult to design a proper legal framework for them – this chapter aims to set out the empirical findings of what DAOs are.

#### A. THE NECESSITY OF A PROPER UNDERSTANDING AND THE FITTING APPROACH

Several experts desire a clear definition that can properly set legitimate DAOs apart from *scams* - or differently phrased: organizations that use the term *DAO* as a marketing tool, while not truthfully qualifying as such. This could eventually effectuate broader societal justification and understanding, as well as avoidance of a bad reputation for *DAOs* as a concept. In their opinion, this necessity follows inherently from DAOs' interrelatedness with the crypto space, which is often perceived as a speculative space with a high degree of uncertainty involved.

However, they also stress that the development of a definition should be approached with caution: the concept is highly emergent, meaning that the scope changes over time. Therefore, a frequently fetched starting point is that of its self-explanatory name, which will likely not change in the future. The relevant sub-concepts thereto are (1) decentralization, (2) autonomous, and (3) organization. They furthermore suggest following either an explanatory or a broader, boundary-based approach, depending on how future-proof the definition should be. This chapter will attempt to develop ideas for both approaches.

#### B. THE GOAL OF A DAO

According to an expert, the difference between legitimate DAOs and *scams* can for the most part be found in the practical operations of the DAO in question: there should be a distinction between the use of the structure merely for – for instance - community engagement or record-keeping purposes, and the use of the structure for the entire organization. This view is substantiated by the observation that while both these use cases can identify as or name themselves a DAO, only the latter use case leads to organizational implications. The expert, therefore, concludes that this should lead to the core criterion being the existence of organizational implications as a result of the use of the structure, rather than merely using the name or identifying as such. He affirms that using the structure or identifying as such should therefore not be sufficient to be qualified as a legitimate DAO, or that there should at least be a distinction between the two use cases. Another expert extends this view by indicating that there should be a distinction between merely being self-sovereign and qualifying as a DAO. He indicates that self-sovereign governance can still be relatively centralized, while using a DAO structure for the organization as a whole implies a focus on decentralization. This leads to the conclusion that *organizations that do not experience organizational-broad implications as a result of using the DAO structure, and/or that do not focus on decentralization should not be qualified as DAOs.*

## C. NOTION OF DECENTRALIZATION

The extent of decentralization explains a large chunk of the deviation between DAOs. While the self-explanatory name of the concept implies decentralization, which is most prominently understood in the context of governance, empirical evidence indicates that this premise should be understood as relative, rather than as absolute.<sup>19</sup>

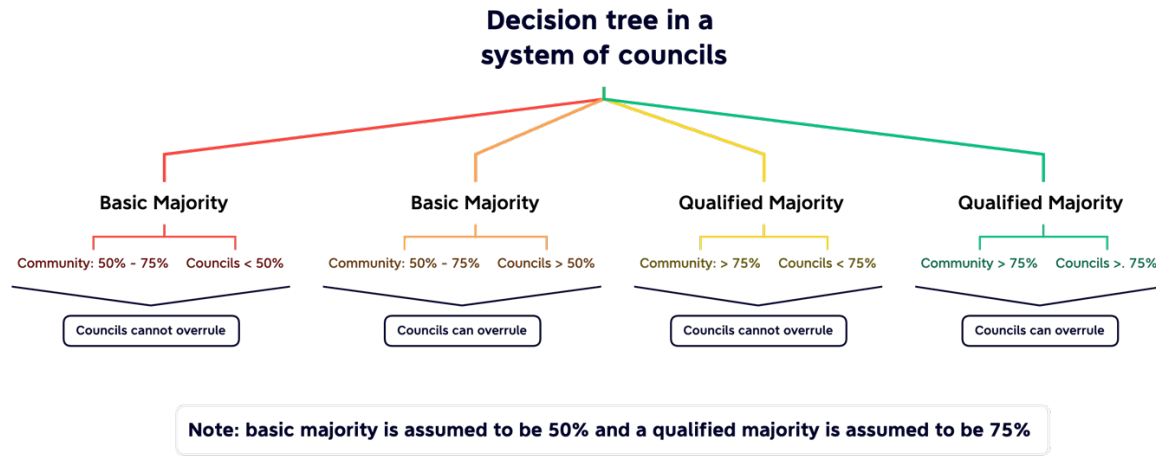
### I. HIERARCHY

The 'basic' understanding of the premise is that DAOs function without central control or hierarchy – a fully flat organization - but there are numerous examples of DAOs that use a governance model that leans towards a higher degree of centralization. For example, some DAOs use a governance model in which councils can overrule community decisions on exceptional occasions. Another example is a situation where the governance model contains the use of sub-DAOs that take care of specific subject matters that require more expertise. Even though those sub-DAOs are installed and voted for by the entire community and the appointed members have a short period of functioning, this constitutes a form of centralization. Lastly, several DAOs make use of 'traditional' management titles, such as CEO, CFO, etcetera, which could – to the outside world – send out a signal that there might be centralized power with these titled members. There can be numerous reasons for the choice to take a more centralized approach: experts named reasons such as the ability to overcome scaling problems, the increase of the efficiency of the voting process, the prevention of mistakes as a result of community decisions, and exuding legitimacy towards society and counterparties by using titles that they are familiar with.

At the first glimpse, such centralization can be perceived as problematic, but the following nuance can put the phenomenon in perspective. When having a closer look, this type of centralization is different from the centralization occurring in traditional organizations. In traditional organizations, there exists an ex-ante type of centralization, where the (centralized) board makes decisions on behalf of the organization. Generally, the shareholders can solely object or decide to provide a discharge of liability afterward. The centralization that occurs in DAOs that use the governance system with councils, however, is arguably the opposite: ex-post centralization. The centralized 'power' to overrule decisions occurs after a decentralized community vote has taken place. Furthermore, this overruling can only go through if there is a sufficient majority within the group of councils. This system is therefore more of an ex-post type of centralization, where the community's views will presumably be valued to a higher extent than in an ex-ante type of centralization, since the community's opinion is clearly expressed through their voting round and would (in all likelihood) only be overruled in exceptional cases, rather than in every decision made. The following graph provides a visual representation of how such a council-based system could be realized.

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<sup>19</sup> As earlier suspected by Vosshmgir: SHERMIN VOSHMGR, *TOKEN ECONOMY: HOW THE WEB3 REINVENTS THE INTERNET* (2 ed. 2020).



*Graph 1: decision tree in a system of councils*

Sub-DAOs address a different issue. Sub-DAOs are smaller groups of community members that center around an area of expertise, such as human resources, communication services, daily protocol maintenance, decision execution or finance/treasury. Experts argue that this can improve the efficiency of the organization, as well as the activeness of the members, because it means that members that do not own that expertise delegate their voting power to the members from that particular sub-DAO. Even though it cannot be denied that decentralization is compromised to a certain extent through this system, it can form the solution to the often-observed issue of members not living up to their voting responsibilities.<sup>20</sup> To avoid such a contradiction, sub-DAOs often put decentralization safeguards in place, which include: electing sub-DAO members through a top-DAO community vote; determining the sub-DAO's budget through a top-DAO community vote; requesting regular reports on the operations of those sub-DAOs; restricting the period of mandate (these can for instance be limited to a few weeks or months); requiring a top-DAO community vote to approve of a roadmap for every mandate period; require a top-DAO community vote for any proposed changes to that roadmap and request the sub-DAO to be accountable for holding on to that voted-upon roadmap. Furthermore, experts argue that this does not decrease the extent of transparency and openness, since those sub-DAOs have the same characteristics as the top-DAOs. Given these safeguards, the improved efficiency, and the fact that it can form a solution, it remains debatable whether the sub-DAO structure should be perceived as a harmful type of centralization: it could very well be a realistic solution to the obstacles that the goal of decentralization brings to the table.

## II. INFLUENTIAL MECHANISMS

Another type of centralization that can be observed is the influence of the core members or core contributors. Whereas the previous types of centralization are arguably intentional, this type can be considered unintentional, being a result of either the lenience of (other) members or a mistake in the design of the voting procedure. Several experts point out that in practice, specific people within the network of a DAO can have comparably much influence on either the members' opinions

<sup>20</sup> Bellavitis, Fisch, and Momtaz, *supra* note 6.

or the decision-making process in itself. They describe two ways in which this can be observed. The first way comprises the situation in which a member in particular has gained much trust from the community, which is arguably an informal or soft type of power. In such a case (1) votes will often be delegated to this member, (2) opinions of this member are followed relatively often, or (3) proposals of this member are accepted relatively easily. Account should be taken of the fact that delegation is only possible if the operating agreement of the DAO allows for delegation, but the other two expressions of the situation can occur in any DAO.

The second situation that they describe relates to the voting system, which is a hard/formal type of power. When a member has bought a substantial number of tokens in a DAO with a token-weighted system (1 token, 1 vote), this member can simultaneously gain substantial voting rights, obtaining relatively much power within the organization. Theoretically, such a gathering of power cannot occur in a fully democratic system (1 member, 1 vote), but experts and literature indicate otherwise. If only a solid core of members votes on proposals, while the others only passively participate in the DAO as they either consistently delegate their voting power to an individual in a solid core group of members or do not vote at all, this core will eventually have substantial power over the decisions made within the DAO.<sup>21</sup> This type of centralization should not be disregarded, because it could harm the decentralized and participatory nature of DAOs. Some DAO members share this concern, while others would like to act on this concern by including democratic (1 person, 1 vote) voting, an obligation to participate in voting procedures, or both, to diminish this unintentional centralization.

### *III. KEYHOLDER / EXECUTOR CENTRALIZATION*

A last type of centralization that should be borne in mind, is the centralized power that lies with the keyholder and the executor of community decisions. The term keyholder refers to the holder of the key that allows for changes in the underlying smart contract and/or the treasury. Several experts indicate that the person who could execute changes to the smart contract has specific centralized power, because this person has access to these generally automatized and locked protocols. Therefore, there is centralized power to change the protocol without the need for a community decision. This can furthermore lead to centralized power concerning the treasury, since this person can (technically) spend the treasury by own discretion rather than by community approval. This is an active risk, and diminishes the absolute meaning of decentralization. Furthermore, the executor of community decisions has centralized power by having a final say in whether he/she will perform the actions necessary to obey the decisions. Even though the first intuition would be that they would have to obey the decisions, because legal enforcement would be an option, this is not necessarily the case for every DAO. Experts indicate that there are two possible difficulties regarding legal enforcement. First, if the executor acts under a pseudonym/anonymously – something that blockchain technology allows for – it could be highly difficult to ever find the actual identity of this person, let alone to sue them for disobeying the smart contract that dictates that he/she should execute those decisions. Experts stress that this is the biggest pain point. Second, DAOs are – at least at this point – not very familiar with legal actions yet, so that a threat to sue as an incentive for obeying decisions is not always effective. This has on the one hand to do with the fact that a natural or legal person shall initiate such an action, while in many states there are still uncertainties around the legal status of DAOs. On the other hand, for a natural person to be able to sue a DAO, this person needs to own governance tokens and the court in question shall need to recognize the DAO as such. These points, therefore, result in a

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<sup>21</sup> *Id.*

situation where the person who shall obey the decision could realize that DAOs without legal personality can face difficulties with initiating or being involved in legal actions. However, the pending Ooki DAO case can make some notable changes to this point of view. In this potential example-setting case, the court allowed the issuing of summons by providing a copy of the summons and complaint through Ooki DAO's Help Chat Box, with contemporaneous notice by posting it in the Ooki DAO's Online Forum.<sup>22</sup> With such possibilities making it easier to sue a DAO, the risk of a court case can notably increase due to the lower burden of formalities thereof, in turn creating a higher incentive for keyholders and executors to obey.

#### IV. PROGRESSIVE, RATHER THAN ABSOLUTE DECENTRALIZATION

The presented empirical results show that decentralization is not always as absolute as it is promised to be: gradations are possible.<sup>23</sup> Furthermore, the concept of decentralization is dynamic, since the extent thereof is not permanent in each case. DAOs that are still in their starting phase could be more centralized at the beginning to ease the process of becoming a functional DAO, and will thereafter delegate an increasing amount of power to the community. This phenomenon can also be described as progressive decentralization.<sup>24</sup> While a project might not be qualified as a DAO from scratch, it could eventually change direction and eventually qualify as such, as confirmed by several experts.

To provide a conclusion on how this aspect should be defined: decentralization is – all in all – a key selling point of DAOs as a form of governance, and it can be defined as a '*peer-to-peer-based decision-making process*', in the context of peer-to-peer meaning a network of equals that communicate and make decisions without a (centralized) intermediary. However, requiring absolute decentralization is incorrect at the current point in time. There should be room for a certain extent of deviation, namely that of progressive decentralization: if the DAO in question shows progress in the decentralization process, and keeps full decentralization as the ultimate goal, it would be wrong to disqualify it from the definition. Therefore, a formulation such as essentially or progressively decentralized can be a solution to fairly extend the scope of the definition of a DAO.

#### D. NOTION OF AUTONOMOUS: DIGITAL / BLOCKCHAIN-BASED FUNCTIONING

According to an expert, autonomous functioning refers to the extent to which the operations of DAOs can function without intermediation and are driven by blockchain technology: the more the operations of a DAO take place digitally or on the blockchain, the more autonomous it functions. At the first glance, this implies a fully on-chain structure, where every action is recorded on the blockchain. This can contain actions such as votes, transactions, and changes to the code. The upside thereto is that a fully on-chain structure provides for full transparency and automatization, which is important for the members, but also for external stakeholders and potential contracting

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<sup>22</sup> Ooki DAO v. CFTC, (2022).

<sup>23</sup> This finding has been acknowledged in literature written by Voshmgir earlier on: VOSHMGIR, *supra* note 19.

<sup>24</sup> WORLD ECONOMIC FORUM, *Decentralized Autonomous Organizations: Beyond the Hype*, (2022).

parties in understanding and monitoring any decisions, changes and transactions made within the organization. However, in reality, at least a part of the activities is still executed off-chain, meaning that these are not directly recorded on the blockchain. Experts mention that for instance, many DAOs still make use of Snapshot for voting, which is an off-chain voting tool. One given reason to use an off-chain tool is cost-related: when voting is conducted on-chain, one vote generally costs a fraction of your token, while with off-chain voting, this is not the case. Another reason is that on-chain transactions can only be executed for cryptocurrencies: if traditional currencies such as the U.S. Dollar shall be used, this transaction is not directly executed on-chain. Yet another observative note is that more DAOs are trying to move their operations toward the physical world. Examples such as FriesDAO and CityDAO aim to buy physical assets and to - at least partially - operate in the physical world. Therefore, it is unrealistic for such DAOs to entirely operate online or on-chain, as some of their activities will likely include offline purchases or contracts.

In addition, there are notable differences between member-managed – or participatory - DAOs and fully algorithmic DAOs. While for both types, the underlying smart contract indeed determines most of the processes that will eventually determine the direction of the DAO for at least a vast majority of DAOs, there are several nuances to be placed. An expert explains that in member-managed DAOs that use community decision-making, especially when off-chain voting is used, automatization is compromised to the extent that such off-chain voting processes take place and should then be implemented on the blockchain afterward. Furthermore, the human component is still of importance in the case of on-chain voting and the execution is often still dependent on the executor. Therefore, this element can be a source of debate within member-managed DAOs. Experts nonetheless indicate that regardless of that participatory nature, it should be the DAOs' goal to strive for optimized autonomous and automatized functioning. Algorithmic DAOs, on the other hand, are perceived to have the opposite starting point: even though community voting can occasionally be required by the operating agreement, the starting point of the operations of that DAO can be found in automated transactions. The expert points to the definition of automated transactions in the Wyoming UCC (40-21-102-a-ii): '*A transaction conducted or performed, in whole or in part, by electronic means or electronic records, in which the acts or records of one (1) or both parties are not reviewed by an individual in the ordinary course in forming a contract, performing under an existing contract of fulfilling an obligation required by the transaction*'. Given this context, it is relevant to allow both types of DAOs to fit within a definition thereof, regardless of their choice for a participatory or algorithmic nature.

Lastly, experts stress that building on blockchain technology is expensive, and so is it to maintain. This coheres with the observation of off-chain tools being less costly than on-chain tools. Additionally, it is highly difficult to change the properties of the code afterward, so there is hesitance toward fully implementing blockchain at the beginning of a project. This holds the more for DAOs that need some fluidity due to their nature, which is the case when the operations will differ over time.

As a conclusion to the 'autonomous' element of the definition: the focus should lie on the goal, rather than on the absoluteness of the concept of 'autonomous functioning'. A progressive element, as with decentralization, is desired by many experts. They state that even though most DAOs do not fully rely on blockchain from the very beginning for cost-related or efficiency-related reasons - blockchain is still known for sometimes being slower than off-chain registration of transactions – the goal should always be to work towards full autonomous functioning. An expert also proposed the requirement of the autonomous (blockchain-based) software being the ultimate form of governance for the DAO: it should not merely govern one aspect of the DAO, but it should where the (legally binding) decisions are made and/or where the decisions that are made within the DAO are practically executed. Therefore, the best way to describe 'autonomous' is the following: '*the*

*community governing itself by progressively relying on rules that are rooted in blockchain technology.'*

#### E. NOTION OF ORGANIZATION

The last element in the self-explanatory name of the DAO is 'organization'. As all experts agree upon, this element does not cause much debate: it can be understood as the requirement that the DAO should have somewhat of a structure. This does not necessarily imply a specific (legal) form, but it mostly focuses on whether the DAO in question is more than just a spontaneous group of individuals. This can easily be achieved by, for instance, having regular meetings or the use of tokens to register members. This view is in line with the actual meaning of the word organization (Cambridge Dictionary): '*a group of people who work together in an organized way for a shared purpose*'.

#### F. ALTERNATIVE DIFFERENTIATIONS

Experts demand that besides focusing on the core characteristics, it is also relevant to evaluate other types of differentiations, as there are many different types of DAOs. Even though the overarching name 'DAO' implies a specific corporate form, this is not the case in practice. The World Economic Forum has tried to categorize DAOs into 9 different categories (Functional, Governance, Task, Investment, Philanthropic, Special Purpose Acquisition DAO, Production, Community, and Flashmob).<sup>25</sup> Furthermore, they suggest differentiations in terms of size (measurable by units such as community membership, the number of token holders, treasury size, total value of locked digital assets or token market capitalization), the possibility to execute on-chain voting (as discussed before) and the distinguishment of DAOs with native tokens and DAOs that use established cryptocurrencies.<sup>26</sup> Other categorizations can be found on websites such as DAO central,<sup>27</sup> which comprise categories such as investment, service, collector, product, social, protocol, grants, special-purpose, education, media, impact and decentralized science.

Another important note is that DAOs move more often toward the traditional world. One way of perceiving this note is by acknowledging that some DAOs, such as CityDAO, LinksDAO and FriesDAO, are striving to interact with real-world assets. Another way of perceiving 'moving to the traditional world', is by analyzing DAOs in the context of the traditional corporate forms. Worker collectives, for instance, act in a way that is similar to general partnerships, while investment DAOs are acting in a way that is similar to LLCs or joint-stock companies. Some DAOs are moving more towards fundraising or collecting, and act like foundations (especially when they are ad hoc DAOs). Associations could be found in the social DAOs, which have a shared (social) goal and usually don't have a profit aim. Since DAOs have so many contexts in which they can be used, it would be wrong to categorize them as a homogeneous group of organizations. The discussion that follows from this observation, is whether DAOs should fit within the current scope of legal forms

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<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> Explore, DAOCENTRAL.COM, <https://daocentral.com/explore>.



(as they are quite similar to those), or whether they deserve to be their own kind of organization and should have a (legal) framework based on that. With this, the famous duck test comes up: 'If it looks like a duck, swims like a duck, and quacks like a duck, then it probably is a duck'. In a sense, DAOs are similar to the ducks (traditional organizations), but DAOs have some different characteristics. These observations keep the discussion alive.

## G. FINAL THOUGHTS

To briefly conclude, the empirical results clearly show that it is hardly possible to provide one single definition for a DAO: they differ in a variety of manners, including the extent to which they live up to the core characteristics, size, type and goals. When discussing a proper definition with the experts, some indicate that this is an impossible mission at this emergent stage, while others have their views on the definition.

One clear observation is that there are three possible approaches to take. The first is to remain close to the self-explanatory name of DAOs: experts that come up with definitions often provide one that entails their interpretation of the elements 'decentralized', 'autonomous' and 'organization'. When taking this line, the recommended definition is as follows: *'a group of people who work together in an organized way for a shared purpose (i.e., organization) that uses a progressively peer-to-peer based decision-making process (i.e., decentralization), that governs itself by progressively relying on rules that are rooted in blockchain-technology (i.e., autonomous).'*

The second approach is to create a negatively formulated definition. This means that rather than attaching specific characteristics to DAOs, the focus should be on what characteristics DAOs do not possess. This can significantly broaden the scope of the definition, allowing it to be more future-proof. Recommendations as to the boundaries include that of *'organizations that do not experience organizational-broad implications as a result of using the DAO structure, and/or that do not focus on decentralization should not be qualified as DAOs'*, *'organizations that lack full central control'*, and *'organizations that do not progressively rely on blockchain'*.

The third approach is to use a category-wise taxonomy of DAOs, examples of which can be found in subsection III.F. According to experts, these overviews can improve the understanding of DAOs as a landscape, rather than as just one specific organizational form.

## IV. EMPIRICAL RESULTS: THE DESIRED LEGAL FRAMEWORK

This chapter aims to set out the empirical findings on the legal needs and expectations of the DAO community. The results are categorized into four areas: (A) the rationale for legislation, (B) the extent of a legal framework, (C) the nature of legislation, and (D) the topics that should be clarified and/or regulated.

### A. RATIONALE FOR LEGISLATION

Experts raise several reasons for introducing legislation. One of the most occurring reasons is that of legislation allowing DAOs to operate in the traditional world. This mostly relates to the access that legal entities have to 'traditional' government-backed currencies (i.e., FIAT-currencies), that DAOs generally do not have access to without the assistance of a supportive legal entity. Even though many DAOs already operate efficiently on-chain, it is still necessary to regulate and officially recognize DAOs as legal entities, so that they can merge even more with real-world industries, because those real-world entities expect DAOs to be (safe) legal entities or risky counterparties. To realize such implications, experts desire legislation that is well-adapted to the technology and the possible developments therein, so that it can be future-proof.

Another reason that is regularly mentioned, is that of the legal protection that legal entities offer in solving disputes, especially concerning the limitation of liability. One example is that of worker collectives: if there are individual contractors involved that are not anonymous, they should be provided (liability) protection, because otherwise any lawsuit will be directed towards them as a jointly and severally liable member of the DAO. The more members are anonymous, the more this becomes a problematic phenomenon, because these non-anonymous members are likely the only members that the initiators of a lawsuit can successfully subpoena or reach out to. This scenario also holds for employees involved with a DAO. Due to the problematic nature of this phenomenon, experts desire legislation that can protect their members against such complications around their membership.

Yet another reason that experts name to implement legislation is to protect the smaller DAOs, with the note that it should be somewhat looser legislation due to the emergent nature of DAOs as a concept. Having too specific clauses would require DAOs to hire a legal expert for advice on how they could comply with the legislation, while this is only possible for the more wealthy (often centralized and/or investor-backed) DAOs. This idea can be compared to a progressive tax system: the burden of investing in a legal expert will be larger on smaller DAOs with fewer funds/income. At the same time, those smaller DAOs (often worker collectives) are generally most in need of a legal wrapper - or limited liability in general - to protect their employees/contractors. If such protection is not in place, it takes away their opportunity to grow their community, and therefore their revenue. This reason is further substantiated by the fact that relatively large DAOs have the resources and legal expertise to provide their members with the legal protection they need through on-chain mechanisms. These are therefore supposedly less urgently in need of a legal framework: until such a framework is developed, they can still offer on-chain protection through smart contracts that are built for that purpose. Such on-chain protection mechanisms are expensive to build due to the required expertise of the software developers, so that this is only possible for larger and relatively wealthy DAOs.

Lastly, experts emphasize that legislation can function as guidance for DAOs to have their organization and their governance in place from the beginning, to improve early coordination success. An expert indicates that even if you are not legally required to have provisions in place in your by-laws on topics such as voting, such provisions should be in place regardless to avoid future frictions. As the community grows, members with different skill sets and backgrounds will enter the DAO, which leads to different levels of involvement and accountability. Another point that this expert stated, is that if a DAO does not have a legal wrapper in place early on, this could hurt members. This statement is substantiated by the example where a member gets hurt by a one-sided event from the DAO: if such a wrapper that establishes legal personality and limited liability is not yet in place, it is unclear how the DAO could then protect itself and its remaining members, especially in case of a lawsuit. Therefore, it would be a safe option to have the legal wrapper already in place and spend money on the development thereof early on. A note that he makes, however, is that the role of legal forms and rules should be in line with the organizations' cultures and values: it should be made clear in the by-laws what those are, and under what circumstances someone could get expelled. It should also be made clear what happens if the project gets dissolved: if it is clear to members what the consequence of that would be, it would save much friction and disappointments. It is always better to have it and not need it, than to need it but not have it.

## B. EXTENT OF A LEGAL FRAMEWORK

### *Standpoint I: mere guidance*

Some experts believe that at this stage, where DAOs are still in evolution, providing guidance for DAOs is sufficient: legislation is not yet necessary. In their opinion, DAOs – and the crypto space in general – have been created for many reasons, but one of those reasons is the avoidance of bureaucracy and government involvement. They, therefore, take the standpoint that any obligatory law on or around DAOs would be a burden for the community, that self-regulation within DAOs would be preferred, and that community recognition should be the main driver of that self-regulation. They recognize, however, that if legislation were to be enacted, it should function as tools, rather than as rules. With this statement, they mean that the legislation should be non-obligatory and that there should always remain an option for DAOs not to file for legislative legal recognition. The legal reality is, however, that any legislation that is related to the operations of DAOs will apply to them, even if the law is not DAO-specific: the lack of a choice for a legal form does not mean that the DAO does not exist in the legal order.

Furthermore, an expert introduces the philosophically-oriented standpoint that DAOs should be corporate forms in their own right, rather than a form that could fit within the current framework, as the latter can be considered a step backward for DAOs. As a comparison, a DAO exists within Ethereum in a way that is similar to a Delaware LLC exists within the jurisdiction of Delaware, indicating that the equivalent state is Ethereum. The expert indicates that this corporate form should be a contract-based association that is structured through the virtue of a smart contract.

### *Standpoint II: guidance and existing legal wrappers*

A second gradation of opinions is offered by the experts that emphasize the need for legal wrappers, but are against creating new laws. They substantiate this standpoint by stating that even though legal wrappers are highly necessary due to the limitation of liability that could increase certainty for its members, newly introduced legal wrappers for DAOs are unlikely to be used, because the ones in place are sufficiently effective. This inherently means that incorporating a new legal form

raises a risk, since the DAO in question would be among the first ones to experiment with this new wrapper. Therefore, they expect it to be highly unlikely that DAO communities will vote in favor of incorporating a new type of legal wrapper.

#### *Standpoint III: new legislation*

A third gradation of opinions is highly in favor of new legislation on DAOs, especially if they would be introduced and/or recognized through private international law in most jurisdictions. They state that such a framework could significantly increase the opportunities for DAOs to operate around the world, as with compliance thereto, it can legitimize their operations to the general public. Most of the experts in this category note that such legislation should provide the individuals with benefits, the more if this type of legislation is binding, otherwise it will hardly be used or voted upon.

### C. NATURE OF LEGISLATION

#### *Loose legislation*

Experts have several ideas on the nature of the suggested legislation. However, one of the most occurring opinions is that of the legislation being ‘loose’, meaning that it shall be an enabling type of legislation, rather than an overload of new requirements. One concrete example of that is the difference between Wyoming and Vermont: The Wyoming DAO supplement has way more requirements than the Vermont legislation, so that it will eventually be more costly for a DAO to understand the law and comply with it. Furthermore, loose legislation can also be beneficial for the evolving nature of DAOs: since their properties and characteristics can change over time, it is beneficial to have provisions in place that allow for developments in the field that do not require legislative updates as often. This is important, since it allows smaller DAOs – the ones that do not have as many resources to hire a legal expert – to better understand what they must do to be eligible for legal protection.

#### *Protocol style*

Another proposal that an expert suggests, is that of putting legislation in a protocol form, such as within the NFT framework. In the NFT space, a protocol is issued that should be followed to qualify as an NFT. This could potentially work for DAOs as well, and should – in this expert’s opinion – contain statements on taxes, treasury (including aspects such as ownership and the transfer of treasury), the possibility to employ people, and the manner of dispute resolution. Limited liability would not necessarily need to be in the protocol, because that inherently follows from compliance with the protocol leads to legal personality being granted.

#### *Binding or guidance?*

Experts that are not in favor of binding legislation prefer a guiding document. In this document, the differences between DAO industries should be considered: some industries might need very different topics to be regulated or guided than others. The document should also contain the current snapshot of DAOs, and how they compare to traditional companies so that it is clear why DAOs should be used. It should also contain information on the current status of DAOs, how they qualify if they do or do not file for legal recognition, and what risks and opportunities are involved, especially with the emergence of global DAOs in mind. Even though this would not be a binding

document, it could eventually help legislators come up with relevant legislation that properly fits the industry.

Another group of experts is in favor of the exact opposite: according to them, a newly introduced framework should be more of an obligation, rather than a recommendation. They point out that this prevents the phenomenon of independent thinking about that framework: an obligatory framework requires the community to keep debating about complying with that framework, rather than individuals having thoughts about said framework and not necessarily sharing those thoughts with the rest of the community – as there is no absolute necessity to comply. The latter case poses the risk of community members blaming each other when a misevent occurs, rather than being required to take responsibility as a community for the compliance decisions made. This can eventually harm the mutual trust that members have in each other and in the functioning of the DAO as a whole.

#### *Determination of a definition*

Whether it is in legislation or a guidance document, experts desire that a proper definition of DAOs is incorporated in either document, to make sure that it is possible to distinguish actual DAOs from DAOs that are just using the term as a marketing tool. Recommendations as to the definition have been developed in Chapter III: *a group of people who work together in an organized way for a shared purpose (i.e., organization) that uses a progressively peer-to-peer based decision-making process (i.e., decentralization), that governs itself by progressively relying on rules that are rooted in blockchain-technology (i.e., autonomous).*

In addition to this recommendation, notes can be taken from the existing legal definitions. The existing legislation landscape shows different types of definitions, depending on the rights and obligations that they provide. The COALA Model Law for instance keeps the following definition: *smart contracts (i.e., blockchain-based software) deployed on a public permissionless blockchain, 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.* Utah did not incorporate the latter principle, whereas New Hampshire added it in their draft bill. This difference can be of significant relevance when it becomes a judgement point, because the scope of DAOs that are sufficiently decentralized could differ between those two regimes. This is even more relevant in light of the findings in the previous chapter (III) about the relativity, rather than the absoluteness of decentralization and autonomous functioning that occurs in a large number of DAOs.

Another note is that New Hampshire included the following section (301-B:4) on the purpose of DAOs in their draft bill, which could significantly limit the scope of DAOs: *A decentralized autonomous organization (DAO) is a legal entity that can be used for commercial, mutualistic, social, environmental, or political purposes, the nature of which shall be specified in its by-laws.* These differences in definition and scope perfectly demonstrate the difficulty of this task.

#### *Scope*

Several experts point out that the legislation should be similar in different countries, since this would make it much simpler to choose the preferred jurisdiction. Another means to achieve this goal is to make sure that those frameworks - and the legal forms flowing from those frameworks – can be recognized through private international law in as many jurisdictions as possible.

## D. TOPICS THAT SHOULD BE CLARIFIED AND/OR REGULATED

When experts name the topics on which guidance or legislation is desired, a few topics stand out: treasury, contracting, liability limitation, securities qualification and taxes. Especially the last two examples are often requested as topics to provide legislation or clarification on: it is currently highly uncertain which tax and securities frameworks apply to transactions and operations, and how DAOs and their tokens qualify within those systems. This provides the members with uncertainty, leading them to be more hesitant toward entering DAOs. Creating such legislation could give DAOs a boost in their credibility for both (new) members and counterparties.

The recommendations added within the overview of topics in points I to XII are based on existing DAO-specific legislation, and on the COALA Model Law for DAOs.

### I. TAXATION

Several experts indicate the need for clarification on which tax regime applies to DAOs. First, they want to know what type of tax they are required to pay (e.g., personal income tax or company tax). Second, they want clarification on the jurisdiction in which they are considered taxable: there is much debate on where the operations of a DAO take place, since its operations are conducted online. Lastly, they point out the difficulties that DAOs without a legal wrapper face: they do not have access to traditional government-backed currencies, such as the US Dollar or Euros. They, therefore, desire clarification on whether it will be possible to pay tax with – for example – stablecoins.

The examples in legislation show different approaches, and do not yet answer all of the questions that the experts have.

**Example 1:** Article 20 of the Model Law proposes the following:<sup>28</sup>

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).

**Example 2:** Article 48-5-406 of the Utah Code states the following:

- (1) If a decentralized autonomous organization recognized by this act is eligible to elect to be classified as a corporation for federal tax purposes, and the decentralized autonomous

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<sup>28</sup> This provision is also implemented in the New Hampshire draft bill (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:20 (U.S.)).

organization makes that election, the decentralized autonomous organization shall be subject to the provisions of Title 59, Chapter 7, Corporate Franchise and Income Taxes.

- (2) (a) Unless the decentralized autonomous organization makes the election described in Subsection (1), a decentralized autonomous organization recognized by this act shall be **classified as a partnership for tax purposes and subject to the provisions of Title 59, Chapter 10, Part 14, Pass-Through Entities and Pass-Through Entity Taxpayer Act.**

(b) For purposes of taxation, a decentralized autonomous organization shall allocate the distributive share of income, gain, loss, deduction, and credit derived from the decentralized autonomous organization's activities, to each member of the decentralized autonomous organization in proportion to the member's membership interest in the entity.

**Example 3:** Section 204 of the Lummis-Gillibrand act proposes that DAOs that fall within the definition of that act shall be taxable as business entities that are not disregarded entities.

## II. TREASURY AND TOKENS

Experts indicate that they desire a clear standard for ownership and transferability of their tokens, as well as for the access rights surrounding the treasury of the DAO. The examples in legislation, however, leave this matter up to the DAOs in question.

**Example 1:** Article 17-31-106 of the Wyoming DAO Supplement and Article 48-250-105 of the Tennessee DAO Supplement state that the transferability of membership interests shall be governed by the articles of organization of the DAO.

**Example 2:** Article 6 of the Model law proposes the following on the treasury:<sup>29</sup>

- (1) No minimum capital requirements will apply to a DAO recognized 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.

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<sup>29</sup> This provision is also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-401 (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:6 (U.S.)).

### *III. EMPLOYMENT*

Experts desire clarification on their legal position in employment contracts. However, as with every other corporate structure or contract, the contract will exist between the relevant parties, which are required to be legal entities. Therefore, the legal position of a DAO in an employment contract highly depends on its legal qualification. If the DAO qualifies as a legal entity – for instance through recognition of a foreign legal form such as the Wyoming DAO LLC – it will be a party in its own right. However, when the DAO qualifies as a general commercial partnership, it will be an employment contract between the employee and the collective of the partners – all the DAO members – in most jurisdictions.

### *IV. DISPUTE RESOLUTION*

Some experts are in favor of allowing on-chain dispute resolution, while others are clearly against this manner of solving disputes. Due to this high discrepancy in opinions, and the discretionary power that DAOs have in the creation of the by-laws for their organization, it would be most fitting to leave this as an internal discussion. This view has been taken over in the model law, as article 4(1)(j-k) requires the following:<sup>30</sup>

- (1) (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.

### *V. SECURITIES QUALIFICATION*

Experts deem it desirable to determine whether the governance tokens of DAOs are considered securities, and what test applies to that analysis. Furthermore, some experts wish to have clarification on whether it is allowed to voluntarily disclose the governance tokens, without directly facing the limitations of transparency, consumer protection and investor protection. This latter desire follows from the concern of prosecution due to incorrect non-disclosure: they indicate that when they are not directly punishable for incorrect disclosure, it would be less of a risk to already voluntarily disclose and be transparent.

At this point in time, regulations regarding the classification of digital assets are developing. Among those regulations are the Lummis-Gillibrand act in the US, and the EU regulation on Markets in Crypto-Assets (MiCA), which are both works-in-progress. Given the fact that these bills

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<sup>30</sup> This provision is also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-201(3)(i) (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:4 (I)(j)&(k) (U.S.)).



are already in progress, it is safe to await these results before diving into a full analysis of this matter.

## VI. LIMITED LIABILITY

Limited liability is arguably the most requested legal provision by the experts. The reasoning behind this request is closely related to legitimacy towards counterparties and the ability to enter contracts. The DAO-LLC acts and the Model Law provide insights into the criteria for limited liability, and have one thing in common: they all provide limited liability for excess liability and any other obligations, such as labor and tax obligations.

**Example 1:** Article 4 of the model law sets out the formation requirements for DAOs.<sup>31</sup> If a DAO fulfills those requirements, it is automatically granted legal personality.

- (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) 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. 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;
  - (e) 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;
  - (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.

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<sup>31</sup> These provisions are also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-104 (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:4 (U.S.)).

- (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.

Article 5 states the following as regards the material aspects of 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.
- (3) 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.

Lastly, article 18 of the Model Law indicates that in case a Failure Event happens, the Person(s) deploying or upgrading the DAO might be held liable if they acted in manifestly bad faith or engaged in gross negligence.

**Example 2:** The DAO-LLC acts in Wyoming and Tennessee have a similar approach, though they contain a few additional requirements. First, they require the possibility of amendment of the underlying smart contracts. Second, they require the following statements in the articles of organization (by-laws):

- √ A statement that the organization is a decentralized organization;
- √ Relations among the members and between the members and the decentralized organization;
- √ The rights and duties under this chapter of a person in that person's capacity as a member;
- √ Activities of the decentralized organization and the conduct of those activities;
- √ Means and conditions for amending the operating agreement;
- √ Rights and voting rights of members;
- √ Transferability of membership interests;
- √ Withdrawal of membership;

- √ Distributions to members prior to dissolution;
- √ Amendment of the articles of organization;
- √ Procedures for amending applicable smart contracts; and
- √ All other aspects of the decentralized organization.

Whereas most of these aspects are also required to be disclosed in the by-laws in the Model Law, these are not formation requirements as such.

## VII. FORKING

Experts hold different opinions on the necessity of provisions on forking. A hard fork is (according to the Model Law) a blockchain software upgrade that is not compatible with previous versions of the blockchain software, and therefore requires all users to upgrade. This can be compared to a hack, and it eventually leaves the door open to the existence of the same beginning parts of the chains: some users upgrade the software, whilst others choose not to, so that separate versions will circulate. The Model Law deals with this phenomenon in the following way:<sup>32</sup>

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).

In this context, public signaling means a declaration authorized by way of a proposal by the DAO in a public forum. The Majority Chain is the version of the chain accepted by more than 50% of the blockchain's validators following a hard fork. This can be determined based on a few factors:

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

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<sup>32</sup> This provision is also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-403 (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:16 (U.S.)), although as contentious forks.

- √ Applications, services and service providers: The blockchain that is recognized and accepted by a majority of tokens, applications, ancillary services and service providers, such as trading protocols, exchanges, wallet providers, oracles and data gateways.
- √ Market capitalization: The blockchain whose token has the highest market value.
- √ Community recognition: The blockchain recognized by the majority of developers, thought leaders, end users and other members and participants.
- √ Trademarks: The blockchain that is formally recognized by the entity holding the relevant trademark.

### VIII. VOTING

Whereas many experts acknowledge the importance of laying out the voting procedure in the by-laws, the opinions differ on how to overcome the issue of non-active members. One of the experts is highly in favor of a voting obligation, explaining that in that case, people will actually contribute, rather than complain about a situation that they did not work on to avoid themselves by not voting. The result then is that the accountability lies with the individual and the collective. Others are in favor of providing the option of voting delegation, to avoid low participation due to the token holders not being informed or not having the required expertise on the matter that is voted upon. Another expert is highly against the possibility to delegate voting, because it allows people to hand over voting power without giving the information necessary to handle that responsibility, which in itself poses a risk of uninformed voting. A last suggestion concerns the implementation of rules on gaining voting power: this expert is in favor of provisions that limit the possibility to buy voting power and grant yourself a majority of the voting power (i.e., 50%).

**Example 1:** Article 8 of the Model Law indicates that decisions on voting rights should remain a choice:<sup>33</sup>

(1) 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.

**Example 2:** The LLC laws hold the same view on this matter, and additionally state that for member-managed DAOs, the calculation of voting rights shall either be based on the amount of contributed assets or (if such contributions are no prerequisite to becoming a member) shall be based on fully democratic voting: 1 member, 1 vote. Lastly, this provision requires at least a majority of the membership interests to vote for a quorum.

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<sup>33</sup> This provision is also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-302 (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:8 (U.S.)).

## *IX. USE OF SMART CONTRACTS*

Experts stress that it is of high importance to determine what smart contracts should be legally capable of, so that it becomes clear whether (and to what extent) they can automate the process. Ideally, blockchain-based smart contracts should be legally recognized, because the Web3 space is all about automation and decentralization: a development that can be facilitated by blockchain. Some experts would therefore like to gain clarification on whether DAOs can use smart contracts to interact with government agencies, for instance for document filing and payments, if the DAO does not have employees, assets, revenue, profits and costs.

## *X. DISSOLUTION*

Experts acknowledge that the uncertainty around what happens to the Members' token value and/or invested assets in the DAO can cause friction both before and during the event of dissolution. Therefore, they desire clarification on what the rules should be on that topic. However, both the LLC laws and the Model Law solely disclose that such procedures shall be introduced in the By-Laws. However, the LLC laws in Wyoming and Tennessee state the following about when dissolution shall occur:

A decentralized organization is dissolved upon the occurrence of the following:

- (1) The period fixed for the duration of the organization expires;
- (2) By vote of the majority of the members of a member-managed decentralized organization;
- (3) At the time or upon the occurrence of events specified in the underlying smart contracts, or articles of organization, or operating agreement;
- (4) The decentralized organization failed to approve proposals or take actions for a period of one (1) year; or
- (5) By order of the secretary of state, if the decentralized organization is deemed to no longer perform a lawful purpose

A noteworthy concern with the experts is part 4 of that provision. They state that it would be unfair to dissolve the DAO when no proposals have been approved for a year. They indicate that when it concerns an algorithmic DAO that functions in a fully autonomous way, and when it is unclear what 'actions' mean - i.e., whether it solely entails the execution of specific decisions or whether it entails basic contract execution as well - this can be a significant burden for DAOs to register in jurisdictions that have that rule in place.

## *XI. DISCLAIMER / FIDUCIARY STATUS*

Experts are generally in favor of incorporating the disclaimer within the Wyoming (and Tennessee) legislation in new legislation as well, which reads as follows:

**Example 1:** ‘NOTICE OF RESTRICTIONS ON DUTIES AND TRANSFERS - The rights of members in a decentralized autonomous organization may differ materially from the rights of members in other limited liability companies. The Wyoming Decentralized Autonomous Organization Supplement, underlying smart contracts, articles of organization and operating agreement, if applicable, of a decentralized autonomous organization may define, reduce or eliminate fiduciary duties and may restrict transfer of ownership interests, withdrawal or resignation from the decentralized autonomous organization, return of capital contributions and dissolution of the decentralized autonomous organization.’

**Example 2:** This view on fiduciary status has also, in a way, been implemented in article 15 of the Model Law:<sup>34</sup>

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

(1) Developers, Members, Participants or Legal Representatives 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 fiduciary;

(b) Their fiduciary status is stipulated in the DAO’s By-Laws.

## *XII. MISCELLANEOUS*

Lastly, some experts wish to have provisions that are dedicated to the possibility not to have members, employees, assets, revenue, profits and costs. According to them, legislation should allow entities without members to have supporting entities and individuals that are all independent of each other. They also desire a possibility to define their relationship by their operating agreements. Both the LLC laws and the model law imply the necessity of at least one member, which is an indication of necessity thereof. However, there is still room for interpretation concerning the creation of provisions regarding the absence of assets, revenue, profits and costs.

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<sup>34</sup> This provision is also implemented in Utah (Decentralized Autonomous Organizations Amendments, Utah Code Annotated 1953 (UT) s. 48-5-307 (U.S.)) and New Hampshire (New Chapter Decentralized Autonomous Organizations, New Hampshire Revised Statutes Annotated (NH) s. 301-B:15 (U.S.)).

## V. CONCLUSIONS AND RECOMMENDATIONS

This article attempted to display the empirical reality around DAOs and their desired legal framework, and tried to address the issues related thereto. A first highlight is that of the lack of coherence in the current international legal framework. Second, it highlights the empirical evidence on the DAO landscape, and the difficulty surrounding its definition. Nevertheless, it proposes three approaches to the creation of a proper definition: a positively formulated definition, a negatively formulated definition and a category-wise definition for DAOs. Lastly, this article zoomed in on the empirical evidence on the needs and expectations from the DAO community regarding a legal framework and legal clarity in general. The empirical conclusions thereof are firstly a display of the possible standpoints on the rationale behind legislation: the ability to operate in the traditional corporate world (entering into contracts, using traditional currencies, recognition and legitimization); legal protection, particularly limited liability; protection of smaller DAOs that have fewer resources for building their legal protection regimes on-chain; guidance for DAOs on how they should shape themselves. Second, it presented different views on the extent of a legal framework, namely the standpoints of mere guidance – i.e., no binding new legislation; the existing legal framework is sufficient, since this group considers it unlikely that DAOs are willing to be the first to experiment with new types of legislation and legal entities, while there is efficient legislation in place; new legislation, as long as that legislation provides them with benefits, rather than with burdens. Third, it contained recommendations for the nature of legislation, such as loose legislation that is future-proof, potentially a protocol-style legislation, and an as international as possible scope. It shall further include a solid definition that is sufficiently inclusive and future proof. There is, however, a lack of consensus on whether that legislation shall be binding or mere guidance. The chapter lastly highlighted the subfields that the experts wish to have legal clarification or a legal framework for, including tax, treasury and tokens, employment relations, dispute resolution, securities qualification, limited liability/legal personality, forking, voting, use of smart contracts, dissolution, disclaimer, and fiduciary status. In order to provide the reader with a full picture, it contained recommendations on these topics based on provisions from the COALA Model Law for DAOs, DAO-specific legislation in Vermont, Wyoming, and Tennessee, and the Utah and (the proposed) New Hampshire bills. Since these subtopics are all research areas on themselves, this article provides researchers and legislators with a starting point for further research for the establishment of a suitable legal framework for DAOs. It furthermore can function as a guiding line for DAOs on how they could shape themselves in accordance with the legal frameworks that are currently in place.