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Legal Recognition and Governance of Decentralised Autonomous Organisations (DAOs) From Code-Based Communities to Legal Entities

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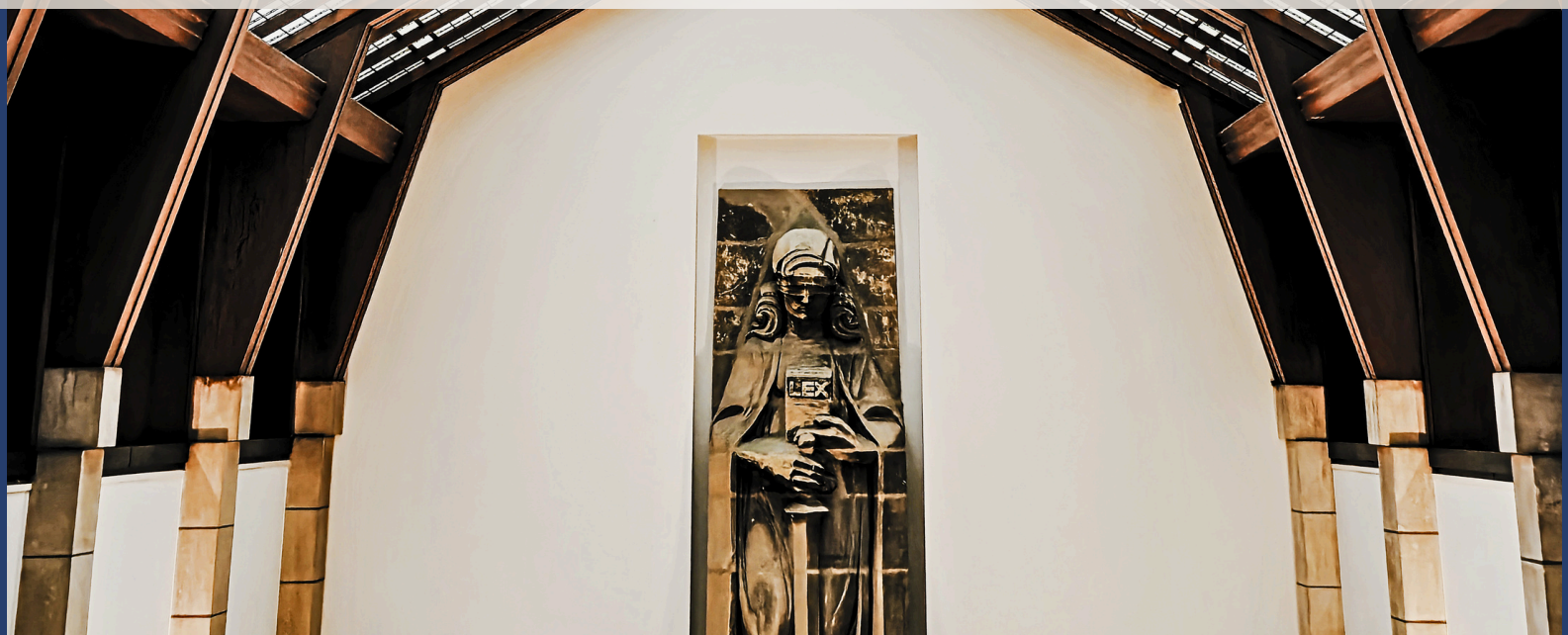

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No 2026/02

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Published in Maastricht, March 2026

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This paper is to be cited as MCEL Master's Thesis Series 2026/02

Abstract

Decentralised Autonomous Organisations (DAOs) have emerged as novel forms of collective organisation governed through blockchain-based smart contracts and decentralised decision-making, closely associated with cryptocurrency and Web3. "The DAO" project launched in 2016 popularised this type of organisation, characterised by transparency, decentralised and participatory governance, and autonomous execution. However due to these features, most legal systems do not recognise DAOs as legal persons, creating uncertainty about liability, accountability, and regulatory compliance. In the absence of legal personality, courts may reclassify DAOs as partnerships or unincorporated associations, exposing participants, including developers and governance token holders, to joint and several liability. DAOs fundamentally redefine the hierarchical governance structure of traditional organisations, such as companies, by replacing managerial discretion with automated execution through smart contracts. This Master's thesis focuses on the practical tension between decentralised governance and legal wrappers designed for centralised entities.

It analyses the recognition of DAOs in the United States, France, and Switzerland in order to identify the legal challenges and regulatory responses related to their legal status. It examines the use of legal wrappers such as Limited Liability Company (LLCs), foundations, and associations to confer limited liability and operational capacity, while analysing the risks of undermining decentralisation. It also discusses the impact of the European Union's Markets in Crypto-Assets Regulation (MiCA) which deliberately excludes "fully decentralised" systems while leaving the concept of decentralisation undefined, thereby illustrating the difficulty of applying existing financial regulation to decentralised governance structures. Overall, the research argues that tailored legal frameworks are necessary to integrate DAOs into existing legal systems and the potential role of the European Union in shaping such frameworks.

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List of Abbreviations

BBLLC	Blockchain-Based Limited Liability Company
CFTC	Commodity Futures Trading Commission
COALA	Coalition of Automated Legal Applications
DAO	Decentralised Autonomous Organisation
DeFi	Decentralised Finance
DEX	Decentralised Exchange
DLT	Distributed Ledger Technology
DO	Decentralised Organisation
DUNA	Decentralised Unincorporated Non-profit Association
EBA	European Banking Authority
EC	European Commission
ESMA	European Securities and Markets Authority
EU	European Union
LLC	Limited Liability Company
MiCA	Markets in Crypto-Assets Regulation
MiFID	Markets in Financial Instruments Directive
NFT	Non-Fungible Token
P2P	Peer-to-Peer
SPILA	Swiss Private International Law Act
PoW	Proof of Work
UNA	Unincorporated Non-profit Association
UUNAA	Uniform Unincorporated Non-profit Association Act
US	United States
Web3	Third Generation of the Internet Based on Decentralisation

1 Introduction

"We are in the midst of encoding the world, this time not in law, but in digits." — Katharina Pistor, The Code of Capital: How the Law Creates Wealth and Inequality (2019)

Following the 2007 financial crisis, trust in centralised financial institutions has been dramatically undermined. On 3 January 2009, an unknown developer known as Satoshi Nakamoto mined the first block of the Bitcoin blockchain, quietly starting a technological experiment with far-reaching consequences.[1] Bitcoin invention represented more than just a new type of currency. It was a blueprint for a new financial architecture based on cryptographic proof rather than institutional trust. The combination of decentralised networks, an innovative consensus method such as the "Proof of Work" (PoW), and the distributed ledger technology (DLT) of the blockchain, led to the creation of this ground-breaking currency capable of functioning without a central authority.[2]

Bitcoin demonstrated the viability of peer-to-peer (P2P) digital money, its architecture soon inspired a broader ambition: to replicate and reimagine the entire financial system without intermediaries. This vision gave rise to Decentralised Finance (DeFi), one of the major developments within the blockchain ecosystem. As Piñeiro-Chousa and others explain, DeFi is "a novel disruptive process that promotes the use of blockchain technology for creating and issuing all kinds of financial products and services".[3] More broadly, DeFi refers to "the use of blockchain technology, specifically cryptocurrencies and smart contracts, to create a permissionless, open-source and transparent financial services ecosystem that is available to everyone and operates without the need for intermediaries, such as banks or brokers".[4]

Bitcoin and DeFi introduced a model based on decentralisation, transparency, and autonomous management. This approach inspired the broader emergence of decentralised autonomous organisations (DAOs).[5] The DAO, a recent innovation of the

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[1] Juan Piñeiro-Chousa and others, 'A preliminary assessment of the performance of DeFi cryptocurrencies in relation to other financial assets, volatility, and user-generated content' (2022) 181 *Technological Forecasting and Social Change* 121740, 1.

[2] Paola Agnese Bongini and others, 'Crypto ecosystem: navigating the past, present, and future of decentralized finance' (2025) 50 *Journal of Technology Transfer* 2.

[3] Linh Thi My Nguyen and Phong Thanh Nguyen, 'Determinants of cryptocurrency and decentralized finance adoption: A configurational exploration' (2024) 201 *Technological Forecasting and Social Change* 123244, 3.

[4] Agata Ferreira, 'Decentralized finance (DeFi): the ultimate regulatory frontier?' (2024) 19 *Capital Markets Law Journal* 242.

[5] Nathan Vandy, 'Progressive Decentralization Requires Progressive Regulation: Do DAOs Require Direct Legislative Intervention, Self-Regulation or No Regulation?' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 28.

Web3 era, is typically defined as a virtual organisation, built and run through blockchain-based code, which allows members to manage shared resources and modify rules without a central authority.[6] In practice, a group of individuals in DAOs can control crypto assets such as cryptocurrencies or non-fungible tokens (NFTs) collectively based on governance rules embedded in smart contracts. These rules operate much like a company's statutes: they define how decisions are made, how the organisation is structured, and how it interacts with members and third parties.[7] One of the most cited definitions describes a DAO as "a virtual entity… [whose] code runs on a blockchain and enforces these rules automatically".[8] Another definition refers to DAOs as "'virtual' organisations embodied in computer code and executed on a distributed ledger".[9] In DAOs, members take part directly to the decisions without relying on a leader, redesigning traditional decision-making models. Although DAOs are frequently presented as non-hierarchical structures, their governance is primarily determined by rules encoded on the blockchain, which regulate how decisions are taken and how funds are allocated. This form of governance, embedded in blockchain protocols, is often presented as a mechanism to enhance transparency and reduce certain operational risks, particularly in the context of decentralised finance.[10] These digital-native organisations have grown rapidly in recent years, with thousands now active and over 200 managing treasuries worth more than $1 million each. Collectively, DAO-controlled assets exceed $34 billion globally.[11]

Despite their proliferation, most countries, including those in the European Union (EU), have not yet developed a dedicated legal regime for DAOs. In general, DAOs today operate outside of the fringes of established legal frameworks or in grey areas where traditional laws do not clearly apply.[12] The legal uncertainty faced by DAOs comes from their unconventional mode of operation, which relies on blockchain, cryptocurrencies,

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[6] Andrzej Brzeziński, 'Specificity of Decentralized Autonomous Organizations as the Implementation of Blockchain Technology' in Robert Howlett (ed), *Proceedings of the 27th International Conference on Knowledge-Based and Intelligent Information & Engineering Systems (KES 2023)* (University of Lower Silesia in Wrocław 2023) 4373–4374.

[7] Florence Guillaume and Sven Riva, 'Loi type sur les DAOs – un régime juridique adapté aux nouvelles formes de sociétés numériques' (*Blog du LexTech Institute*, 25 January 2022) https://www.lextechinstitute.ch/loi-type-sur-les-daos-un-regime-juridique-adapte-aux-nouvelles-formes-de-societes-numeriques/.

[8] Christoph Jentzsch, Decentralized Autonomous Organization to Automate Governance (Slock.it White Paper, 2016) 1.

[9] Brian S Mondoh, Sara M Johnson, Matthew Green and Aris Georgopoulos, 'Decentralised Autonomous Organisations: The Future of Corporate Governance or an Illusion?' (23 June 2022) 1.

[10] Association pour le Développement des Actifs Numériques (ADAN), *Regulating DeFi in Europe: Issues for Consideration* (2023) 26.

[11] Haut Comité Juridique de la Place Financière de Paris (HCJP), Rapport sur la réception des organisations autonomes décentralisées (ou « DAO ») en droit français (31 May 2024) 1.

[12] Ibid.

and smart contracts. These technological features are "incompatible with the underlying legal presumptions and principles" of traditional business entities and governance structures, thereby raising fundamental questions concerning coordination, authority and the attribution of legal status in this new decentralised environment.[13] This structural mismatch is further exacerbated by the absence of a legal definition of DAOs. In a roundtable discussion composed of blockchain experts, Romain Figuereo explained that DAOs frequently defy classification within existing legal categories. This is because these entities often do not fit with traditional business structures. While they may function as associations, companies or foundations, their decentralised and transnational nature, combined with autonomous governance based on code, challenges the assumptions upon which existing regulatory frameworks are built.[14]

DAOs are challenging the concept of corporation, constructed on the "clear separation between the personal assets of shareholders and the assets used in the company's business". This decision-making structure can "create conflicts of interest due to divergent objectives and risk appetites, known as the principal-agent problem". DAOs emerge as an alternative to this traditional company structure, where "ownership, participation, and the prospect of control are closely linked, if not merged" and "offer the potential to fundamentally change how organisations operate".[15] Another advantage is that DAOs can exist and operate entirely within the digital environment without requiring a formal legal incorporation. However, when they want to engage with the off-chain world, like by hiring service providers, entering contracts with third-parties, or facing claims from harmed investors, they inevitably enter in contact with the legal system. This prompts the fundamental question of whether DAOs can be recognised as legal persons and subjected to the same legal responsibilities as traditional entities. It is imperative to elucidate their legal existence to ascertain which regulations pertain to their activities and how liability, rights, and obligations are distributed.[16] Indeed, as it has been observed "sometimes it's impossible to identify who's in charge, whether it's an individual or a legal entity. However, this entity is not

[13] Guy C Charlton, Michael Adams and Cindy Whang, 'The Decentralised Autonomous Organization: Legal Personality and the Problem of Governance' (2023) 42(1) *Journal of Law & Commerce* 64.
[14] ADAN, Replay – Événement ADAN & Ethereum France chez Cometh (ADAN, 2023) 20:51 – 24:30.
[15] Zarja Hude, Matej Igličar and Brian Sanya Mondoh, 'DAOs: Introducing a New Era of Governance' (2023) 83(1) *Ljubljana Law Review* 196 https://doi.org/10.51940/2023.1.195-219.
[16] Florence Guillaume and Sven Riva, 'Exploring the Laws for DAOs' (*Blog du LexTech Institute*, 25 January 2022) https://www.lextechinstitute.ch/exploring-the-laws-for-daos/.

an empty shell; it organises itself and evolves on its own".[17] Consequently, the question arises as to whether DAOs could or should eventually be recognised as entities capable of legal personality.

1.1 Research Questions

Therefore, this thesis addresses the following question:

What are the legal risks and opportunities associated with the recognition of DAOs as legal persons?

The question will be divided in three sub-questions based on the structure:

a. What are the conceptual and technical characteristics of DAOs that complicate their recognition as legal persons?

b. How have selected jurisdictions (United States, Switzerland, France) addressed the question of DAO legal recognition and liability?

c. What are the legal implications of DAO non-recognition, particularly regarding liability and regulatory compliance?

1.2 Methodology

To answer these questions, a doctrinal methodology is used to find a solution. Moreover, a comparative approach is employed to examine how the United States (US), Switzerland, and France, deals with DAOs. Finally, the thesis includes normative reflections based on the limits of DAOs recognition to improve the legal framework. The comparative analysis is constrained to these three jurisdictions, which have been selected based on their representative diversity and relevance in the DAO ecosystem. In the course of writing this thesis, certain sources proved to be of essential importance. The HCJP report was a significant contribution to the field, dealing with the legal framework governing DAOs. It was also chosen because it is written in French and can complement the approach to DAOs for English-speaking readers. Other reports were deemed essential, such as that by Ellen Naudts, which provides a critical eye and an important analysis on EU financial regulation that is not often found in other texts. Finally, it is important to note that I was not able to access certain recent sources, such as the book by Florence Guillaume and Sven Riva, "Decentralized Autonomous Organizations in the Legal Landscape - From Decentralized Governance to Legal Frontiers" (published by Edward Elgar in May 2025), which would have been highly relevant to the subject of this master's thesis.

[17] Pierre Person, Monnaies, banques et finance: vers une nouvelle ère crypto – Un enjeu de souveraineté et de compétitivité économique, financière et monétaire. Rapport personnel faisant suite au rapport relatif aux monnaies virtuelles (Assemblée nationale, XVe législature, 2020) 193.

In addition to the normative approach, the governance structure of the DAO plays a central role in the analysis, as it characterises the particularity of the DAOs and has an influence on the appropriate standards to adopt in order to maintain the integrity of the governance structure. The US was chosen as the first country to be featured in the work because it is a major jurisdiction with influence around the world, but also because certain federal states such as Wyoming, Tennessee and Vermont have created unique legislation adapted to the characteristics of DAOs. Some states, such as Delaware, Utah and Colorado, have not been covered because they have similar legislation for DAOs, or because the legislation is still pending in the legislative process. France has been chosen because it receives little attention in the literature. The only important document to which I had access dealing with the French jurisdiction and DAOs was the HCJP. In addition, as a French citizen, I was interested in analysing the legal regime for DAOs in my country. Switzerland was chosen because it has a flexible legal framework for DAOs that could inspire other jurisdictions in Europe. It is also a territory that attracts pioneering blockchain and cryptocurrency companies, and the Swiss city of Zug, which is home to many of these companies, is known as the 'Crypto Valley'.

Regarding the limits to the non-recognition of DAOs, the thesis focuses on the question of liability and the absence of accountability, and then on the question of compliance with the recent MiCA regulation. The question of liability was chosen because it is the answer to all the previous development on *de facto* partnerships and associations and their consequences for the personal liability of DAO members and because it is a subject much discussed in the literature. The second part about MiCA has received comparatively less attention but is essential considering that this regulation may have a significant impact on DAOs dealing with crypto assets, and it raises the question of whether all DAOs, including those without legal recognition should be subject to this regulation. The issue of compliance with its decentralised governance structure is also central to this section. EU legislation on DeFi is undergoing imminent development, with the potential to impact DAOs.

1.3 Research Objective

The objective here is to examine the challenges that DAOs pose regarding legal recognition. It is focused on their lack of legal personality, decentralised structure, and technical autonomy. It aims to determine whether DAOs can or should be treated as legal persons, and if not, the legal consequences for participants involved in DAO governance. The thesis explores how different jurisdictions approach the classification or regulation of DAOs, the liability risks DAO stakeholders face in the absence of personality, and the implications of recent regulatory frameworks such as MiCA. The objective of this study is not to provide a critical evaluation, but rather to map the current state of legislation concerning DAOs and their legal recognition. It aims to allow

the reader to comprehend the implications of their recognition and to ascertain the prospects and means of action for resolving the issue of legal recognition. In fact, the emergence of DAOs and their analysis is still very recent and requires more legislative, jurisprudential, academic and institutional content to form a clear opinion on the issue.

1.4 Structure

This thesis is divided into three main sections:

Chapter 2 presents the conceptual and technical foundations of DAOs. It defines DAOs, identifies their core technical and organisational features, and place them within the broader development of blockchain and DeFi ecosystems. It analyses the internal governance of DAOs and contrasts them with traditional organisational models. It explores how DAOs attempt to address the agency problem, the use of on-chain voting mechanisms, and the broader implications of code-based governance.

Chapter 3 examines how DAOs are classified in three jurisdictions: the US, France, and Switzerland. It discusses how those jurisdictions incorporate DAOs in legal wrappers like partnerships, associations, or foundations, and the implications of each legal framework.

Chapter 4 explores the limits of DAO non-recognition. It provides an examination of liability risks faced by DAO participants when no legal personality is attributed, and the regulatory uncertainty created by frameworks like MiCA.

2 The Structure and Governance of DAOs

2.1 The Concept and Characteristics of DAO

The emergence of DAOs must be understood within the broader evolution of blockchain technologies and the ideological foundations of Web3.[18] The invention of Bitcoin in 2008 introduced the first decentralised ledger capable of securing P2P financial transactions without a central intermediary.[19] Ethereum extended this vision by incorporating smart contracts, enabling the automatic execution of programmable logic on-chain.[20] Web3, built upon these infrastructures, aims to redesign the internet around decentralised ownership and user-governed digital environments.[21] It is in this technological and ideological context that DAOs appeared. Initially, DAOs emerged through experiments like "The DAO", launched in 2016 as an open-source venture fund governed by smart contracts, where token holders could vote on proposals without relying on a traditional managerial structure.[22] This first experience have been generalised to all DAOs, that now "are a new form of virtual organisational structures powered by blockchain technology that aim to enable decentralised governance and decision-making".[23]

Defining what a DAO is remains difficult.[24] DAOs take many forms and are still developing. They do not follow a single legal or technical model and often shift between decentralised goals and more traditional structures.[25]

2.1.1 Technical components

At a technical level, DAOs rely on several core components: blockchain infrastructure, smart contracts and governance tokens.

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[18] Kwan Yiu Cheng, 'The Legal Structure of Decentralised Autonomous Organisations (DAOs): Governance, Legal Personality and Liability' (21 February 2025) 34 Information & Communications Technology Law 1.

[19] Michael Lustenberger, Florian Spychiger and Lukas Küng, 'Designing a Decentralized Autonomous Organization' (2024) *ECIS 2024 Proceedings* 6, 6–7 https://aisel.aisnet.org/ecis2024/track16_fintech/track16_fintech/6.

[20] Florence Guillaume and Sven Riva, 'Blockchain Dispute Resolution for Decentralized Autonomous Organizations: The Rise of Decentralized Autonomous Justice' in Andrea Bonomi, Matthias Lehmann and Shaheeza Lalani (eds), *Blockchain and Private International Law* (Brill Nijhoff 2023) 551-552.

[21] Joseph Lee and Rougang Li, 'Law and Regulation for Decentralised Autonomous Organisations (DAOs)' (22 May 2023), 3–5 https://ssrn.com/abstract=4455052.

[22] Guillaume and Riva (n 20) 554; Mustafa Adıgüzel, *Decentralization and Law: Establishment and Functioning of DAOs in the EU* (LLM thesis, Leibniz University Hannover 2023) 14-15.

[23] Vanessa Villanueva Collao, 'Decentralized(?), But Far From Disorganized: A Comparative Analysis of Legal Wrappers and the Evolving Structure of DAOs' (18 February 2025), 6 https://ssrn.com/abstract=5143035.

[24] Charlton and others (n 13) 58; Alexandra Sims, *Decentralised Autonomous Organisations: Governance, Dispute Resolution and Regulation* (PhD thesis, Macquarie University 2021) 69.

[25] Guneet Kaur, 'What is a DAO, and how does it work?' (Cointelegraph, 15 August 2024) https://cointelegraph.com/learn/articles/what-is-a-dao.

2.1.1.1 Blockchain

Blockchain is a form of distributed ledger technology (DLT) invented by Haber and Stornetta in 1991 with the aim to securely timestamp digital documents using of cryptographic hashes to guarantee immutability.[26] DLT is "a digital system for recording the transaction of assets in which the transactions and their details are recorded in multiple places at the same time".[27] Blockchain is a form of DLT in which data is stored in blocks that are connected to each other in a chain. Data in each block is cryptographically secured and timestamped, making it difficult to change or tamper with.[28] Users of the network agree on what is valid through a process called consensus, so no central authority is needed. A consensus mechanism is "a protocol that brings all nodes of a distributed blockchain network into agreement on a single data set. They act as the verification standards through which each blockchain transaction gets approved".[29] Public blockchains like Ethereum, Binance Smart Chain, and Tron are the base for most DeFi projects because they are transparent and open to anyone.[30] In addition to storing data, blockchains can also run smart contracts programs that automatically carry out actions between users when certain conditions are met.[31]

2.1.1.2 Smart contracts

Smart contracts were invented by Nick Szabo in the 1990s and became popular with the launch of Ethereum in 2014.[32] According to the UK Government Office for Science, the true potential of blockchain technology emerges when it is used alongside smart contracts.[33] Smart contracts are "contracts whose terms are recorded in a computer language instead of legal language. Smart contracts can be automatically executed by a computing system, such as a suitable distributed ledger system".[34] This removes the need for intermediaries which help reducing transaction, enforcement, and compliance costs. They also make small-scale transactions more efficient and can

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[26] Bongini and others (n 2) 5.
[27] Nick Barney, Sue Troy and Mary K Pratt, 'Distributed Ledger Technology (DLT)' (*TechTarget*, 7 September 2023) https://www.techtarget.com/searchcio/definition/distributed-ledger.
[28] Satarupa Saha, Bappaditya Jana and Jayanta Poray, 'A Study on Blockchain Technology' (15 October 2019) 1 https://ssrn.com/abstract=3477373.
[29] Brooke Becher, 'What Is a Consensus Mechanism?' (*Built In*, 28 August 2024) https://builtin.com/blockchain/consensus-mechanism#:~:text=Consensus%20Mechanism%20Definition,each%20blockchain%20transaction%20gets%20approved.
[30] Matteo Aquilina, Jon Frost and Andreas Schrimpf, 'Decentralised Finance (DeFi): A Functional Approach' (16 January 2023) 4 https://ssrn.com/abstract=4325095.
[31] Merlinda Andoni and others, 'Blockchain Technology in the Energy Sector: A Systematic Review of Challenges and Opportunities' (2019) 100 Renewable and Sustainable Energy Reviews 143, 144.
[32] Bongini and others (n 2) 6.
[33] UK Government Office for Science, *Distributed Ledger Technology: Beyond Block Chain* (2016) 9 https://www.gov.uk/government/publications/distributed-ledger-technology-blackett-review.
[34] Ibid 18.

support interoperability between different transaction systems.[35] They often rely on oracles, which supply real data from the real world, such as weather or news, and bridges that connect different blockchains by "creating synthetic tokens that represent assets from one blockchain on another".[36] DAOs use smart contracts to automate tasks like voting, resource distribution, and member coordination.[37]

2.1.1.3 Governance tokens

DAOs usually create tokens that give holders the right to vote on how the organisation runs. These are called governance tokens because they represent power distribution, funding, and voting.[38] They are used to measure the voting power of each token holder during votes.[39] Anyone can join a DAO by buying tokens and can leave by selling them.[40] Those tokens give holders rights to manage assets or access DAO resources. They are also transferable, and their value can change over time. It is possible to buy them using cryptocurrencies like Bitcoin or Ether.[41]

2.1.2 Conceptual elements

Beyond this technical infrastructure, DAOs are characterised by several conceptual traits.

2.1.2.1 Organisation

First, the DAO is "a form of organisation that necessarily has rules governing its operation. These rules generally result in the development of a governance system, the functions of which are in principle partially automated".[42] They rely on defined protocols and governance mechanisms that structure how participants interact.[43] They function as distinct entities that "exist separately from its developers and its participants" which needs resources (e.g., cryptocurrencies) to function.[44] These digital organisations implement membership frameworks that allow anyone to become participants and engage in governance processes.[45] Their organisational character is further

[35] Andoni and others (n 31) 146.
[36] Bongini and others (n 2) 6.
[37] Carlos Cabello and Patrick Mikalef, 'Exploring Decentralized Autonomous Organization (DAO) Governance: An Integrative Literature Review' (2024) *MCIS 2024 Proceedings* 27, 3 https://aisel.aisnet.org/mcis2024/27.
[38] Cheng (n 18) 3; Cabello and Mikalef (n 37) 4.
[39] Cabello and Mikalef (n 37) 4.
[40] Cheng (n 18) 3.
[41] Charlton and others (n 13) 63.
[42] HCJP (n 11) 5.
[43] Adıgüzel (n 22) 5-6.
[44] Sven Riva, 'Decentralized Autonomous Organizations (DAOs) in the Swiss Legal Order' (2019/2020) 21 Yearbook of Private International Law 614-615.
[45] HCJP (n 11) 6.

demonstrated through coded rules that manage collective assets and direct activities towards specific objectives.[46]

2.1.2.2 Decentralised

Second, it is their decentralised nature, which eliminates the need for a central authority, as all decisions and management are conducted by members via smart contracts.[47] This decentralisation is further reflected in the horizontal governance structure of DAOs, where power is distributed among stakeholders, including token holders, rather than concentrated in a hierarchical management system.[48]

2.1.2.3 Autonomous

Third, the autonomous nature of DAOs comes from their use of smart contracts that carry out tasks automatically when specific requirements are met, removing the need for manual oversight.[49] However, while this automation of decision-making processes brings efficiency and speed to the execution of smart contract functions, there are also constraints. DAOs can only act on programmed instructions, but when they encounter unforeseen situations or code errors, it is much more difficult for them to adapt. For example, these risks manifested themselves in 2016 when a coding error in "The DAO"'s smart contracts opened a breach and allowed millions of dollars to be extracted, leading to its collapse.[50]

2.1.2.4 Transparent

Finally, DAOs maintain complete transparency because "most of the relevant information relating to the DAO (i.e., its governance rules, past management and the assets it controls) is accessible to everyone, as it is recorded on the blockchain".[51] The code must be available to all participants to properly evaluate the organisational structure before engagement.[52] This level of transparency fundamentally distinguishes DAOs from traditional companies, enabling participation through blockchain addresses without personal identification. However, fully comprehending these systems may require specialised skills due to their technical nature.[53]

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[46] Riva (n 44) 616; HCJP (n 11) 6.
[47] Cheng (n 18) 2; Sims (n 24) 75.
[48] HCJP (n 11) 5-6.
[49] Ibid 5.
[50] Cryptopedia Staff, 'What Was The DAO?' (*Cryptopedia*, 26 February 2025) https://www.gemini.com/cryptopedia/dao-hack-explained.
[51] HCJP (n 11) 7.
[52] Riva (n 44) 615.
[53] HCJP (n 11) 6.

2.2 Typologies and Use Cases of DAOs

There are different types of DAOs depending on what they are trying to achieve. Below are the main categories, with real examples to help illustrate how they work.

2.2.1 Protocol DAOs

This type of DAO is present behind all major DeFi protocols. It has for objective to manage and update blockchain major protocols in DeFi. It involves governance token holders and other DAO members in managing the protocol and aligns their interests with those of the protocol managers. This protocol type allows users to vote on the changes to bring to technical settings, like interest rates or transaction fees. One famous example is MakerDAO which governs the DAI stablecoin. People who own its governance token, MKR, can vote on how the system should work. In the same way, Uniswap is a decentralised exchange (DEX) where UNI token holders can vote on "the protocol's direction, fees and treasury".[54]

2.2.2 Investment DAOs

An investment DAO is a "DAO made up of a community of investors who pool financial resources to invest in a specific strategy or asset".[55] Instead of using a traditional investment that operate with pooled capital in a single centralised party, members vote on what projects or assets to invest in. Examples include MetaCartel Ventures, which is a DAO under the broader MetaCartel DAO, and The LAO.[56] These DAOs raise money from members, and then those members vote on which start-ups or tokens to support. However, when these DAOs expect to make a profit and distribute it to members, they may face strict financial rules. This includes rules on securities and asset management in places like the US.[57]

2.2.3 Grant DAOs

Grant DAOs collects funds and then give them away to support useful projects, usually in the public interest. They do not expect to make a profit. Instead, "grant is collected for a person, group, or project that has the ability to grow and succeed" that benefit the wider community.[58] People donate to the DAO, and then the community votes on which projects to support. One Grant DAO example is Uniswap Grants which funds activities such as hackathons and protocol development. Another example is The

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[54] Ellen Naudts, 'The Future of DAOs in Finance – In Need of Legal Status' *ECB Occasional Paper No 2023/331* (October 2023) 12–15; Chris Brummer and Rodrigo Seira, 'Legal Wrappers and DAOs' (30 May 2022) 20-21; Adıgüzel (n 22) 10-11; Sims (n 24) 88-89; HCJP (n 11) 8.
[55] HCJP (n 11) 8-9.
[56] Naudts (n 54) 11.
[57] Brummer and Seira (n 54) 22-23; Naudts (n 54) 11; Adıgüzel (n 22) 12; Nestor Dubnevych, 'DAO Types: Community DAO, Service DAO & Investment DAO and Regulatory Requirements For Each' (*Legal Nodes*, 10 July 2025) https://legalnodes.com/article/dao-types; HCJP (n 11) 8-9.
[58] Adıgüzel (n 22) 11.

Coffee Shop Support where the goal is to support local coffee shops. This type of DAO plays an essential role in supporting open-source projects and maintaining the technical foundations of decentralised ecosystems.[59]

2.2.4 Philanthropic DAOs

These DAOs are similar to grant DAOs but focus more on social or humanitarian causes. Philanthropic DAOs "raise funds in digital assets with a view to redistributing them to further causes of general interest".[60] They "facilitate and manage donations and charitable giving in ways to support various causes, activities, or projects".[61] For example, they may support disaster relief, climate action, or access to education and health. An example is Big Green DAO, which supports sustainable agriculture and food access in the US.[62] Another example is Ukraine DAO, an organisation set to support Ukraine in the war against Russia which collected $6 million in cryptocurrency donations within nine days.[63] A lot of those become non-profit organisations to raise funds more easily.[64]

2.2.5 Social / Community DAOs

Social or community DAOs do not "pursue a commercial objective; they seek to use decentralised governance techniques to develop and federate a community. The development of the community generally becomes a goal in itself, independently of the indirect objectives that the community DAO may pursue on an ad hoc basis".[65] They can be based on art, music or even fashion and focus on organising social events like parties, managing active discussion forums or publishing newsletters. For example, Friend with Benefits (FWB) DAO, "one of the crypto industry's most expensive and popular social clubs" is on the intersection of technology and culture. Members need a certain number of tokens to join and participate to the creation of content together.[66] Cabin DAO, another example, explores how to build physical communities or "decentralised cities" governed by their members.[67]

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[59] Ibid; Naudts (n 54) 11.
[60] HCJP (n 11) 9.
[61] Brummer and Seira (n 54) 26.
[62] Big Green DAO https://biggreen.org/grantmaking/.
[63] Michal Jirásek and Eva Švandová, 'Ukraine DAO: A Case of a Self-Organized Community in Adverse Times' (29 September 2023) https://ssrn.com/abstract=4863948.
[64] Sims (n 24) 92-95; Brummer and Seira (n 54) 26-28; Adıgüzel (n 22) 11.
[65] HCJP (n 11) 9.
[66] CoinMarketCap, 'Friends With Benefits News' https://coinmarketcap.com/currencies/friends-with-benefits/; Maria Paula Fernandez, 'Crypto Clubs Throwing Summer Parties: Inside The Friends With Benefits DAO Festival' (*Forbes*, 10 August 2023) https://www.forbes.com/sites/digital-assets/2023/08/10/crypto-clubs-throwing-summer-parties-inside-the-friends-with-benefits-dao-festival/.
[67] HCJP (n 11) 9; Brummer and Seira (n 54) 21-22 ; Adıgüzel (n 22) 11-12; Naudts (n 54) 12.

2.2.6 Collector DAOs

Collector DAOs are "pool funds to purchase collectable items such as NFTs, real-life artwork and music".[68] Instead of one person buying a piece of art, a group can pool their funds and own it collectively. Consequently, each member has a personal share in every collected artwork in proportion to personal investment.[69] PleasrDAO is known for buying iconic digital works and rare items. On 9 June 2021, PleasrDAO bought an NFT linked to a Doge (meme) image for over $4 million at an auction on Zora (NFT marketplace).[70] Flamingo DAO has built one of the largest NFT collections through group decisions where users can lend and hold NFTs. NFTs can be displayed in a digital art gallery or used as collateral in other DeFi platforms.[71] One famous example is ConstitutionDAO, which tried to buy an original copy of the US Constitution at auction.[72] These DAOs combine culture, technology and shared ownership.[73]

2.3 DAO Governance: Theory and Practice

Governance means the way decisions are made, rules are set, and actions are taken to manage how a protocol works. It includes both the technical changes to the system and the way the community discusses, decides, and works together to reach shared goals.[74] In corporate law, governance has a similar meaning. It describes the legal and practical frameworks that structure how companies are managed and supervised, aiming to balance the interests of shareholders, managers, and other stakeholders, while also addressing possible conflicts between them.[75]

2.3.1 The agency theory

The idea of corporate governance comes from principal-agent relationships, especially the conflicts that can arise between managers and shareholders.[76] Shareholders rely on managers to make decisions on their behalf, but managers do not always act in the best interest of the owners. This is what agency theory, also known as the principal-agent problem, tries to explain: "the separation of ownership from control produces a condition where the interests of owners and ultimate manager may, and often do, diverge, and where many of the checks which formerly operated to limit

[68] Naudts (n 54) 12.
[69] Adıgüzel (n 22) 12.
[70] IQ.wiki, 'PleasrDAO' https://iq.wiki/wiki/pleasrdao.
[71] IQ.wiki, 'Flamingo DAO' https://iq.wiki/wiki/flamingo-dao.
[72] Brummer and Seira (n 54) 23.
[73] Naudts (n 54) 11; Brummer and Seira (n 54) 23-24; Adıgüzel (n 22) 12.
[74] Mondoh and others (n 9) 8-9.
[75] Florian Möslein and Daniel Ostrovski, 'Legal Personality of Decentralized Autonomous Organizations (DAOs): Privilege or Necessity?' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 99.
[76] Ibid.

the use of power disappear".[77] To deal with this issue, owners often set up systems to keep managers in check, such as performance-based rewards or external monitoring but putting these measures in place can be costly and is not always effective.[78] However, agency problems go beyond this relationship. Conflicts can also arise between majority shareholders, those who own most shares of the company, and minority shareholders because majority shareholders have more power and may make decisions that benefit themselves. Disputes can also emerge with external shareholders like creditors, employees and customers. Consequently, tools are used to protect everyone's interests such as fiduciary duties (legal obligation for directors to act in good faith and in the best interests of the company and its stakeholders), company and partnership law, contractual rules, and shareholders agreements like provisions in the contract that protects minorities.[79]

2.3.2 DAOs, an alternative to the agency theory

As an alternative, DAOs use technology to reduce these conflicts through decentralised decision-making.[80] Most DAOs organise themselves through self-governance, where decisions are made collectively by the community.[81] Instead of fixed meetings or centralised boards, DAOs use an open process where users can submit proposals at any time and token holders vote during set periods, often through online forums and on-chain systems.[82] When the decision has been approved after a vote by the community, smart contracts carry out automatically those decisions. This removes the discretion of the management and prevents some individuals to act in their own interest. Minorities members are protected because it is possible to encode rules that allow them to withdraw their funds from the organisation or that limits certain proposals from being approved if they would harm them.[83]

2.3.3 DAOs' participation process

Most of the DAOs follow a standard process to let any member participate in the organisation functioning through voting mechanisms and discussion. Any member can make a proposal to change the rules. It is shared publicly on popular platforms like

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[77] Andrew Smith, Kevin D Tennent and Jason Russell, *The Modern Corporation and Private Property* (Macmillan Company 1933) 6, cited in Cheng (n 18) 3; The Investopedia Team, 'Principal-Agent Problem Causes, Solutions, and Examples Explained' (*Investopedia*, 15 June 2025) https://www.investopedia.com/terms/p/principal-agent-problem.asp.
[78] Cheng (n 18) 3-4.
[79] Charlton and others (n 13) 70-71.
[80] Möslein and Ostrovski (n 75) 99.
[81] Cabello and Mikalef (n 37) 6.
[82] Jungsuk Han, Jongsub Lee and Tao Li, 'A Review of DAO Governance: Recent Literature and Emerging Trends' (3 November 2024) *European Corporate Governance Institute – Finance Working Paper* No 1044/2025, 4-5 https://ssrn.com/abstract=5074046.
[83] Charlton and others (n 13) 71.

Discourse or Discord to allow a maximum of members to see it. Those proposals follow a classic format which includes a title, an explanation of the idea and often a short poll to obtain early feedback from the community. This early stage is called "temperature check" to help improve the proposal. One example is the Uniswap Foundation proposal in 2022.[84] In some DAOs it necessary to meet extra conditions like having a specific number of tokens, such as 2.5 million UNIs for Uniswap or to upload the proposal on GitHub that requires the proposal to respect Ethereum Name Service (ENS) requirements that go beyond the typical DAO two-step proposal model.[85]

Once the proposal has been discussed and refined, it moves on to the voting stage, which can take place directly on the blockchain or on off-chain platforms such as Snapshot, which avoids gas fees. Each DAO has its own voting rules. These include, for example, how many people must vote for the result to be taken into account (the quorum), how long the vote is open for, or the percentage needed for it to be approved.[86] If the proposal passes, it is executed automatically by smart contracts or implemented by a group using a multi-sig wallet, sometimes with a short delay after the vote to ensure security checks.[87] Although this system gives members real control over how the organisation is run, issues such as low voting turnout or disproportionate influence of members with large numbers of tokens remain a major concern.[88]

2.3.4 DAOs voting mechanisms

DAOs use governance models that differ from traditional corporate models as in ordinary companies where the voting rule is often "one share, one vote" during shareholder meetings.[89] DAOs are based on token-weighted voting, which allows the largest token holders to have greater influence. This system has been criticised for centralising power because "If one purchases whole tokens or as adequate tokens to manipulate the voting mechanism then there is no possibility for a democratic decision-making mechanism in a DAO".[90] Then, some DAOs have tried fairer voting systems. Quadratic voting for example, increase the cost of vote for each extra vote which "greatly mitigates tyranny-of-the-majority and factional control problems". For example, 1 vote might cost 1 token, but 2 votes cost 4 tokens, 3 votes cost 9 tokens, and so on.[91] Conviction voting is where a vote gain strength the longer someone

[84] HCJP (n 11) 11-12.
[85] Möslein and Ostrovski (n 75) 6.
[86] Cabello and Mikalef (n 37) 4-5.
[87] Möslein and Ostrovski (n 75) 8-9.
[88] Cabello and Mikalef (n 37) 4.
[89] Cheng (n 18) 6; Möslein and Ostrovski (n 75) 12.
[90] Adıgüzel (n 22) 18.
[91] RadicalxChange, 'Quadratic Voting' (*RadicalxChange Wiki*) https://www.radicalxchange.org/wiki/quadratic-voting/ accessed 28 July 2025.

supports a proposal, encouraging "sustained support for initiatives and enables better-informed decision-making, as participants weigh their choices thoughtfully".[92]

Some DAOs are experimenting with new systems such as liquid democracy which is similar to representative democracy because it allows members to delegate their votes to someone else. However, delegation can be revoked at any time, allowing "for greater accountability of decision-makers, at the expense of short-term thinking". Holographic consensus allows users to predict the outcome of proposals and are rewarded for their accuracy. These approaches aim to improve fairness and engagement, but they can be "financially demanding and difficult to adapt and maintain in the long term".[93]

2.4 Conclusion

The study reveals the uniqueness of DAOs structure and governance. The combination of blockchain, smart contracts and governance tokens is the foundation of decentralisation and the autonomous coordination among participants that provides transparency. The diversity of DAOs, from protocol and investment DAOs to philanthropic and community-driven models shows the flexibility and the wide range of their objectives. Similarly, there are multiple governance models often relying on token-weighted mechanisms. However, this model of creates a centralisation of the decision-making in the hand of few token holders. As a result, alternative voting models such as quadratic or conviction voting are increasingly explored to mitigate concentration of power and increase participatory fairness. DAOs also challenges the traditional company model based on the agency theory, creating at the same time an innovative model of collective governance founded on technology and members participation, while introducing complex legal challenges.

[92] Möslein and Ostrovski (n 75) 13.
[93] Naudts (n 54) 32.

3 Comparative Legal Approaches to DAO Recognition

3.1 The Legal Personality Problem: Structuring DAOs Through Wrappers

The question of legal personality lies at the heart of DAO integration into existing legal systems. Legal personality allows an entity to contract, hire employees, open bank accounts, pay taxes, sue or be sued, own property, and be recognised as a distinct actor under the law.[94] In this context, some DAOs can be referred to the concept of "maverick DAOs", a term invented by Florence Guillaume and Sven Riva, which is the category of DAOs "created outside existing legal frameworks and are not incorporated within a state jurisdiction".[95]

In practice, when DAOs have no legal status, courts may qualify them as *de facto* or simple partnership. This have the consequence for the members to become jointly liable for DAOs' actions, even when it was not desired.[96] An example is California law which states that the "association of two or more persons to carry on as co-owners a business for profit forms a partnership, whether or not the persons intend to form a partnership".[97] In *Sarcuni v. bZx DAO*, a US federal court accepted that the plaintiffs had plausibly shown the DAO functioned like a general partnership.[98] Governance rights, shared profits, and contributions to protocol maintenance were seen as indicators of partnership, even for token holders who did not actively vote. Then, the court let the case move forward with the consequence for the members to be personally responsible where there is no legal structure in place.[99]

Legal wrappers offer a response to this problem. A "DAO legal wrapper is a legal structure, or a collection of legal entities, that provide a DAO with recognised legal status under the jurisdiction of a specific place of incorporation".[100] It allows to gain separated limited liability and tax protection, to manage assets, enter in contracts and in general it "provides a legal framework for a DAO to interact with traditional financial and legal systems".[101] Wrappers thus do more than confer status; they enable operational

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[94] Brummer and Seira (n 54) 7.
[95] Guillaume and Riva (n 20) 556.
[96] Brummer and Seira (n 54) 6-7; Sims (n 24) 219, 249; HCJP (n 11) 40-41.
[97] California Corporations Code § 16202(a).
[98] *Sarcuni v bZx DAO*, No 22-cv-0618 (SD Cal, 27 March 2023) (United States District Court); Lee Pascoe, 'Decentralised autonomous organisations and liability in litigation – Sarcuni, et al v bZx DAO, et al' (*International Bar Association*, 28 April 2023) https://www.ibanet.org/decentralised-autonomous-organisations-and-liability-in-litigation.
[99] HCJP (n 11) 47-49.
[100] Irina Heaver, 'The DAO Legal Wrapper and Why You Need Them' (*Neolegal*, 31 March 2023) https://neoslegal.co/dao-legal-wrapper/.
[101] DAObox, 'DAO Legal Wrappers: Definition, Types, Jurisdictions, and Use Cases' (*DAObox*) https://docs.daobox.io/dao-legal-wrapper-design-and-creation/legal-wrappers-for-daos-

functionality. They serve as the bridge between the DAO's on-chain governance and its off-chain execution. While a DAO may vote on a proposal using a smart contract, only the wrapper can carry out the result in legal terms, such as signing a contract, opening a bank account, or transferring intellectual property. DAO decisions require an entity capable of producing legally effective acts in the off-chain world, and most legal systems still require contracts or assets to be held by a legally recognised party rather than by a protocol or smart contract address.[102]

However, wrappers come with some negative points. Incorporation can sometime require appointing directors to run the legal entity, but this creates gap between what DAO members decide on the on-chain sphere, which refers to the decision-making process within a DAO taking place directly on the blockchain, and what off-chain representatives (meaning the processes that are not recorded on the blockchain or automated by smart contracts) will do in the real world.[103] This can undermine the DAO's decentralised nature as legal representatives must follow the rules of the legal regime where they exercise their functions.[104] This is why some DAOs choose to remain unincorporated because it "could compromise the anonymity that DAOs inherently offer which is supposed to be different to the exacting reporting and disclosure rules that traditional corporations are required to comply with".[105] Furthermore, making the connection between the virtual and the real-world is difficult "for projects that aim to develop virtual/ digital organisations with an impact in the offline world". Many people who might want to join or help these DAOs don't understand coding or blockchain technology.[106]

Those divergence introduces the next section, which examines how different jurisdictions recognise or requalify DAOs, either by default rules or emerging legislation. Some jurisdictions, such as Wyoming, have adopted DAO-specific statutes that allow smart contracts to serve as governing instruments while preserving limited liability (section 3.2). Others, like France or Switzerland, rely more on analogue legal tools such as associations, foundations, or general partnership rules (sections 3.3 and 3.4). The

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definition-types-jurisdictions-and-use-cases accessed 28 July 2025; Brummer and Seira (n 54) 3-4; HCJP (n 11) 20.

[102] HCJP (n 11) 20-21, Cheng (n 18) 10.

[103] HCJP (n 11) 20-21; Susana, 'DAO and On-Chain Governance' (*EurocoinPay*, 20 March 2025) https://eurocoinpay.io/blog/en/dao-and-on-chain-governance/#:~:text=What%20are%20DAOs?,blockchain%2C%20it%20cannot%20be%20changed; Algorand Foundation, 'Governance Dynamics: How On-Chain and Off-Chain Governance Work' (*Algorand*, 2 August 2023) https://algorand.co/blog/governance-dynamics-how-on-chain-and-off-chain-governance-work.

[104] HCJP (n 11) 20-21.

[105] Cheng (n 18) 9.

[106] Villanueva Collao (n 23) 15–16.

comparative analysis that follows will assess how these approaches affect DAO recognition, liability, and operational effectiveness.

3.2 The United States

The US emerged a one of the major and pioneer jurisdictions in the legal recognition of DAOs. Some states such as Wyoming and Tennessee, initiated the introduction of a tailored legislative frameworks allowing DAOs to register as limited liability companies (LLCs). LLCs are a type of company that combines the limited liability protection of a corporation with the tax treatment and operational flexibility of partnerships.[107] The "DAO LLC" statute recognises the possibility for smart contract code to replace or complement traditional corporate governance mechanisms. It reflects the comprehension of the particularities of the DAO's organisational model where ownership, participation, and control are interlinked. This is different from the traditional way, where shareholders and managers are separate.[108] In parallel, some states have explored association-based models, such as the Unincorporated Non-profit Association (UNA) and the newly adopted Decentralised UNA (DUNA) in Wyoming, which offer DAO-friendly legal status without relying on corporate structures.

3.2.1 DAO-LLC frameworks in Wyoming and Tennessee

In July 2021, Wyoming became the first US state to adopt legislation specifically tailored to DAOs through the enactment of Senate Bill 38. This law was developed by a bipartisan committee, creating the Wyoming Decentralised Autonomous Organisation Supplement, which integrates specific provisions for DAOs into the state's existing Limited Liability Company Act.[109] This allows DAOs to register as LLCs and grant legal recognition to this type of governance based on smart contracts.[110] DAOs can operate as conventional business entities, enabling them to carry out transactions such as hiring employees, and at the same time, it clarifies accountability and confer legal legitimacy.[111] In addition, the members of a DAO LLC are not personally liable for the debts and legal obligations of the DAO.[112]

Under Wyoming law, a DAO may register as a LLC, provided its articles of organisation explicitly state its DAO status.[113] The entity's name must include "DAO,"

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[107] Ribstein LE, "The Emergence of the Limited Liability Company" (1995) 51(1) *Business Lawyer* 1.
[108] HCJP (n 11) 28.
[109] Wyoming Statutes § 17-31-103 (2024).
[110] Aaron M Lane, Darcy WE Allen and Chris Berg, 'Towards Legal Recognition of Decentralised Autonomous Organisations' (GW Competition & Innovation Lab Working Paper Series No 2024/8, 2024) 18.
[111] Naudts (n 54) 28.
[112] HCJP (n 11) 30.
[113] Wyoming Statutes § 17-31-104(a) and (c) (2024); Naudts (n 54) 29.

"LAO" (limited autonomous organisation), or "DAO LLC".[114] The DAO must also specify whether it is "member-managed" or "algorithmically managed," with the default being the former if left unspecified.[115] Other statutory requirements include appointing a registered agent in Wyoming, compliance with general LLC rules, and automatic dissolution if the DAO remains inactive after one year.[116] Members are not bound by fiduciary duties unless the articles provide otherwise.[117]

This legal framework has the advantage to improve the clarity and enforceability of DAO operations, but it has been criticised for reintroducing elements of centralisation. The obligation to appoint a registered agent establishes a human point of contact which contradicts with the decentralised ethos of DAOs.[118] Furthermore, the law requires algorithmically managed DAOs to use smart contracts that are able to be updated, modified, or otherwise upgraded, and additionally, DAO's articles of organisation must be amended when the DAO's smart contracts have been updated or changed.[119] This goes "against the immutability of public records on the blockchain" and potentially requires "consensus mechanisms that would either be impractically decentralised or centralised".[120] This points out ongoing tensions between legal flexibility and the core principles of decentralised governance.[121]

Tennessee followed Wyoming by adopting its own DAO legislation in April 2022 with few notable adjustments. The law refers to the entities as "Decentralised Organisations" (DOs), omitting the term "autonomous" to reflects the functioning of DAOs in practice.[122] Like in Wyoming, DOs in Tennessee are structured as LLCs and governed by the state's general LLC framework. One difference is that Tennessee requires a majority quorum for member votes, whereas Wyoming allows DAOs to define their own quorum rules in their articles of organisation.[123] Wyoming's law, as indicated hereinbefore, merely requires smart contracts to be modifiable, updatable or otherwise upgradable, while Tennessee law has a broader standard and requires smart contracts to be amendable, which could signify a higher degree of flexibility in Tennessee by

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[114] Wyoming Statutes § 17-31-104(d) (2024).
[115] Wyoming Statutes § 17-31-104(e) (2024); Mondoh and others (n 9) 6.
[116] Wyoming Statutes § 17-31-105(b); § 17-31-103(a); § 17-31-114(iv) (2024).
[117] Naudts (n 54) 29.
[118] Deric Behar, Miles Jennings and Stephen Wink, 'Decentralized Autonomous Organizations Find a Home in Wyoming' (JDSupra, 26 April 2021) https://www.jdsupra.com/legalnews/decentralized-autonomous-organizations-5960480.
[119] Wyoming Statutes § 17-31-107(a) (iii) and 17-31-109 (2024); Mike Dill, 'Crypto, DAOs, and the Wyoming Frontier' (*Holland and Hart*, 19 July 2021) https://www.hollandhart.com/crypto-daos-and-the-wyoming-frontier.
[120] Wyoming Statutes § 17-31-109 (2024); Naudts (n 54) 28.
[121] Behar and others (n 118).
[122] Mondoh and others (n 9) 6.
[123] Naudts (n 54) 29.

allowing more substantive changes to the DAO's operational logic and governance structure.[124]

Under traditional LLC law, the general framework remains more flexible than the DAO-specific statutes adopted in Wyoming and Tennessee. These dedicated regimes impose more restrictive obligations, such as mandatory quorum rules, the requirement to publish or amend smart contract code, or the dissolution of the entity after twelve months of inactivity. By contrast, LLCs having a general purpose, such as those formed in Delaware, offer governance structures that are more easily adapted to decentralised needs. They can be managed by either a board or the members themselves and may be fully operated on chain. Members are also allowed to waive mutual fiduciary duties. However, state transparency requirements, such as maintaining and sometimes publishing membership registries, can undermine the limited liability protections and deter participants who wish to remain anonymous.[125]

3.2.2 The Vermont blockchain-based LLC model

Vermont was the first US state to introduce legislation recognising blockchain-based business entities. In 2018, it enacted Senate Bill 269 (SB 269), creating the "blockchain-based limited liability company" (BBLLC) as a specific legal form.[126] This law does not focus solely on DAOs. Rather it adopts a broader approach to blockchain governance. SB 269 has been signed into law in May 2018 and amended Vermont's LLC statute. It has for objective to promote the wider adoption of blockchain across areas such as court procedures, personal data, and public recordkeeping.[127]

A BBLLC is a specific form of LLC that allows governance through blockchain-based smart contracts. While not designed specifically for DAOs, it enables them to gain legal personality, allowing to validly enter contractual relationships and offers limited liability to its members, protecting its "owners, managers and blockchain participants from unwarranted liability". The first BBLLC, dOrg LLC, was formed in 2019 as the first legal entity to cite blockchain code as its governing structure.[128]

A BBLLC is formed like a traditional LLC by filing a certificate of organisation with the Vermont Secretary of State, while also specifying its intention to operate under BBLLC status. The founding documents must include: (i) a description of its mission and objectives, (ii) its level of decentralisation, (iii) whether the blockchain used is public or private, (iv) governance procedures and voting mechanisms, (v) security risk

[124] HCJP (n 11) 32.
[125] Ibid.
[126] Vermont Statutes § 4171 – 4175 (2024).
[127] Lane and others (n 110) 17-18.
[128] HCJP (n 11) 29; Guillaume and Riva (n 20) 565.

remediation protocols, and (vi) the rights and obligations of each participant. BBLLCs are allowed to customise their governance structures using blockchain technology. This includes the use of algorithms to validate records or carry out internal operations. They must also maintain a physical address in Vermont for dispute resolution and legal matters.[129]

3.2.3 Association-based DAO models: UNA and DUNA

One approach in the US is giving DAOs legal recognition by structuring them as Unincorporated Non-profit Associations (UNAs). This is possible under the Uniform Unincorporated Non-profit Association Act (UUNAA). A UNA is formed "when two or more members join under an agreement – which may be oral, recorded, or inferred from conduct – with at least one common, non-profitmaking purpose".[130] This statute can provide limited liability for DAO members and typically does not require any formal registration. However, the UUNAA is only a "model law" as each state has to adopt its local law to give UNAs a legal personality and liability protection. Consequently, its legal effect varies across jurisdictions.[131] In absence of an adoption at the federal state level, common law will apply, and an UNA will be considered as an "extension of the persons who make it up, and not as a legal entity with legal personality".[132]

Kerr and Jennings present UNAs as one of the most suitable structures for DAOs under American law because of their flexibility and adaptability to the formation and operation of DAOs.[133] The problem is that the term "non-profit" is not defined in UUNAA, and each state must define what type of jurisdiction can define as non-profit.[134] Kerr and Jennings argue that DAOs can fall within this definition as "the primary functionality of a governance protocol is not to make profit, but to create and vote on governance proposals that control the smart contracts of an underlying protocol and direct the actions of the DAO treasury to foster the development and growth of a decentralised ecosystem".[135] Kerr and Jennings provide the example of the bingo parlor donating proceeds to a shelter for homeless to illustrate that making proceeds does not automatically disqualify an entity from being non-profit as long as the profits serve a

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[129] HCJP (n 11) 29.
[130] Naudts (n 54) 30.
[131] HCJP (n 11) 32-33; Brummer and Seira (n 54) 15–16.
[132] HCJP (n 11) 33.
[133] Ibid 31.
[134] Jacob E Hirshman, An Exploration of the Regulation and Governance of Decentralized Autonomous Organizations (2022) 43 http://www.keepandshare.com/doc17/view.php?id=27147&da=y.
[135] David Kerr and Miles Jennings, 'A Legal Framework for Decentralized Autonomous Organizations' (2022) 16 https://api.a16zcrypto.com/wp-content/uploads/2022/06/dao-legal-framework-part-1.pdf.

public purpose.[136] However, DAOs could be initially considered as non-profit entities under UNA but governance token holders could vote to change this and decide to distributes profits to themselves at some point. If the DAO refuses, a member could fork (copy the code) and create a version of the DAO that does share profits. It could create competitive pressure on the original DAO and incentivise it to abandon the non-profit purpose.[137]

To counter these limitations, Wyoming adopted the Decentralised Unincorporated Non-profit Association (DUNA) in 2024. This legislation was built especially for DAOs. The DUNA statute therefore incorporates most of the characteristics and rules applicable to UNAs, including the legal personality and limited liability of members and managers.[138] But it accomplish it while safeguarding decentralisation by providing "a baseline structure that does not include a management function, but instead allows for the selection of administrators with limited authorisation to perform specific tasks authorised by the membership" and at the same time respecting applicable standards and US security laws.[139]

3.3 France

France does not have *sui generis* legal status for DAOs. They are not recognised as legal persons and cannot interact with third parties. As a result, most DAOs active in the French ecosystem operate as "maverick DAOs" without registration or formal incorporation. This legal vacuum led to the research of suitable civil law structures that could incorporate DAOs, though each remains imperfect and uncertain.[140]

3.3.1 Association *loi* 1901

One potential route for DAOs seeking some level of legal anchoring in France is through association law. The association *loi* 1901 allows for a very flexible governance because it does not require to open a bank account, and only mandates a simple declaration at the *préfecture* (an administration that belongs to the Ministry of the Interior presents in every department). It is also possible to replicate some of the DAO's on-chain governance at association level and to establish it in the statutes. Several French DAOs already adopted this form, such as Morpho, Mangrove or Paladin. French association structure offers limited liability to their members and its legal

[136] Ibid 19.
[137] Hirshman (n 134) 45
[138] HCJP (n 11) 35-36.
[139] Miles Jennings and David Kerr, 'The DUNA: An Oasis For DAOs' (*a16zcrypto*, 3 August 2024).
[140] HCJP (n 11) 37-40.

representatives can manage off-chain operations, like signing contracts.[141] However, it is not sure whether limited liability will apply to every members of the DAO (governance token holders, developers, users) or will only protect legal representatives against personal liability "because the association 'represents' the DAO without being confused with it".[142] Overall, the association *loi* 1901 solution echoes to UNA model in the US.[143]

In the absence of formal incorporation, French civil law may classify DAOs either as a *société créée de fait* (*de facto* company) or as an *association de fait* (*de facto* association).

3.3.2 *De facto* company

A *société créée de fait* is a civil law concept (similar to a "general partnership" in common law countries), that is used to describe the existence of a partnership between several individuals, even if no partnership has been officially created.[144] It is "a situation in which two or more persons have acted in fact as partners, without having expressed the will to form a partnership".[145] It is based on the same legal regime as that of *société de participation* (joint venture company), meaning that a *société créée de fait* is not a legal person and its existence may be proven by any means.[146] The judge may determine the existence of a *société créée de fait* if it meets three cumulative conditions: existence of contributions, profit sharing and an *affectio societatis* (the intention to associate and form company).[147] In the event the qualification is accepted by the judge, *de facto* partners have unlimited liability to third parties and are jointly and severally liable for their own assets.[148]

3.3.3 *De facto* association

A more probable classification is as an *association de fait*, a contract-based informal association with no legal personality. This structure mirrors many DAO characteristics: the joint adoption of rules by a collective of token holders, for example, can demonstrate tacit agreement. But here too, the lack of personality is a major obstacle. An *association de fait* cannot enter into contracts or hold property in its own name. Legal liability is borne individually by those who act on behalf of the group, and any damage caused may be attributed personally to those members under French tort

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[141] HCJP (n 11) 23-26; Cryptoast, 'La structuration d'une DAO à l'épreuve du droit français – Quels enjeux juridiques ?' (25 November 2022) https://cryptoast.fr/structuration-dao-droit-francais-quels-enjeux-juridiques/.
[142] HCJP (n 11) 25.
[143] Cryptoast (n 141).
[144] Ibid.
[145] HCJP (n 11) 40.
[146] HCJP (n 11) 40; Code civil (France), arts 1871 and 1873.
[147] HCJP (n 11) 41-43; Cryptoast (n 141).
[148] Cryptoast (n 141).

law.[149] The personal liability of the directors of an *association de fait* was confirmed by the French Court of Cassation in two rulings on 17 March 2022: "any fault committed by the directors of a community, which has no legal personality, constitutes a personal fault likely to engage their liability towards the victim, whether or not the fault is detachable from the exercise of their functions".[150]

In conclusion, judicial requalification is still a significant legal risk for DAOs in France. Courts may classify them as *de facto* companies or associations, which all have the same consequences: lack of legal personality, inability to contract or own assets in the name of the DAO, and personal liability for founders or members. As in other jurisdictions, French law tends to push DAOs to adopt an existing legal structure, such as an association or a company. However, doing so requires sacrificing core features of decentralised governance in exchange for clearer and more protective legal treatment. Only the adoption of dedicated legislation would allow DAOs in France to access a secure legal framework while preserving their defining characteristics.[151]

3.4 Switzerland

Switzerland has no DAO-specific law, but its legal system offers a flexible approach through existing forms like associations (*Vereine*) and foundations (*Stiftungen*), which are commonly used as wrappers by DAOs. This strategy provides legal personality and limits liability for participants.[152]

3.4.1 Swiss association

In Switzerland, foundations tend to consolidate power within a board, which may restrict wider involvement because "participants of a DAO cannot take any direct resolutions but will always depend on the approval or implementation by the foundation's board or the supervisory".[153] Associations, on the other hand, provide freedom and a more flexible structure. Under Articles 60 to 79 of the Swiss Civil Code, associations can be formed by two or more founding members for a non-commercial purpose, meaning that "the final purpose of an association must not consist in providing financial benefits to the members".[154] There is no need to be registered unless commercial activities are carried out.[155] What makes this form especially compatible

[149] HCJP (n 11) 44-45.
[150] Cour de cassation (Second Civil Chamber), 17 March 2022, Nos 20-13.505 and 20-13.506.
[151] HCJP (n 11) 55.
[152] Marcel Hostettler and Piotr Wojtowicz, 'The Swiss Association as a Legal Wrapper for a Global DAO and vis-à-vis the MiCA Regime' (2023) 25(1–2) *European Journal of Law Reform* 164-166; Naudts (n 54) 30.
[153] Hostettler and Wojtowicz (n 152) 166.
[154] Ibid 166; Swiss Civil Code, arts 60–79.
[155] Hostettler and Wojtowicz (n 152) 168.

with DAO architecture is the flexibility it provides in shaping internal governance structures and that it "mirror the nature of a DAO".[156]

3.4.2 Swiss Private International Law

When a DAO opts for foreign incorporation, Switzerland remains open to recognising it as a legal person. Under Article 150(1) of the Swiss Private International Law Act (SPILA), any structured association of persons showing that they have a sufficiently organised internal structure and organised asset ("assets must be administered by an administrator, they must be independent of the administrator's assets, and they must have a proper goal") to be treated as a company.[157] Once a DAO is considered a company, Article 154 determines which law governs it (*lex societatis*). If the company is organised under the law of a specific state, then the law of that state governs it according to Article 154(1) SPILA. However, according to Article 154(2), if the company is not organised under any state's law, then it is governed by the law of the state where its administration is located.[158] For a DAO to be recognised as a legal subject (i.e., a company) under Swiss law, it must comply with the *lex societatis*, meaning that it must be governed by a law under Article 154(1) or (2) and it must satisfy the criteria of a company under Article 150 SPILA. In the event it doesn't meet these requirements "it will not exist in Swiss legal order regardless of whether it is characterisable as a company under Art. 150 SPILA".[159] For instance, DAOs formed as Vermont BBLLCs or under the laws of the Maltese Innovative Technology Arrangement and Services (ITAS) Act may be recognised *ipso jure* ("by the law itself") as a company in Switzerland.[160] However, this become more problematic when concerning a "maverick DAO" without legal recognition, how will it be possible to determine the law applicable to them? They are by definition not organised with a law of a state and exists solely on internet and "it should therefore be concluded that maverick DAOs cannot be recognised in Switzerland as foreign companies, cannot have legal personality in Switzerland and cannot appear before Swiss courts".[161]

3.4.3 Simple partnership

Where no wrapper is adopted, Swiss law may impose a default classification. DAOs operating in or from Switzerland without any formal structure risk being requalified as

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[156] Ibid 161.
[157] Riva (n 44) 623; Swiss Private International Law Act (SPILA), art 150(1).
[158] SPILA, art 154.
[159] Adıgüzel (n 22) 39.
[160] Riva (n 44) 629; Florence Guillaume, 'Decentralized Autonomous Organizations (DAOs) Before State Courts: How Can Private International Law Keep Up With Global Digital Entities?' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 142–143.
[161] Ibid 143–144; Riva (n 44) 630.

simple partnerships (*einfache Gesellschaften*) under Article 530(1) of the Code of Obligations, defined as a "contractual relationship in which two or more persons agree to combine their efforts or resources in order to achieve a common goal". This recharacterisation does not depend on intent can also be established unconsciously and unintentionally.[162] Its consequences are far-reaching, since it imposes joint and several liability on all members of the partnership.[163] For projects built on decentralised governance and shared control, being personally liable for the group's actions poses a serious legal risk. Given its liability protection, flexibility, and international recognisability, adopting a Swiss association early is, in my opinion, currently the most effective way for DAOs to secure legal certainty.

3.5 Conclusion

This comparative analysis demonstrated the fragmented and evolving legal landscape surrounding DAO recognition. In all the jurisdictions, the main legal challenge remains the absence of legal personality for DAOs, exposing their participants to liability risks and limits their operational capacity. To address this issue, jurisdictions incorporated DAOs into various legal wrappers like LLCs, foundations, associations, and bespoke DAO statutes. This allows DAOs to have the capacity to interact on both decentralised on-chain governance and off-chain legal requirements. The US leads with specific statutes for DAO such as Wyoming's DAO LLC and DUNA which preservers elements of decentralisation. In contrast, France relies on traditional structures such as the association but with a risk of being qualified as *de facto* companies or associations and be personally liable. Finally, Switzerland offers one of the most permissive environments by allowing association structures compatible with DAO governance and the recognition of foreign entities based on functional criteria. However, there is still a tension between the willingness to keep the decentralised governance models and the need to adopt a legal wrapper built for centralised organisations.

[162] Hostettler and Wojtowicz (n 152) 163; Swiss Code of Obligations, art 530(1).
[163] Guillaume (n 160) 147.

4 The Limits of DAO Non-Recognition

4.1 Liability and the Absence of Accountability

The determination of liability and accountability of DAOs is important to clarify the legal status of both the organisation and its participants.[164] The DAO can theoretically bear liability as a separate entity, protecting members behind the corporate veil, if it is incorporated in a legal wrapper and has legal personality. However, the majority of DAOs are not incorporated in a legal wrapper, leading to complex questions regarding accountability in the occurrence of harm or legal violations. In the absence of legal personality, DAOs could be treated as a general partnership or unincorporated association. As a result, liability may fall on individual participants. This opens the door to joint and several liability for members, including founders or major token holders, even if their involvement is limited. The attribution of liability is thus inseparable from the DAO's legal characterisation, and the roles played by its members and developers.[165] Participants in DAOs may rise liability concerns by acting in their own interest at the expense of others. Developers might be negligent, introduce bugs, or leave backdoors, and token holders can manipulate governance. Such conduct can lead to internal harm among members or external harm to third parties (e.g., fraud, regulatory breaches, financial loss).[166]

4.1.1 Corporation's limited liability

In corporate law, corporations are considered as legal entities that are separate from their owners. This means that the company itself is responsible for its debts, rather than its shareholders, who only risk losing the money they invested or still owe in their shares. This is called limited liability, and it aims to protect the personal assets of shareholders. This doctrine is also named as the "corporate veil" or the principle of "separate legal personality".[167] It encourages smaller investors to invest, as they will not be held personally responsible in the case the company goes bankrupt. In its absence, small investors might be afraid to invest because they may be dissuaded from investing due to a perceived risk of personal financial loss. Similarly, wealthy investors may exercise caution, as they could be targeted individually by creditors. Most large businesses today use entity shielding (like limited liability) to protect owners from direct

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[164] Adıgüzel (n 22) 23.
[165] Ministry of Justice Law Commission, *Decentralised Autonomous Organisations (DAOs): Summary of the scoping paper* (11 July 2024) 23 https://lawcom.gov.uk/project/decentralised-autonomous-organisations-daos/.
[166] Peder Østbye, 'DAOs and Civil Liability: Some Policy Considerations' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 177.
[167] Alessandro Piccolo, 'A Corporation Is A Legal Entity Separate From Its Owners' (*LTD 24*, 28 March 2025) https://ltd24.co.uk/a-corporation-is-a-legal-entity-separate-from-its-owners/.

legal claims which helps support economic growth by reducing personal risk for investors.[168]

4.1.2 The liability of the developers or designers of the protocol

Developers are the creator of smart contracts. Once deployed on the blockchain they become immutable, meaning developers can no longer alter them unless they retain privileged access.[169] This situation reflects the "Code is Law" mentality which hold that if the code allows an action, it is permitted: ""Code is Law" suggests that the rules embedded in blockchain code and smart contracts are supreme. Once the code is deployed, it runs autonomously and executes agreements according to its pre-programmed conditions" and that "the code of a smart contract is the ultimate arbiter of the outcome of an on-chain interaction, as opposed to some overriding force from outside the network. As a result, applications are unstoppable, and run exactly as programmed without downtime, censorship, or third-party interference".[170] This concept suggests that developers should not be held liable as long as the code is transparent, and functions as written.[171] However, these contracts can contain technical defaults and economic vulnerabilities that can be exploited by malicious actors.[172]

Therefore, smart contracts developers can be civilly liable if it can be shown that the vulnerability causing harm was due to their negligence or imprudence. In most legal systems developers are not liable for unintended bugs unless they intentionally introduced vulnerabilities. For instance, in *Risley v. Uniswap*, a US Court rejected claims for scam tokens not because the developers were immune after deployment, but because the harm came from third-party misuse.[173]

4.1.3 The liability of token holders

Governance is the key right of DAO token holders, and it also marks the "beginning of legal liability." Token holders must exercise their decision-making rights with fidelity and good faith. When DAOs are considered as companies, members involved in governance are expected to act carefully and responsibly to avoid causing harm.[174] But, as we said earlier about the idea of "separate legal personality", traditional

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[168] Cheng (n 18) 13.
[169] Adıgüzel (n 22) 24.
[170] Sergey Ostrovskiy, '"Code is Law" in Crypto & Blockchain: Myth or Effective Framework?' (*Aurum*, 18 October 2024) https://aurum.law/newsroom/Code-is-Law-in-Crypto-and-Web3-myth-or-effective-framework; Ethereum Classic, 'Code is Law' (*Ethereum Classic*, 22 February 2022) https://ethereumclassic.org/why-classic/code-is-law.
[171] Adıgüzel (n 22) 24.
[172] HCJP (n 11) 65.
[173] HCJP (n 11) 65; *Risley v Universal Navigation Inc and others*, No 1:22-cv-02780 (SDNY 29 August 2023) https://law.justia.com/cases/federal/district-courts/new-york/nysdce/1:2022cv02780/577791/90/.
[174] Adıgüzel (n 22) 23.

companies are based on keeping ownership and control separate. In DAOs, "decision-making is decentralised among token holders. This in theory eliminates the need for differentiating the interests of investors and managers, and as a result, the agency costs associated with the separation of ownership and control".[175] This separation often breaks down in DAOs, and token holders typically act both as owners and decision-makers, challenging the corporate model and increases the likelihood that token holders could be held directly liable, unlike shareholders in traditional firms who are shielded by limited liability.[176]

Though, identifying member rights is not enough to find an applicable liability regime, it depends on whether the DAO has legal personality or is treated as an ordinary partnership under the law.[177] Granting legal personality to DAOs offers the clearest and safest liability framework. The DAO, as a separate legal entity, would be liable for its own contractual breaches, torts, regulatory violations, and unpaid obligations, protecting individual members from being held personally liable for the DAO's general actions (excepted for their own misconduct or negligence).[178] Without a legal entity acting as a shield (no "corporate veil"), token holders may be personally liable. This liability would be unlimited, exposing governance token holders to risks that are still difficult to estimate.[179]

The *Ooki DAO* lawsuit represents the first civil enforcement action by a federal regulator against a DAO and its members for violations of regulatory requirements.[180] The Commodity Futures Trading Commission (CFTC) filed a federal civil enforcement action in September 2022 in the US District Court for the Northern District of California concurrently with the issuance of an administrative order against the Ooki DAO's predecessor LLC (bZeroX) and its founders for illegally operating as an unregistered futures commission merchant and failing to implement a customer identification programme in violation of the Commodity Exchange Act (CEA). The documents were simultaneously submitted through a help chat box on the DAO's website.[181] In its

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[175] Cheng (n 18) 4.
[176] HCJP (n 11) 68.
[177] Adıgüzel (n 22) 23.
[178] Ibid 24.
[179] HCJP (n 11) 70.
[180] Neal E. Kumar, J. Christopher Giancarlo, Justin L. Browder, Kari S. Larsen and Michael Selig, 'CFTC Brings First-of-its-Kind Lawsuit Against a Decentralized Autonomous Organization' (*Willkie Compliance Concourse*, 30 September 2022) https://complianceconcourse.willkie.com/articles/insights-2022-20220930-cftc_brings_first-of-its-kind_lawsuit/
[181] HCJP (n 11) 49; Naudts (n 54) 16; Commodity Futures Trading Commission, 'CFTC Order Finds, and Complaint Alleges, Ooki DAO is Liable as an Unincorporated Association' Release No 8590-22 (22 September 2022) https://www.cftc.gov/PressRoom/PressReleases/8590-22; *Commodity*

complaint, the CFTC argued that Ooki DAO met the federal definition of an unincorporated association, as it "is (i) a voluntary group of persons, (ii) without a charter, (iii) formed by mutual consent, (iv) for the purpose of promoting a common objective".[182] The CFTC argues that because members of an UNA can be held personally responsible for the association's actions, certain Ooki DAO token holders may also bear personal liability for the DAO's conduct, as any person who participated in the governance of the DAO through the exercise of its right to propose and vote on governance proposals to that effect, should be considered a partner of the UNA.[183]

In December 2022, in an order granting motion for default judgment, Judge William Orrick affirmed that Ooki DAO was an unincorporated association and could be sued under California law.[184] The Court did not explicitly accept the CFTC's argument that only active voters should be considered members of the DAO. Instead, it supported a broader definition of "association member", suggesting that simply holding a governance token may be enough to qualify someone as a member, even without voting. The Court reasoned that the ability to vote or propose governance decisions reflects a common objective and even choosing not to vote contributes to the DAO's governance purpose, potentially making the token holder part of the association.[185]

However, the Court recognised Ooki DAO as an unincorporated association only for the purpose of validating service of process, not to decide on member liability. Then, it remains unresolved whether merely holding a governance token is enough to be considered a liable member.[186] Furthermore, another issue was that "it remains unclear who should have appeared on behalf of the DAO and whether that individual or group could genuinely represent the entire DAO".[187] To enforce the judgment, the CFTC would need to identify token holders, but this is complicated due to decentralised nature of

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Futures Trading Commission v Ooki DAO (formerly d/b/a bZx DAO), Complaint, No 3:22-cv-5416 (ND Cal, 22 September 2022).

[182] Naudts (n 54) 16;

[183] Ibid; HCJP (n 11) 51; Commodity Futures Trading Commission, *In the Matter of bZeroX, LLC, Tom Bean, and Kyle Kistner*, CFTC Docket No 22-31, Order Instituting Proceedings Pursuant to Section 6(c) and (d) of the Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions (22 September 2022) 9-11.

[184] Naudts (n 54) 16; HCJP (n 11) 51; *Commodity Futures Trading Commission (CFTC) v Ooki DAO* No 3:22-cv-05416-WHO, 2022 BL 454541, 2022 US Dist LEXIS 228820 (ND Cal, 20 December 2022).

[185] HCJP (n 11) 51; Kristopher B Kastens, 'Ooki DAO Default Judgment: Regulators Still Face Many Technical and Legal Challenges in Regulating Smart Contracts' (*Herbert Smith Freehills Kramer*, 20 June 2023) https://www.hsfkramer.com/insights/2023-06/ooki-dao-default-judgment-regulators-still-face-many-technical-and-legal-challenges-in-regulating-smart-contracts;
Commodity Futures Trading Commission (CFTC) v Ooki DAO No 3:22-cv-05416-WHO, 2022 BL 454541, 2022 US Dist LEXIS 228820 (ND Cal, 20 December 2022) 11.

[186] HCJP (n 11) 52.

[187] Ibid; Kastens (n 185).

the protocol, the lack of know your customer (KYC) protocol and identity verification, and the uncertainty around liability for non-US token holders.[188] Ultimately, in the June 2023 judgment, Ooki DAO was fined $643,542.[189]

In the end, DAOs that operate without a legal wrapper risk being recharacterised by a court as a general partnership, as in *Sarcuni v. bZx DAO*, or as an unincorporated association, as in the *Ooki DAO* case, potentially exposing token holders to personal liability. Even when DAOs adopt wrappers such as foundations or associations to shield participants from liability, the effectiveness of such structures remains uncertain. Indeed, they often lack control over the protocol and do not hold significant assets. Because of this, regulators and victims may still pursue individual actors. Creating legal uncertainty also creates personal risk for directors, discouraging them participating in the development of DAOs.[190]

4.2 DAO Regulation under MiCA and EU Gaps

The present situation calls for a conceptual approach to the regulation of DAOs, despite the potential prematureness of formal rules. Many policymakers still avoid addressing DeFi, and current international regulatory frameworks were not designed for DAOs. There is a need to explore how DAOs might fit into existing rules and to prepare for a future EU regulation specifically tailored to DAOs.[191]

The EU is the first region to establish a regulatory package for crypto assets, in the form of the MiCA Regulation. It has been adopted in May 2023 and fully entered into force in December 2024.[192] MiCA has been adopted in accordance with the 2020 digital finance strategy and covers the "crypto-assets and related services and activities that are not covered by other Union legislative acts on financial services".[193] The regulation defines the term crypto assets extensively as "a digital representation of value or rights which may be transferred and stored electronically, using distributed ledger technology or similar technology".[194] MiCA covers stablecoins in one category, which are divided into asset-reference tokens and e-money tokens, and in another category it covers

[188] Kastens (n 185).
[189] *CFTC v Ooki DAO* No 3:22-cv-05416-WHO (ND Cal, 8 June 2023) 1.
[190] HCJP (n 11) 67.
[191] Naudts (n 54) 15.
[192] Ibid 17; European Securities and Markets Authority (ESMA), Markets in Crypto-Assets Regulation (MiCA) https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation/markets-crypto-assets-regulation-mica accessed 24 July 2025.
[193] European Commission, Crypto-assets https://finance.ec.europa.eu/digital-finance/crypto-assets_en accessed 24 July 2025.
[194] Regulation (EU) 2023/1114 of the European Parliament and of the Council of 31 May 2023 on Markets in Crypto-assets [2023] OJ L 150/40 (MiCA), art 3.

utility tokens.[195] Its main provisions focus on transparency, disclosure, authorisation and supervision of transactions to support market integrity and financial stability.[196]

MiCA rules "applies to natural and legal persons and certain other undertakings that are engaged in the issuance, offer to the public and admission to trading of crypto-assets or that provide services related to crypto-assets in the Union".[197] MiCA uses the term "undertakings" in Articles 16, 18, 59 and 62, and it could possibly include such non-legal entities. This is like in the Markets in Financial Instruments Directive (MiFID), which lets Member States include certain non-legal entities if they meet conditions.[198] Still, DAOs are likely not covered unless a Member State legally recognises them as such, which has not happened yet.[199]

Furthermore, The European Parliament initially sought to include DAOs in MiCA, given their ability to issue tokens and provide DeFi services. However, following the political agreement in October 2022, all references to DAOs were removed.[200] Recital 22 states that "where crypto-asset services are provided in a fully decentralised manner without any intermediary, they should not fall within the scope of this Regulation".[201] However, MiCA does not clearly explain what counts as decentralised. Also, it is still uncertain whether decentralisation must exist only in the blockchain infrastructure or also in the DAO's governance structure.[202] As discussed earlier, a DeFi community governed by a DAO might be legally seen as a civil partnership, and that could be considered as an "intermediary" that could render MiCA applicable. The scope of MiCA is flexible, and might apply even to decentralised arrangements, depending on how decentralisation is assessed. Indeed, since absolute decentralisation is rare or even a myth, it is unclear how much decentralisation is "enough" to fall outside MiCA's scope.[203] In reality, most so-called decentralised platforms have identifiable persons or entities involved in code development or custom services via Telegram and Discord, challenging

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[195] Ibid, rec 18.
[196] ESMA (n 192).
[197] João Vieira dos Santos, 'The Nature of the DAO: Transaction Costs, MiCA and a Specific Legal Framework' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 212; MiCA, art 2(1).
[198] Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments [2014] OJ L173/349 (MiFID), art 4(1).
[199] Vieira dos Santos (n 197) 212.
[200] Naudts (n 54) 17; António Garcia Rolo, 'Out of Scope, Out of Mind, and Don't Say Decentralisation: Brief Remarks on the New MiCA Regulation' (*European Law Blog*, May 2023) https://doi.org/10.21428/9885764c.6c41a360.
[201] MiCA, rec 22.
[202] Vieira dos Santos (n 197) 213.
[203] Madalena Perestrelo de Oliveira and Marta Boura, 'DAOs and Mandatory Decentralisation: How to Assess Decentralisation When Shaping Regulation for DAOs' in Madalena Perestrelo de Oliveira and António Garcia Rolo (eds), *DAO Regulation: Principles and Perspectives for the Future* (Mohr Siebeck 2023) 13.

the notion that such platforms are truly decentralised and outside the scope of regulation: "at the heart of fully decentralised platforms thus lies human cooperation, exercised through the steering of computers and servers".[204]

MiCA requires the European Commission (EC) to publish a report of the regulation by 30 December 2024 after consulting the European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA) to provide "an assessment of the development of decentralised-finance in markets in crypto-assets and of the appropriate regulatory treatment of decentralised crypto-asset systems without an issuer or crypto-asset service provider, including an assessment of the necessity and feasibility of regulating decentralised finance" and where appropriate a legislative proposal.[205] The EC's report has been delayed until mid-2025. However, EBA and ESMA published a joint report, pursuant to Article 142 MiCA. It confirmed that "where crypto-asset services are provided in a fully decentralised manner without any intermediary, they should not fall within the scope of MiCAR". This aligns with Recital 22 MiCA, but it also says that "MiCAR, however, does not specify how to interpret references to fully decentralised."[206] Consequently, guidance on the applicability of DeFi and DAOs to MiCA is likely to be provided in the forthcoming EC report.

4.3 Conclusion

The absence of legal recognition for DAOs creates problems around liability and regulatory compliance. In the absence of a legal wrapper, there is a risk of being recharacterised as partnerships or associations, exposing developers and token holders to personal liability. Most DAOs operate outside such frameworks, leaving participants vulnerable. Cases like *Ooki DAO* and *Sarcuni v. bZx* demonstrated the legal risks faced by members, even for non-active governance token holders. In the EU, MiCA regulation is a relevant example of the difficulty to address decentralised entities operating in DeFi. MiCA shows the urgent need for legislative actions to address the risks and opportunities of DAOs while preserving their decentralised nature.

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[204] Dirk A Zetzsche, Ross P Buckley, Douglas W Arner and Maurits van Ek, *Remaining Regulatory Challenges in Digital Finance and Crypto-Assets after MiCA* (Policy Department for Economic, Scientific and Quality of Life Policies, European Parliament 2023) 115.
[205] MiCA, art 142.
[206] European Securities and Markets Authority and European Banking Authority, Joint *Report: Recent Developments in Crypto-Assets (Article 142 of MiCAR)* (ESMA (n 185)75-453128700-1391, EBA/Rep/2025/01, 16 January 2025) 4 https://www.esma.europa.eu/document/joint-eba-esma-report-recent-developments-crypto-assets-article-142-mica.

5 Conclusion

The expression "*code-based community*" has been used in the title of the thesis to reflect the governance structure embedded in digital code, principally smart contracts operating on blockchain networks. It echoes to the distinction made by Katharina Pistor in *The Code of Capital* between legal code that protects capital through the law, and the digital code which she identifies as a rising alternative mode of social and economic ordering. She remains cautious and ask the question whether the digital code will replace legal code. However, "all indicators suggest that the arbiter over this battle will be the "legacy" institutions: the courts and legislatures that are themselves products of law", which she sees as "a strong predictor for which of the two codes will emerge from this battle victoriously". Then, this can be linked with DAOs and whether these "legacy" institutions will accommodate DAOs in the existing legal categories or recognise them as a distinct legal entity.[207]

DAOs are atypical organisations that are rooted in blockchain technology, smart contracts, and distributed decision-making. They reshape the legal and organisational landscape by challenging traditional corporate forms. Those entities that have encoded their rules in code, automated execution through smart contracts and dispersed control among token holders, opened new governance opportunities by eliminating the agency costs associated with the separation of ownership and control. However, current legal systems, which rely on centralised authority and individual legal subjects, are not yet equipped to accommodate the transparency and automation of DAOs.

In this thesis, we have analysed the conceptual foundations and legal implications of DAOs, demonstrating that their lack of legal personality creates uncertainty regarding liability and regulation compliance. DAOs that does not have legal status cannot own assets, enter binding agreements, or shield their members from personal liability. This is the reason why, Courts across jurisdictions, have qualified DAOs as partnerships or unincorporated associations, attributing liability to developers and token holders based on participation, and even based on mere token ownership. To counter those setbacks, DAOs have tried to fit into wrappers such as foundations or associations, offering partial protection, but which often fail to reflect or preserve the decentralised architecture of the DAO itself.

Important jurisdictions introduced laws to bring a regulatory response. In the US, some states have enacted laws that recognise DAOs as LLC, enabling them to

[207] Katharina Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton University Press 2019) 203-204.

operate under smart contract governance while preserving aspects of decentralised control. Switzerland already has an adaptable environment through its association law which allow DAOs to act with a legal status and flexibility. France, by contrast, applies existing categories such as *de facto* associations or companies, leaving DAO members exposed to full personal liability. This creates a legal "vacuum" when considering compliance to regulations. In the EU, MiCA has refrained from addressing DAOs directly and exclude "fully decentralised" systems which maintains ambiguity about the scope of decentralisation.

It becomes necessary to adopt a regulatory framework tailored to DAOs which reconcile their technical nature based on smart contracts with a legal personhood to enable DAOs to securely operate within legal systems. Initiatives have been undertaken by experts from the legal and technological fields like the Coalition of Automated Legal Applications (COALA) to fill the legal vacuum around DAOs and to draft "a model law to help States modernise their company law by adopting substantive rules applicable to DAOs".[208]

It is imperative that the EU assumes a leading role in establishing legal frameworks tailored to the unique characteristics of DAOs. This is because the EU is not the privileged territory to incorporate DAOs compared to most popular countries like Switzerland, the US, Panama, the Marshall Islands, the Cayman Islands, Singapore and Liechtenstein. This is a pivotal issue, given that "the domiciliation of DAO developers on European territory represents a significant strategic opportunity for Europe" with the risks of "loss of EU talent and consequently loss of competitiveness and employment potential in the decentralised web economy".[209]

The future of DAO governance depends on the willingness of legal systems to adapt. This means reinterpreting legal principles considering new technological realities, not abandoning them. This is the only way for DAOs to become a real and lasting part of the digital economy.

[208] Guillaume and Riva (n 7) 30–31.
[209] ADAN (n 10) 30-31.

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