DECENTRALIZED AUTONOMOUS ORGANIZATIONS: AN INDIAN PERSPECTIVE ON LEGAL AND REGULATORY ISSUES

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ABSTRACT

Decentralised Autonomous organizations are a rapidly growing concept that works on the principle of blockchain with smart contracts automatically doing tasks on trigger of events. The core feature of these organizations is their decentralised nature, i.e. they do not possess any single owner. These organization act as investment pools, and utilise cryptocurrency to pursue a common goal. This concept has gained traction but so does liability concerned with such DAOs. These DAOs fail to fit within the traditional laws made for existing corporations, making it complex for regulatory bodies to ensure their regulation.

The paper aims to highlight the significant challenges posed by the lack of such explicit regulations concerning the operations of DAOs. The research begins by providing a detailed explanation of DAOs, including their fundamental components and the mechanisms through which they operate. The paper also provides for a comparative analysis across various jurisdictions wherein DAO has been legally recognized and how the laws of those jurisdictions deal with DAO operations. Further, the paper elaborates on India's take on such blockchain technologies while explaining about the issues that may arise due to the non-regulation of DAOs by a hypothetical example. The primary issues addressed are: the liability of DAOs in matters of a potential default, taxation dilemma, and the money laundering concerns arising from the very nature of DAOs. The research is concluded with a set of recommendations that must be inculcated in the legislation governing DAOS to seamlessly regulate them within the Indian context.

Keywords: DAO, Smart Contracts, Blockchain, DLT, Cryptocurrency

I. INTRODUCTION

In recent years, a novel organizational form has emerged, ostensibly addressing some of the inherent limitations[1]of traditional corporations and representing a brand innovation in the design of organizations i.e., Decentralized Autonomous Organizations **(DAO)**.[2] First introduced in 2016 with the launch of "The DAO" by Slock.it[3], DAOs are entities that operate on blockchain technology and are governed by self-executing smart contracts.[4] There is no widely accepted definition of a DAO aside from Jentzsch's broad explanation of this novel phenomena. Jack du Rose, defines a DAO as a type of decentralised application which incentivises its users to engage in activity which furthers its agreed business objectives and enables them to work together without requiring them to trust one another.[5] DAOs are thus open-networked enterprises (ONEs) combined with autonomous agents—software that makes decisions and acts on them without human intervention.[6] It operates as a borderless, permissionless entity and allows participation irrespective of geographic location or demographic background.[7] Unlike traditional corporations, DAOs are characterized by their decentralized nature, tamper-resistance, and transparency, as all rules and decisions are encoded in immutable smart contracts.[8] These organizations promise to revolutionize governance and decision-making and enable participants to collaborate globally without relying on traditional principal-agent relationships or centralized authority.[9] The purported goal of DAOs is to successfully manage the assets under their control and to maximise their net

[1] 3 JOHN ARMOUR AND OTHERS, THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH 6 (Oxford University Press, New York, 2017).
[2] Usman W Chohan, *The Decentralized Autonomous Organization and Governance Issues*, University of New South Wales, Discussion Paper, 1 (2017).
[3] Christoph Jenztch, *Decentralized Autonomous Organization to Automate Governance,* White Paper, 1-31 (2016).
[4] De Filippi and others, *Blockchain technology as a regulatory technology: From code is law to law is code,* 21 First Monday, 12 (2016).
[5] Jack du Rose, *Clearmatics, EtherCasts & Colony* (speech to the London Ethereum Monthly Meetup, London, 4 May 2016).
[6] DON TAPSCOTT AND ALEX TAPSCOTT, BLOCKCHAIN REVOLUTION HOW THE TECHNOLOGY BEHIND BITCOIN IS CHANGING MONEY, BUSINESS AND THE WORLD 121 (Penguin Random House 2016).
[7]Aaron Wright, *The Rise of Decentralized Autonomous Organizations: Opportunities and Challenges*, 4 Stan. J. Blockchain L. & Pol'y 152, 154-158 (2021).
[8] Brian Sanya Mondho and others, *Decentralised Autonomous Organisations: The Future Of Corporate Governance or An Illusion?,*SSRN Electronic Journal 1, 2-3 (2022).
[9] Nathan Tse, *Decentralised Autonomous Organisations and the Corporate Form*, 51 Victoria U Wellington L Rev 313, (2020).

economic returns.[10]

A DAO is understood as an unincorporated, distributed ledger technology (DLT)-structured, smart contracts-enabled, profit or non-profit, entity or system, which is ultimately controlled collectively by its participants.[11]

A. Blockchain Technology

A blockchain is, in essence, a cryptographically secure, distributed ledger. It is a decentralised database distributed across nodes in a peer-to peer-network.[12] Each user or "node" in the network can access a replicate of the ledger, and community validation is used to keep the ledger content synchronised.[13] This community validation process (or consensus protocol) is a set of formalised, pre-defined governance rules stored on the blockchain's consensus layer.[14] Thus, blockchains eliminate the requirement for a reliable third party to verify transactions because the network does it by consensus. They are characterised either permissioned or permissionless (open), digitally distributed, transparent, and immutable ledgers, which can record anything expressible in code in timestamped and chronologically arrayed blocks. These characteristics facilitate trust and system-robustness, as the coded value cannot be double-spent or undone.[15] Since blockchains operate on a peer-to-peer network, and facilitate direct interactions between participants without needing intermediaries, it makes them particularly suitable for circumventing centralized authorities, such as governing bodies like boards of directors and thereby, promote decentralisation.[16]

[10] K. Minn Taeck, *Towards Enhanced Oversight of "Self-Governing" Decentralized Autonomous Organizations: Case Study of The DAO and Its Shortcomings,* 9(1) JIPEL 139, 162 (2020).
[11] Marco Bodellini and Dalvinder Singh, *Decentralised autonomous organizations: looking for a suitable regulatory treatment,* OPEN REVIEW OF MANAGEMENT, BANKING AND FINANCE (Apr. 5, 2021), https://openreviewmbf.org/2021/04/05/decentralised-autonomous-organizations-looking-for-a-suitable-regulatory-treatment/.
[12] Alex Norta, Creation of Smart-Contracting Collaborations for Decentralized Autonomous Organizations' in Raimundas Matulevicius and Marlon Dumas (eds),'Perspectives in Business Informatics Research' (14th International Conference, BIR 2015, Tartu, Estonia, 26-28 August 2015) (2015) .
[13] Tomaso Aste and others, Blockchain *Technologies: The Foreseeable Impact on Society and Industry*, 50(9) Computer 18, 18 (2017).
[14] Shermin Voshmgir, *Disrupting governance with blockchains and smart contracts,* 26 Strategic Change 499, 499 (2017).
[15] Credit Suisse, *Blockchain 2.0* (11 January 2018, Global Equity Research Technology) 54.
[16] Marcella Atzori, *Blockchain Technology and Decentralized Governance: Is the State Still Necessary*? (PhD Thesis, University of Nicosia, Cyprus, 2015) 15.

B. Smart Contracts

The concept of smart contracts, first introduced by Nick Szabo in 1994, lies at the heart of DAOs and is defined as a computerized transaction protocol that executes the term of a contract.[17] These self-executing protocols automate business logic based on pre-defined conditions and ensure secure and trustless execution of organizational processes.[18] Smart protocols distinguish themselves from conventional 'event-condition-action-rules based on Boolean logic in that they are programmed on blockchains,[19] and that their execution cannot be interfered with when commenced.[20] DAOs implement smart contract code to automate organisational governance and corporate decision-making tackling issues and operational systems inherent in traditional corporations.[21] Once deployed, the DAO becomes independent of its smart contract developers and contains rules, which are embedded in code and are self-executed independently of the will of the parties.[22]

C. Initial Coin Offering

DAOs usually raise money from participants all over the world and use crowdfunding programs, particularly initial coin offers (**ICOs**). An ICO is the introduction of a new blockchain with an offer to the general public or a specific investment group for the pre-mined cryptocurrency assets of the new system in return for fiat money like USD or EUR or other cryptocurrency assets like bitcoin or Ether. ICOs sometimes referred to as "crypto-crowdfunding" or "crowd-sale," can generally be used to promote or crowdfund distributed projects like DAOs.

These elements of a DAO, inclusive of blockchain technology and smart contracts, eliminates the need for hierarchical management. Therefore, DAOs turn into "flat" organizations where

[17] Nick Szabo, *Smart Contracts*, Whitepaper (1994).
[18] Stuart D. Levi and Alex B. Lipton, *An Introduction to Smart Contracts and Their Potential and Inherent Limitations,* THE HARVARD LAW SCHOOL FORUM ON CORPORATE GOVERNANCE (May 26, 2018), https://corpgov.law.harvard.edu/2018/05/26/an-introduction-to-smart-contracts-and-their-potential-and-inherent-limitations/#3.
[19] DAVID GERARD, ATTACK OF THE 50 FOOT BLOCKCHAIN: BITCOIN, BLOCKCHAIN, ETHEREUM & SMART CONTRACTS 101 (CreateSpace Independent Publishing Platform 2017).
[20] Konstantinos Christidis and Michael Devetsikiotis, *Blockchains and Smart Contracts for the Internet of Things,* 4 IEEE Access 2292, 2292-94 (2016).
[21] Christoph Jenztch, *Decentralized Autonomous Organization to Automate Governance,* White Paper, 1-31 (2016).
[22] Aaron Wright, *The Rise of Decentralized Autonomous Organizations: Opportunities and Challenges*, 4 Stan. J. Blockchain L. & Pol'y 152, 154-158 (2021).

power is distributed collectively among participants and participants engage with co-equals to add equal (or similar) value to the community.[23] As a result, DAOs represent a significant shift from traditional corporate governance models, potentially paving the way for a decentralized autonomous society in which humans are 'freed' from centralized institutions of power and control.[24]

A DAO may act as a platform, where members interact according to a self-enforcing, open-source protocol.[25] Those interested in furthering the objective of the DAO or in optimising the value of the DAO purchase the DAO's tokens.[26] The tokens gave governance, economic, and information rights in the form of, *inter alia*, voting rights.[27] DAOs were, therefore, referred to as digital corporations.[28] These governance tokens are native cryptocurrencies that are tied to a specific DAO's project, and the proceeds are then allocated to DAO's treasury's account.[29] It is in the interests of all DAO token holders that only beneficial proposals that will optimise the value of the DAO are approved.[30] If the proposal is approved, it will be recorded in the blockchain. Remuneration for fulfilling the proposal will typically be codified in a smart contract, such that compensation will only be rewarded once proposers deliver on their promise.[31]

It is pertinent to assert that legal regulation of DAOs is essential to fully realize their potential. Lack of such determination leads to various issues, some of which are briefed below and will be discussed in detail in further sections.

Primarily, the decentralized and non-hierarchical governance structure of DAOs, where decision-making power is distributed across network participants rather than concentrated in a

[23] Lund Dane, *DAO Governance Primer: Flat DAOs,* MIRROR XYZ (Mar. 10, 2022), https://lund.mirror.xyz/Fe5BYyO5oMcVeXyXUK1iZX4QM-KVBc4azAG5jjU6ETM.
[24] JZ Garrod, *The Real World of the Decentralized Autonomous Society,* 14 Triple C 62, 62 (2016).
[25] SHERMIN VOSHMGIR, TOKEN ECONOMY: HOW BLOCKCHAINS AND SMART CONTRACTS REVOLUTIONIZE THE ECONOMY 143 (BlockchainHub Berlin 2019).
[26] Wulf A Kaal, *Blockchain Solutions for Agency Problems in Corporate Governance* in Kashi R Balachandran (ed) Economic Information to Facilitate Decision Making (World Scientific Publishers, Singapore, 2019), 19.
[27] DAVID GERARD, ATTACK OF THE 50 FOOT BLOCKCHAIN: BITCOIN, BLOCKCHAIN, ETHEREUM & SMART CONTRACTS 101 (CreateSpace Independent Publishing Platform 2017).
[28] Seth Bannon, *The Tao of The DAO*, TECHCRUNCH (May 16, 2016), https://techcrunch.com/2016/05/16/the-tao-of-the-dao-or-how-the-autonomous-corporation-is-already-here/.
[29] Robert A. Schwinger, *DAOs Enter the Spotlight,* NEW YORK LAW JOURNAL (Mar. 21, 2022), https://www.law.com/newyorklawjournal/2022/03/21/daos-enter-the-spotlight/.
[30] Wulf A Kaal, *Blockchain Solutions for Agency Problems in Corporate Governance* in Kashi R Balachandran (ed) Economic Information to Facilitate Decision Making (World Scientific Publishers, Singapore, 2019), 19.
[31] DAVID GERARD, ATTACK OF THE 50 FOOT BLOCKCHAIN: BITCOIN, BLOCKCHAIN, ETHEREUM & SMART CONTRACTS 101 (CreateSpace Independent Publishing Platform 2017).

central authority,[32] poses a significant challenge in assigning liability. Since, DAOs do not have any single "owner",[33] and lack recognition concerning their legal status, this raises critical issues, such as on whom liability will be imposed in such decentralized structures. Furthermore, taxation framework for DAOs is another lacuna. The existing taxation laws work for traditional businesses with identifiable owners and traceable income, however, DAOs, with decentralized ownership and borderless operations, defy these assumptions, and thus, complicate tax enforcement.[34] Since DAOs do not fit the existing tax frameworks, the industry tend to work by analogy, thus fostering innovation while managing tax exposure effectively.[35] Lastly, participation in a DAO is often open to anyone, with no mandatory identity verification required.[36] This anonymity can facilitate illicit activities such as money laundering and terrorist financing,[37] allowing such actions to occur covertly and evade law enforcement, which must be mitigated through stringent regulations.

Having examined the issues arising due to the non-regulation of DAOs, it becomes imperative to understand how to tackle the same. The subsequent section offers a detailed comparative analysis across jurisdictions and provides a foundation for determination of these issues.

II. LAWS RELATING TO REGULATION OF DAO'S ACROSS JURISDICTIONS

The concept of DAOs is not unique to the Indian economy but has gained global importance due to its potential impact on legal, financial, and regulatory discourse. Despite this, many countries around the world, including India, have mostly neglected the potential of such dematerialized and decentralized entities. It is to be noted that, even today, the legal implications and economic opportunities associated with DAOs often receive little to no

[32] Tomaso Aste and others, Blockchain *Technologies: The Foreseeable Impact on Society and Industry*, 50(9) Computer 18, 18-23 (2017).
[33] PRIMAVERA DE FILIPPI AND AARON WRIGHT, BLOCKCHAIN AND THE LAW: THE RULE OF CODE 149 (Harvard University Press, Cambridge (Mass), 2018).
[34] António Rocha Mendes, The *Case for Taxing DAOs. Challenges, Methods and Impossibility* in Florian Möslein and others (eds), *Decentralised Autonomous Organisation (DAO) Regulation* (Mohr Siebeck Tübingen 2024).
[35] EY India, *How to navigate tax and legal complexity associated with DAOs*, ERNST AND YOUNG GLOBAL LIMITED (Aug. 2, 2023), https://www.ey.com/en_gl/insights/tax/how-to-navigate-tax-and-legal-complexity-associated-with-daos.
[36] Tanner De Witt, *DAOs and the law: Enforcement*, LEXOLOGY (May 3, 2024), https://www.lexology.com/library/detail.aspx?g=839771af-e5d3-45ec-9cbd-47b5ae12c937.
[37] Soledad García Fariña, *Decentralized autonomous organizations and money laundering*, COMPLIANCE LEGAL LATAM (May 25, 2023), https://compliancelatam.legal/en/decentralized-autonomous-organizations-and-money-laundering/.

attention. However, certain countries have recognized the potential of DAOs and have tried to integrate the same into their legal framework.[38]

For the purpose of this paper, the approaches of countries that have made significant strides in recognizing and regulating DAOs will be analysed. The first jurisdiction refers to Switzerland, which represents a scenario in which no specific regulations for DAOs have been established. Instead, the existing provisions of general regulatory frameworks are applied to DAOs, offering both recognition and a legal structure for their operation. The second jurisdiction pertains to Wyoming, a State in the United States of America, having a dedicated individual legislation addressing the legal organization structure of the cryptocurrency regime of the DAOs, while contemplating upon the taxation dilemma of the DAOs. The third jurisdiction details about Cayman Islands that adopts an umbrella legislation approach for virtual and digital assets, rather than having dedicated legislation for DAOs. This framework incorporates anti-money laundering provisions, ensuring compliance with relevant regulatory standards.

A. Switzerland

Switzerland is one of the few countries adopting an increasingly welcoming approach toward DAOs. While DAOs may appear to be a recent development in Switzerland, the country has been nurturing blockchain technology and related innovations for over a decade. Home to over 1,224 blockchain companies, with approximately 900 located in the Greater Zurich Area, Switzerland's appeal as a centre for blockchain advancement is undeniable.[39] Projections indicate that the cryptocurrency market in Switzerland will reach $578 million by 2025, with an annual growth rate of 3.88% from 2025 to 2028.[40]

Despite the rapid growth of DAOs, many still operate without a conscious or explicit legal framework.[41] However, in jurisdictions such as Switzerland, participants in shared projects

[38] Pawan Jain, *From Crypto Wild West to Regulated Frontier: Unleashing the Potential of Blockchain Technology,* 126 W Va L Rev 239, 254-260 (2023).
[39] GREATER ZURICH AREA, https://www.greaterzuricharea.com/en/blockchain-technology#:~:text=Switzerland%20hosts%20a%20remarkable%201%2C224,position%20in%20the%20blockchain%20industry (last visited Jan. 20, 2025).
[40] STATISTA, https://www.statista.com/outlook/dmo/fintech/digitalassets/cryptocurrencies/switzerland?utm_source=chatgpt.com (last visited Jan. 20, 2025).
[41] Marcel Hostettler en Piotr Wojtowicz, *The Swiss Association as a Legal Wrapper for a Global DAO and vis-à-vis the MiCA Regime*, 25 EJLR 161, 161-172 (2023).

may still be legally bound and liable for each other's actions, even without intentionality.[42] Swiss law provides a similar legal concept through Article 530, paragraph 1 of the Swiss Code of Obligations, which defines a simple partnership as a contractual relationship where two or more individuals agree to combine their efforts or resources for a common goal.[43] Such partnerships can form without a formal agreement, often simply through mutual understanding. As a result, DAOs, in their basic form, may unintentionally fulfill the criteria of a simple partnership, potentially exposing token holders to liability for the actions and omissions of other participants.

Recognizing these risks, initiators of DAOs are increasingly aware of the advantages of consciously selecting a legal wrapper to protect participants, particularly in terms of limiting liability.[44] Switzerland's blockchain-friendly regulatory environment provides two primary legal structures for DAOs: Swiss Foundations and Swiss Associations (Vereins), both governed by the Swiss Civil Code. Unlike foundations, which are managed by a board, associations are directly controlled by their members, reflecting the decentralized nature of DAOs and DLT.[45]

Under Swiss law, an association is a legal entity with its own personality. It requires at least two members and the creation of bylaws, with automatic legal personality upon formation. While offering flexibility, associations must maintain a membership list, which may be subject to transparency requirements. The general assembly of members is the association's primary governing body. Additionally, the association must pursue a non-commercial, idealistic purpose at its core.[46]

To mitigate the personal liability of DAO members, the association acts as an effective legal wrapper. It provides a mechanism for members to pursue a common purpose while ensuring that the liability is limited to the assets of the association, thereby shielding individual members from personal liability. This makes the Swiss association an ideal legal structure for DAOs, where members typically do not have personal relationships with one another.

The Swiss legal framework elaborates that an association is not required to be registered with

[42] *Meinhard v. Salmon* [1928] 164 N.E. 545.
[43] Swiss Code of Obligations, 1911, art. 530, para. 1 (Switzerland).
[44] Securities and Exchange Commission, *Report of Investigation of the Security and Exchange Act of 1934: The DAO* (SEC Release No. 81207, 2017).
[45] Marcel Hostettler en Piotr Wojtowicz, *The Swiss Association as a Legal Wrapper for a Global DAO and vis-à-vis the MiCA Regime*, 25 EJLR 161, 161-172 (2023).
[46] *Bundesgericht (BGE) Band* II 1962 BGE 88 II 209.

the cantonal commercial registry to be established or conduct its activities, although registration is permissible at the discretion of the founders or members. This provides flexibility, particularly for DAOs. However, registration is mandatory if the association engages in commercial activities, as defined by Article 91 of the Swiss Federal Ordinance on the Commercial Register, which encompasses a wide range of business activities beyond trading or manufacturing.[47]

Thus, Switzerland's regulatory regime ensures that DAOs operate with the same level of oversight as traditional financial entities, offering legal clarity and protections for investors and market participants, while retaining their decentralized character

B. Wyoming, United States of America

In 2021, Wyoming became the first state in the United States to officially recognize and regulate DAOs through the enactment of Wyoming Senate Bill 38, also known as the DAO Supplement.[48] This legislation defines DAOs as a Wyoming Limited Liability Corporation **(LLC)** thus providing for liability protection for DAO members, ensuring they are not personally liable for the actions and obligations of the organization, and shielding them from being treated as general partnerships in legal disputes. To qualify as a DAO LLC under Wyoming law, DAOs must include specific provisions in their articles of organization, such as a publicly available identifier for the smart contracts used to manage the DAO, include abbreviations DAO LLC in its registered name to specifically denote its status as a DAO and ensure they maintain a registered agent in Wyoming.[49] Wyoming has extended this legal framework for DAOs even further, by setting up a new nonprofit status.[50] In 2024, Wyoming introduced the Decentralized Unincorporated Nonprofit Association Act (**DUNA Act**), which recognizes DAOs as '*unincorporated nonprofit associations'*, allowing them to enter into contracts, acquire property, and comply with legal requirements while maintaining their decentralized governance. The DUNA Act builds on the DAO Supplement and emphasizes the non-commercial nature of DAOs, offering additional legal protections for their members.

[47] Swiss Federal Ordinance on the Commercial Register, 1883, art. 91 (Switzerland).
[48] Wyoming Senate Bill 38, 2021, §17-31-101-115, Acts of State of Wyoming Legislature, 2021 (Wyoming).
[49] Adam Kashin, *Wyoming's DAO Statutes: A Model for Wider Adoption*, 25(1-2) EJLR 227, 227-237 (2023).
[50] Jenny Cieplak and others, *Wyoming Adopts New Legal Structure for DAOs*, GLOBAL FINTECH & DIGITAL ASSETS BLOG (Apr. 1, 2024), https://www.fintechanddigitalassets.com/2024/04/wyoming-adopts-new-legal-structure-for-daos/.

A surprising aspect of analysing any DAO for tax purposes is that it can be a tax entity.[51] The tax treatment of DAOs hinges on their classification as entities under U.S. tax regulations. In 1988, the Internal Revenue Service (**IRS**) ruled that Wyoming LLCs qualified for partnership tax treatment.[52] According to regulations, a joint venture or contractual arrangement constitutes a separate tax entity if participants engage in a trade, business, financial operation, or venture and share the resulting profits.[53] Minimal formality is needed to establish a partnership for tax purposes. Courts have recognized partnerships based on oral agreements[54] or informal agreements, such as profit-sharing arrangements[55] or joint ventures aimed at common economic goals.

Further, the Securities and Exchange Commission (**SEC**) has clarified that certain blockchain-related issuances are considered securities and are subject to SEC regulation.[56] A 'security,' as defined by the SEC, includes an investment contract involving the investment of money in a common enterprise with an expectation of profits derived from the efforts of others.[57] The four prongs of the Howey Test[58] help to determine whether a digital asset constitutes a security:

1. An investment of money,

2. In a common enterprise,

3. With an expectation of profit,

4. Derived primarily from the efforts of others.

With regards to taxability, investments made by a DAO[59], income generated, and liquidating distributions resulting from member withdrawals may constitute a taxable event for both the entity and its members.

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[51] David J. Shakow, *The Tao of the DAO: Taxing an Entity that Lives on a Blockchain*, 160 Tax Notes 929, 940 (2018).
[52] Internal Revenue Service, Revenue Ruling 88-76, 1988-2 C.B. 360.
[53] Internal Revenue Service, Treasury Regulations, 1975, Reg. § 301.7701-1(a)(2).
[54] *Hyman Podell v. Commissioner* 55 TC 429 (1970).
[55] *Bergford v. Commissioner* 12 F.3d 166, 169 (9th Cir. 1993).
[56] Securities and Exchange Commission, *Report of Investigation of the Security and Exchange Act of 1934: The DAO* (SEC Release No. 81207, 2017).
[57] David J. Shakow, *The Tao of the DAO: Taxing an Entity that Lives on a Blockchain*, 160 Tax Notes 929, 939 (2018).
[58] *Securities Exchange Commission v. W.J. Howey Co.* 328 U.S. 293 (1946).
[59] Internal Revenue Service, Notice 2014-21, 2014-16 IRB 938, § 4, Q-6.

Thus, if any DAO engage in a partnership-like relationship by voting on proposals and sharing in profits generated from pooled investments then it may qualified as a tax entity within the IRS Regulation. Further if the tokens issued by a particular DAO constitute to be a security (investment contract) under the SEC regulations and exchange of such securities by the DAO forms a taxable event, then the DAO qualifies as a U.S. taxpayer and would be required to file tax returns and notify its owners of any taxable income or events impacting them. However, just because a DAO qualifies as a tax entity does not imply that all blockchain-based assets constitute ownership interests in entities. Pure cryptocurrencies rely only on value fluctuations, not entity earnings, and many ICO tokens are unrelated to the issuing entities.[60]

However, there is an additional possible issue if any DAO is situated outside of the US and is not governed by US law. Foreign Account Tax Compliance Act (**FATCA**),[61] mandates that organizations that might be doing business with US taxpayers notify the IRS of any financial transactions involving US taxpayers.[62] It was created to stop US taxpayers from concealing assets abroad. Any DAO whose goal is to invest the funds it receives from its investors, constituting a Foreign Financial Institution (**FFI**) under FATCA,[63] must enter into an agreement with IRS to identify U.S. account holders and withhold 30% of payments to unidentified or non-compliant individuals.[64] Blockchain anonymity complicates compliance, necessitating withholding on payments to account holders who fail to properly identify themselves.[65]

Wyoming's LLC status for DAOs offers legal recognition, protecting participants from personal liability. It also provides clarity on the taxation status of DAOs, presenting a model that other countries may consider adopting.

C. Cayman Islands

The Cayman Islands has established itself as a popular choice for virtual asset issuers,

[60] David J. Shakow, *The Tao of the DAO: Taxing an Entity that Lives on a Blockchain*, 160 Tax Notes 929, 943 (2018).
[61] Internal Revenue Code, 1986, § 1471-4, Title 26, Acts of United States Congress, 1986 (United States).
[62] David J. Shakow, *The Tao of the DAO: Taxing an Entity that Lives on a Blockchain*, 160 Tax Notes 929, 944 (2018).
[63] AICPA Seeks Updated Guidance on Tax Treatment of Virtual Currency, 2018 TNT 105-14 (May 30, 2018).
[64] Internal Revenue Code, 1986, § 1471(a), 1472(a), Title 26, Acts of United States Congress, 1986 (United States).
[65] David J. Shakow, *The Tao of the DAO: Taxing an Entity that Lives on a Blockchain*, 160 Tax Notes 929, 946 (2018).

particularly during the ICO boom of 2017-18, due to its flexible, business-oriented legislation and internationally recognized securities regulatory framework. The jurisdiction has evolved by transitioning away from crowdfunding platforms and focusing more on security tokens and stablecoins.

A standout feature of the Cayman Islands' corporate offerings is the foundation company structure, which is particularly well-suited for decentralized projects like DAOs. Unlike traditional companies, which have shareholders or members, a foundation company can be structured without members, making it effectively 'ownerless,' which aligns well with decentralized projects. Similar to a typical company, the foundation company possesses a legal personality, enabling it to enter into contracts and engage in transactions with third parties. The foundation is overseen by a supervisor who ensures that the directors of the foundation company comply with the governing documents. The supervisor has no ownership or economic entitlement, focusing purely on stewardship and compliance. This setup is highly compatible with DAOs, which prioritize decentralized governance and community-driven decision-making. For DAOs, the Cayman Islands offers the unique advantage of combining the limited liability protections of a corporate entity with the flexibility of a trust, making the foundation company an ideal vehicle for DAOs.[66]

When establishing a foundation company in the Cayman Islands, a critical piece of legislation to be considered is the Virtual Asset (Service Providers) Act (**VASP Act**), which came into force in October 2020.[67] This act provides a regulatory framework tailored for virtual asset services and token issuances, positioning the Cayman Islands as a forward-thinking jurisdiction for emerging technologies. It defines a 'virtual asset' as a digital representation of value that can be traded or transferred for payment or investment purposes, excluding digital representations of fiat currencies.[68] Further, the VASP Act regulates the business activities of virtual asset service providers, which include entities that issue or transfer virtual assets. The VASP Act aligns with international standards set by the Financial Action Task Force (**FATF**) and is designed to facilitate innovation while ensuring compliance with anti-money laundering (**AML**) and combating the financing of terrorism (**CFT**) regulations.[69] This allows for greater

[66] Peter Colegate, *Technology And Innovation Guide 2024 – Cayman Islands*, APPLEBY (May 11, 2024), https://www.applebyglobal.com/publications/technology-and-innovation-guide-2024-cayman-islands.
[67] The Cayman Virtual Asset (Service Providers) Act, 2020, Law 14 of 2020, Cayman Islands.
[68] VASP FAQ, https://www.cima.ky/vasp-faq, (last visited Jan. 23, 2025).
[69] LEWIS COHEN AND OTHERS, BLOCKCHAIN 2022 29 (Chamber Global Practice Guides 2022).

flexibility in how decentralized projects can issue tokens or digital assets. Additionally, the Cayman Islands has long been committed to best practices in terms of AML and CFT compliance, adhering to international standards set by bodies like the Organisation for Economic Co-operation and Development (**OECD**) and FATF. As a member of the Caribbean FATF, the Cayman Islands follows the recommendations of the FATF, ensuring that it remains compliant with global standards in combating money laundering and terrorism financing.[70] Moreover, entities incorporated in the Cayman Islands are subject to the Proceeds of Crime Act, which establishes principal money laundering offenses, ensuring that all businesses operate within a framework designed to detect and prevent financial crimes. Certain businesses, especially those considered at higher risk of money laundering, must also comply with the Anti-Money Laundering Regulations. These regulations prescribe procedures related to identification, record-keeping, and internal controls to ensure compliance with AML standards.[71]

Cayman-incorporated entities are subject to the phased implementation of the VASP Act. Phase one, already in effect, focuses on AML/CFT compliance, supervision, and enforcement, requiring businesses engaged in virtual asset services to register with the Cayman Islands Monetary Authority (**CIMA**). Phase two, passed in 2024, will require businesses providing custodial services or operating virtual asset trading platforms to obtain licenses from CIMA and a sandbox regime for innovative financial technologies, introducing a more robust regulatory framework.[72]

The Cayman framework for virtual assets, which provides regulations for DAOs while emphasizing anti-money laundering measures, significantly supports the jurisdiction's objectives by ensuring effective regulation of decentralized autonomous organizations.

III. ISSUES RELATED TO NON-REGULATION OF DAOs IN INDIA

India’s rapidly evolving tech ecosystem has demonstrated a strong interest in blockchain

[70] Bradley Kruger, Structuring*, virtual asset service provider regulations and other considerations*, OGIER (Aug. 8, 2024), https://www.ogier.com/news-and-insights/insights/supporting-daos-in-the-cayman-islands/.
[71] LEWIS COHEN AND OTHERS, BLOCKCHAIN 2022 29-32 (Chamber Global Practice Guides 2022).
[72] Legal Guide, *Virtual asset service providers in the Cayman Islands: An overview*, HARNEYS (May, 2021)*,* https://www.harneys.com/media/br4fmtsz/legal-insights-harneys-virtual-asset-service-providers-in-the-cayman-islands-an-overview.pdf.

technologies,[73] including DAOs. Still, traditional regulatory frameworks and principles of the rule of law struggle to address the unique distributed governance structures and operational models of DAOs.[74] This lack of regulatory clarity creates challenges for DAOs currently functioning within India's established legal framework. Consequently, the conventional regulatory frameworks do not suffice, making it essential to develop specific rules that support decentralized governance models. The Indian government has shown interest in blockchain innovations, focusing primarily on cryptocurrencies, but remains cautious about implementing comprehensive regulations for DAOs,[75] which places it in a precarious position. This hesitance is further aggravated by the reasoning that the application of stringent rules designed for traditional organizations may stifle innovation and reduce adaptability.[76] However, it is equally important to recognize that granting DAOs complete freedom without any regulatory oversight can lead to critical vulnerabilities, such as exploitation and a lack of accountability.

These challenges posed by the non-regulation of DAOs are compounded by historical incidents like '*The DAO exploit of 2016'*. In this matter, The DAO, created by Slock.it in 2016, a groundbreaking experiment in decentralized governance, allowed investors to directly fund and manage projects on the Ethereum blockchain without a central authority.[77] With no external regulations, its smart contract code served as the sole governing framework. The DAO raised over $150 million, setting a record for crowdfunding at the time. However, this lack of formal oversight left the system vulnerable. An attacker exploited vulnerabilities in the smart contract, siphoning $60 million. Since The DAO had no terms or conditions explicitly forbidding such actions, the exploit was deemed technically legitimate under its code.[78] The attacker claimed the siphoned funds were "rightfully claimed" as part of the system's decentralization design.[79]

This incident highlighted the critical need for thoughtful regulation and oversight to prevent governance failures, even in autonomous systems. However, it is necessary to ensure that these

[73] Report with NASSCOM, *The India Web3 Startup Landscape*, HASHED EMERGENT (Oct. 18, 2022), https://www.hashedem.com/public/uploads/reports/1667628521064.pdf.
[74] Rick Tapia and others, *DAO Regulation and Legislation,* 1-2 EJLR 245, 246 (2023).
[75] V.C. Mathews and Mansha Bhatia, *IP Rights in the Emerging World of DAOs in India*, FOXMANDAL (Aug. 20, 2024), https://www.foxmandal.in/ip-rights-in-the-emerging-world-of-daos-in-india/.
[76] Juan Diego Arregui, *The DAO Regulation Dilemma,* EMILDAI (Jul. 14, 2023), https://emildai.eu/the-dao-regulation-dilemma/.
[77] Quinn DuPont, *Experiments in algorithmic governance: A history and ethnography of "The DAO," a failed decentralized autonomous organization* in Malcolm Campbell-Verduyn (eds), *Bitcoin and Beyond Cryptocurrencies, Blockchains, and Global Governance* (Routledge, London 2017).
[78] Mimi Zou, *Code and other Laws of Blockchain,* 40(3) Oxford J Legal Studies 645, 661 (2020).
[79] Hristo Georgiev, The *Hack That Changed the Blockchain Perspective,* MWR LABS (Aug. 11, 2016), https://labs.mwrinfosecurity.com/blog/the-hack-that-changed-the-blockchain-perspective.

regulations should be such that support the decentralized nature of the autonomous organization while addressing risks and not at the expense of it. Many crypto-friendly jurisdictions have adapted their regulations to accommodate DAOs, but India's lack of a structured approach leaves these organizations in uncertainty. This hinders India's ability to capitalize on the economic potential of DAOs and creates challenges for businesses and investors. The absence of a regulatory framework is particularly concerning because, if a DAO-related crisis like The DAO exploit were to occur in India, it is unclear how the judiciary and regulatory bodies would respond. To assess whether Indian laws adequately address key issues related to DAO entities we will consider the following hypothetical scenario.

A. Hypothetical Scenario

Let us suppose that there is a DAO, referred to as "***IndDAO***" which operates a decentralized lending platform in India. The platform allows the participants to borrow or lend cryptocurrency via smart contracts. IndDAO's follows a governance which is token-based with members voting on interest rates and platform features. While such a platform may seem as exceptional innovation that can promise decentralized and efficient financial services, it can raise significant regulatory concerns such as the following:

i. Money laundering concerns

Decentralized Finance (DeFi) platforms such as "*IndDAO*", which operate without intermediaries, create substantial challenges for money laundering authorities both in India as well as globally. These platforms are mostly operated anonymously or pseudonymous.[80] Furthermore, they also function with minimal oversight as there is no established framework to govern them. This makes it difficult for regulators to enforce existing financial laws and prevent illicit activities.

In this specific example, a participant identified as *CryptoTrader_X* borrows cryptocurrency from *IndDAO* and transfers it to an external wallet. He then converts it to cash through a series of transactions across international exchanges. Now, such activities effectively circumvent the Prevention of Money Laundering Act, 2002 (**PMLA**) by exploiting its grey areas. While the Finance Ministry's notification brings crypto transactions under PMLA and requires VASPs to

[80] A. Krishnan, *Blockchain Empowers Social Resistance and Terrorism Through Decentralized Autonomous Organizations* 13(1) *Journal of Strategic Security* 41, 45 (2020).

report suspicious activities, it remains unclear whether DAOs without a central governing body would fall within this definition.[81] Similarly, Section 3[82] of the PMLA, defines money laundering as "*engaging, directly or indirectly, in any process or activity related to the proceeds of crime, including its concealment, possession, or projection as untainted property."* While the definition of 'proceeds of crime' under the present act is broad enough to cover illicit gains as presented in the given example, what remains unclear is enforcement as there is no central governing entity. Therefore, identifying responsible parties amongst the developers, token holders, or the users would be complex. Additionally, PMLA relies on financial intermediaries for monitoring and reporting suspicious transactions.[83] Although VASPs are now explicitly covered, DAOs operate in a fully decentralized manner which mostly often bypasses these intermediaries. Another limitation concerning jurisdiction is that while PMLA applies to offenses committed within India and extends to proceeds of crime transferred abroad,[84] the transnational and decentralized nature of crypto transactions makes enforcement practically difficult.

The Finance Ministry recently has made a positive step towards addressing these concerns by issuing a notification bringing crypto transactions under PMLA.[85] However, it still did not resolve money laundering due to DAOs because, unlike traditional crypto exchanges, DAOs do not fall under the definition of VASP and there is no single entity responsible for compliance. The notification does not clarify how decentralized platforms like '*IndDAO'*, where governance is community-driven, can be held accountable. Hence, with no official management team, the enforcement mechanisms remain unclear.

ii. Taxation of DAOs

Another pressing issue arising from the hypothetical case of '*IndDAO'* is taxation. *IndDAO* challenges the Indian tax framework such as India's Income Tax Act, 1961,[86] and the Goods

[81] Aanchal Magazine and Soumyarendra Barik, *Finance Ministry brings crypto assets under Prevention of Money Laundering Act: What are the implications?*, THE INDIAN EXPRESS (Mar. 10, 2023), https://indianexpress.com/article/explained/explained-economics/crypto-assets-pmla-explained-8486629/.
[82] Prevention of Money Laundering Act 2002, § 3, No. 15, Acts of Parliament, 2002 (India).
[83] Prevention of Money Laundering Act 2002, § 2(v), No. 15, Acts of Parliament, 2002 (India).
[84] Prevention of Money Laundering Act 2002, § 2(1)(u), 4, No. 15, Acts of Parliament, 2002 (India).
[85] Department of Revenue, Ministry of Finance, Notification No F.No.6/2/2005-E.S., https://dea.gov.in/sites/default/files/moneylaunderingrule.pdf.
[86] Income Tax Act 1961, No. 43, Acts of Parliament, 1961 (India).

and Services Tax (**GST**) Act, 2017.[87] These entities, present complex yet unique challenges in identifying taxable entities and enforcing compliance.

Under the Income Tax Act, the challenges posed by DAOs primarily revolve around income attribution and the identification of liable entities. Taxable income in India is tied to identifiable individuals, entities, or establishments as defined under Section 4 of the Act.[88] However, DAOs are inherently decentralized and pseudonymous which complicates the process of determining who qualifies as an "*assessee*." Also, the absence of a central governing entity market difficult to assign the responsibility for tax obligations. Additionally, the question also remains regarding cross-border transactions. Section 9 of the Income Tax Act governs income deemed to accrue or arise in India, however, it struggles to incorporate income arising from such decentralized structures.[89] For instance, if profits are generated by the DAO and distributed via governance tokens or smart contracts, then this may not trigger conventional taxable events, making it difficult to apply traditional enforcement mechanisms. Sections 194[90] and 195[91] of the act which applies to tax deducted at source (TDS) deduction for residents and non-residents, respectively also cannot be effectively enforced in a DAO structure.

The GST Act, 2017 is also complicated to apply on such entities. The GST Act does not explicitly categorize digital assets thus leaving a gap in the law. Furthermore, as there is no fixed physical location for a DAO, the determination of the place of supply which is crucial for establishing whether GST should be applied as intra-state or inter-state tax becomes complicated. Thus, the absence of identifiable payers and payees in a decentralized system makes the application of these provisions practically impossible.

iii. Liability and Accountability of DAOs

One of the main issue that is debated over with respect to DAO is the issue of liability and accountability. Following the above hypothetical scenario, let us assume that *CryptoTrader_X* defaults on a loan which leads to losses for other participants. Under the Indian legal framework, such act would fall under the purview of the Indian Contract Act, 1872.[92] However,

[87] Goods and Services Tax Act 2017, No. 12, Acts of Parliament, 2017 (India).
[88] Income Tax Act 1961, § 4, No. 43, Acts of Parliament, 1961 (India).
[89] Income Tax Act 1961, § 9, No. 43, Acts of Parliament, 1961 (India).
[90] Income Tax Act 1961, § 194, No. 43, Acts of Parliament, 1961 (India).
[91] Income Tax Act 1961, § 195, No. 43, Acts of Parliament, 1961 (India).
[92] Indian Contract Act 1872, No. 9, Acts of Parliament, 1872 (India).

the lack of DAO recognition poses serious challenges in applying such traditional principles.

The Indian Contract Act requires certain essentials for a valid contract such as identifiable parties, free consent, clear obligations, and enforceable rights.[93] In the case of *IndDAO*, smart contracts governing the loan do meet many of these criteria, as they establish terms and conditions that execute autonomously upon fulfilment of predefined triggers. Furthermore, since IndDAO lacks legal personality, no legal entity can be held accountable for enforcing the terms of the contract and the liability ensues upon all the members of the DAO. Moreover, the pseudonymity of participants as well as the jurisdiction of defaulters like "*CryptoTrader_X*" becomes a significant hurdle.

If we understand this from a corporate liability perspective, the absence of a corporate veil within a DAO structure creates a critical departure from traditional business entities governed by the Companies Act, 2013.[94] In a corporation, it is well-established that individual shareholders are not personally liable for the company's debts or legal infractions.[95] However, DAOs operate without incorporation or legal recognition under Indian law. This implies that all participants who govern or even interact with the DAO could potentially be held jointly and severally liable for its actions. Therefore, if *CryptoTrader_X's* default leads to any kind of legal proceedings then the inability to hold the DAO itself accountable may expose other participants including the ones which are actively involved in governance. This lack of a liability shield clearly creates significant risks as participants could face personal accountability for actions taken on behalf of the DAO, regardless of their degree of involvement.

IV. THE WAY FORWARD

It is apparent that the absence of regulations in India regarding the operation of DAOs may lead to significant challenges. Drawing from the regulatory approaches adopted by other jurisdictions, the following recommendations aim to establish a coherent and structured framework within domestic regulations. These suggestions seek to address the identified issues comprehensively, ensuring a streamlined and effective approach to the governance and operation of DAOs in India.

[93] Indian Contract Act 1872, § 10, No. 9, Acts of Parliament, 1872 (India).
[94] Companies Act 2013, No. 18, Acts of Parliament, 2013 (India).
[95] *Salomon v. Salomon* [1897] AC 22.

A. DAOs must be granted the autonomy to choose their preferred method of legal wrapping

Legal wrapping refers to the legal recognition of a DAO through the use of a traditional legal entity to structure its operations. This approach provides a formal legal framework that enables a DAO to engage with the real world while limiting the personal liability of its members. Under this arrangement, a separate legal entity—referred to as the 'legal wrapper'—assumes liability in the event of any default or contravention of applicable laws by the DAO. Legal wrappers for DAOs can include entities such as companies under the Indian Companies Act, 2013, or partnerships under the Indian Partnership Act, 1932. A hybrid option is also available in the form of a Limited Liability Partnership (**LLP**), which combines features of both companies and partnerships.

A company, possesses a separate legal personality, ensuring that its directors are not personally liable for the company's defaults. In contrast, a partnership lacks this characteristic, exposing its partners to potential personal liability for the partnership's actions. For DAOs seeking the benefits of a partnership with limited liability, the LLP model offers an effective solution, as it provides a separate legal personality distinct from its partners, thereby protecting members from personal liability. Within the Indian context, it is recommended that DAOs be granted the autonomy to select their preferred legal wrapper based on their specific objectives and operational needs. Mandating a particular form of legal wrapping would undermine the decentralized nature of DAOs, contradicting their fundamental principles. Instead, India could draw insights from jurisdictions such as Wyoming, which allows DAOs to incorporate as LLCs, rather than imposing recognition as a specific entity.

B. To facilitate taxation, a degree of centralization should be incorporated within the decentralized framework of DAOs

In India, both short-term and long-term capital gains are subject to taxation at predetermined rates, ensuring that any profits arising from the sale of invested assets are taxed appropriately. In this context, it is reasonable to conclude that once DAOs, which typically pursue profit-oriented and commercial objectives, are formally recognized in India, they will constitute taxable entities under the domestic taxation framework, contingent on their chosen mode of legal wrapping. Consequently, regulating the taxation of DAOs is essential to ensure that these organizations contribute their fair share of taxes from profits earned through their investments.

However, the 'ownerless' nature of DAOs introduces complexities in regulating their taxation. To address this challenge and facilitate seamless tax compliance, it is recommended that a specific individual or a designated body of individuals be authorized to oversee the DAO's tax-related obligations. This entity would be responsible for disclosing the taxable income of the DAO, completing the requisite forms, and ensuring timely compliance with tax regulations. Furthermore, such an individual or body could be approached by tax authorities in the event of non-compliance or assessment disputes. While this suggestion may raise concerns regarding the potential impact on the decentralized nature of DAOs, it is important to clarify that this individual or body would be assigned a strictly limited role, solely pertaining to tax-related matters. They would not interfere with or influence the operational aspects of the DAO, thereby preserving its decentralized structure. This minimal centralization is a necessary and pragmatic measure to ensure that the DAO operates efficiently while maintaining compliance with taxation authorities, thus mitigating potential disruptions arising from regulatory requirements.

C. For the purposes of anti-money laundering, the anonymity of DAO participants should be relinquished

DAOs allows its members to retain their anonymity while participating in DAO operations and transactions. However this anonymity may raise serious concerns for prevention of money laundering. he lack of traceability creates a risk that DAOs could be exploited for illicit purposes, including money laundering and the financing of terrorism, since DAO acts as a borderless organization. The authors suggest this anonymity factor must be forgone during the laying down of the DAO regulations to ensure that these DAOs align with the international AML and CFT regulation. The anonymity factor can be relinquished by mandating identification of the members of DAO similar to Know Your Customer (**KYC**) requirements in the banking sector. Members could be required to provide verifiable identification through a designated process, linking specific identifiers to each individual member. To encourage compliance with such measures, the regulatory framework could stipulate that any member who fails to comply with identification requests forfeits their voting rights and entitlement to distributions from the DAO, thereby promoting transparency and accountability and allowing for seamless regulation of DAOs in India.

V. CONCLUSION

The advent of DAOs represents a transformative shift in governance and financial systems,

offering innovative solutions for decentralized decision-making and investment. However, these novel structures pose significant challenges, particularly in jurisdictions like India, where regulatory mechanisms remain inadequate. The decentralized and pseudonymous nature of DAOs introduces vulnerabilities, including accountability deficits, taxation dilemmas, and risks of misuse for illicit activities such as money laundering.

This study has underscored the pressing need for India to adopt a comprehensive and well-structured regulatory framework tailored to the unique characteristics of DAOs. Drawing insights from global best practices, such a framework must balance innovation and regulation, ensuring that DAOs contribute positively to economic growth while mitigating associated risks. Specific measures, such as the introduction of legal wrappers, centralized oversight for tax compliance, and stringent anti-money laundering provisions, can provide the necessary checks and balances without undermining the decentralized ethos of DAOs.

In a policy-centric context, timely regulatory intervention is crucial. The absence of clear guidelines not only jeopardizes the potential of DAOs to revolutionize the economic landscape but also exposes the Indian ecosystem to significant risks. A robust regulatory framework will not only enhance the legitimacy of DAOs but also position India as a forward-thinking hub for blockchain innovations. Failure to act decisively risks stifling the growth of this promising sector, leaving India at a disadvantage in the rapidly evolving global digital economy