

The Rise of Decentralized Autonomous Organizations

An in-depth look at Decentralized Autonomous Organizations

By Stefan Piech

Key Takeaways

- ❖ Decentralized Autonomous Organizations (“DAOs”) are blockchain-based structures that enable the coordination of people and resources through a formalized, transparent, and binding set of rules deployed on a public blockchain in a decentralized way.
- ❖ Compared to more traditional LLC structures, it is easier for a DAO to take on responsibility and create innovation. However, DAOs have to balance between decentralization and efficiency constantly.
- ❖ DAOs have evolved and moved from a more monolithic to a modular structure, allowing for more specialization and scalability through delegation.
- ❖ By using a DAO structure, decision-making can become effectively more transparent, secure, and autonomous.
- ❖ Quorum voting is likely to inhibit DAOs from moving quickly. This poses a risk in periods where fast decision-making is of importance, such as periods of market distress. As of now, not all decisions are best reached by a broad consensus.
- ❖ Soulbound tokens might play a more critical role for DAOs in the future as they help to signal qualification and skills.
- ❖ Having a plutocratic system that is controlled by wealth and income is undesirable not only since it can lead to class conflict, corruption, greed, and hedonism but also because it goes against the hopes of many that increased adoption of cryptocurrencies and crypto-native products will lead to more equality.
- ❖ As of now, the majority of proposals are driven by just a few DAOs. Over 65% of all proposals come from just 10% of DAOs.
- ❖ While voting increased, the majority of DAO participants still only voted less than 2 times, with more than 50% of users only having voted once. DAO proposals are heavily skewed towards a small number of decisive votes.

What is a DAO

Within the crypto space, most people will have heard the word “DAO” at one point or another. “DAO” stands for decentralized autonomous organization, describing a community with a common cause and a shared crypto wallet. While this might sound romantic, DAOs have exploded in size over the last few years and play a key role within crypto. Some of the most significant projects are run as decentralized autonomous organizations, managing tens of billions of US dollars (US\$).

Considering their importance as a foundational layer within the crypto space, the aim of this report is to dive deeper into what DAOs are, how they work, their strengths and weaknesses, and reflect on recent developments in the space.

DAOs are at the core of the web 3.0 ecosystem. The goal is to create a decentralized, trustless governance structure that can operate without the need for a centralized decision-maker.

Key characteristics of a decentralized autonomous organization (“DAO”):

- ❖ In their purest form, they operate “autonomously” and are thus self-governed, meaning they are, amongst others, free from the oversight of any judiciary or law enforcement.
- ❖ They are decentralized and built as smart contracts on a blockchain.
- ❖ They are borderless due to their decentralization, with a flatter hierarchy and an oftentimes formalized governance that is enforced on the blockchain.
- ❖ They own a treasury of (crypto) funds, allowing them to vote for transactions on-chain, reward contributing members, and invest in the development of the DAO, among others.

In order to have a common understanding of what DAOs are, following the characteristics mentioned above, we can define them DAOs as follows:

“Decentralized Autonomous Organizations are blockchain-based structures that enable the coordination of people and resources through a formalized, transparent, and binding set of rules deployed on a public blockchain in a decentralized way⁽¹⁾”

While other areas within the crypto space gained a lot more attention and traction in the last few years, **DAOs are of crucial importance to developing the space further, fostering progressive decentralization and efficient organizational design.**

The goal of this article is to foster a discussion of how the space can and should develop without giving up on the key elements of decentralized autonomous organizations. For now, though, let’s explore the history of DAOs more to understand how we got here.

A short history lesson

The originating idea of decentralized autonomous organizations envisioned a future in which it is not management and governments that dictate the future of projects but instead the community that can operate without the limitations of traditional organizational structure.

While the aim of decentralization and independence was floating around the crypto space for quite some time, it wasn't until 2016 that one of the first decentralized autonomous organizations was built. Fittingly, they called it "The DAO," also known as Genesis DAO, built on the Ethereum blockchain as an open-source project by the Slock.it team. During its creation period, the project managed to gather around 12.7 million Ether (worth around 150 million USD at the time, though around 13 billion during the time of writing this report and more than 62 billion during Ethereum's all-time high, representing nearly 14% of all Ethereum coins in circulation to that point), making it the biggest crowdfund ever⁽²⁾. "The DAO" was meant to be an operating venture capital fund focusing on crypto investments. The actual breakthrough of "The DAO" was its organizational structure more than it was the fact that it tried to invest in crypto venture capital early on. **The project was characterized by a lack of centralized authority to provide a lean and efficient organizational structure that gives control to investors rather than keeping it internal**⁽³⁾. Back when "The DAO" was still operating, any community member could pitch a project in order to receive funding, which was voted on by token holders.

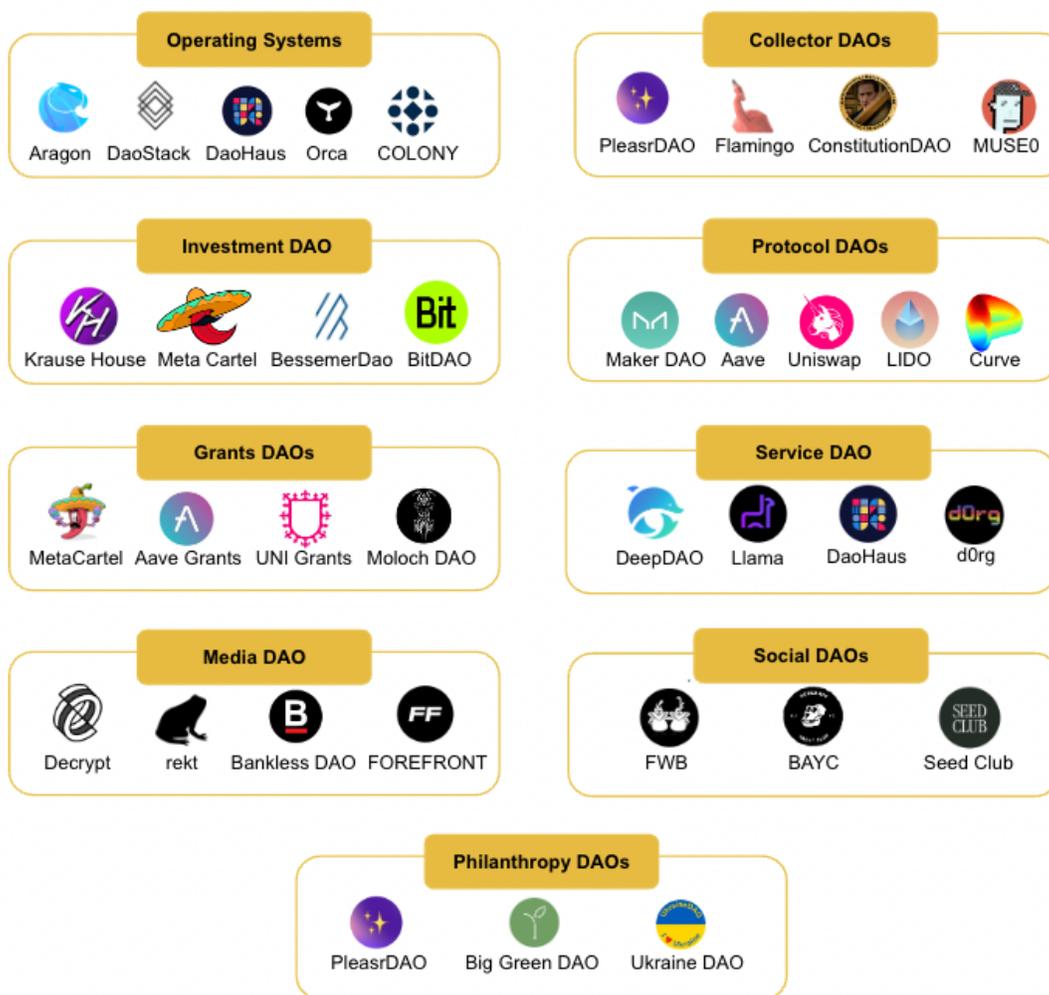
While "The DAO" was initially doing well, it didn't take two months until things turned dark for the project. On June 17, 2016, a hacker used a loophole in the code to drain the existing funds of the DAO. 3.6 million Ether were stolen in the attack (worth more than 17 billion at Ethereum's all-time high of 4,891 USD and equivalent to around 70 million USD at the time of the attack). The hacker chose not to return the funds⁽⁴⁾. What followed the attack is history. With the community acting fast, the funds of the hacker could be placed into a 28-day holding period. Intense community discussion led to the hard fork of Ethereum and Ethereum Classic. The new Ethereum fork returned the lost funds by sending new Ethereum tokens to those affected by the attack. The token owners were given an exchange rate of 1 Ether to 100 DAO tokens - the same rate as the initial offering⁽⁵⁾. Following the attack, there was a lot of community backlash and anger about how the new Ethereum "violated" the idea of autonomy, but also fear how the attack would impact a move from Ethereum's Proof-of-Work (PoW) to Proof-of-Stake (PoS).

Not only that, but also the US Security Exchange Commission (SEC) showed interest in the project. According to the SEC, "Tokens offered and sold by a "virtual" organization known as 'The DAO' were securities and therefore subject to the federal securities laws. The Report confirms that issuers of the distributed ledger or blockchain technology-based securities must register offers and sales of such securities unless a valid exemption applies. Those participating in unregistered offerings also may be liable for violations of the securities laws⁽⁶⁾." **Due to the SEC ruling, crypto start-ups started using the SAFT method (Having a legitimate utilitarian value on a blockchain platform is violating a component of the Howey case, which means it cannot be applied. This is stopping them from being listed as securities).**

Types of DAOs

Following the growth of Decentralized Financial applications (DeFi) in 2018, we could see how the “old” decentralized autonomous governance structure experienced a revival. Many of the **DeFi projects of the time, such as Uniswap and Aave, chose to drive community engagement through governance tokens and a DAO governance structure.** Nowadays, the world looks a bit more complex, and there are different types of DAOs for different purposes. There are those that focus on building projects, those that focus on investments, those that aim to collect NFTs, those that provide services, and many more. As such, this chapter aims to shed light on the different (major) types of DAOs and their characteristics.

Figure 1: DAO Landscape - A vast variety of DAOs exist with blurry lines between them



❖ Protocol DAOs

The first category of DAO we should touch on is the so-called protocol DAOs. In essence, they are designed to govern a decentralized protocol (such as decentralized exchanges and DeFi applications, amongst others). Uniswap, a famous example of a protocol DAO, uses its governance token UNI to give community members voting rights. As such, **the fact that Uniswap is structured as a DAO allows community members to decide on key changes in parameters, tokenomics, the treasury, and many more.** However, voting power is not based on wallets but on the weight of governance token ownership. This means that someone owning 20% of the governance token will be able to contribute 20% of each vote. At first glance, this might already seem problematic, and we will explore later on why that might be the case.

❖ Grant DAOs

Grants DAOs fulfill the function of facilitating non-profit work within the crypto space.

Their design allows non-profit organizations to deploy capital - supervised by the smart contract and managed by the members of the DAO. Aave, the DeFi protocol, runs a community-led Grants DAO to fund ambitious developers and their ideas, helping them to develop projects that can help in the growth of the Aave protocol.

❖ Philanthropy DAOs

Similar to Grants DAOs, the focus of a philanthropy DAO is on charitable work. However, this work does not have to be linked to a specific protocol but can simply contribute to any philanthropic course, such as contributing to the UN Sustainable Development Goals. For example, Big Green DAO, the first philanthropy DAO, focuses on sustainable food, nutritional security, and climate impact.

❖ Social DAOs

Social DAOs, don't focus on social courses but on the community aspect of DAOs. They aim to bring together like-minded people. Social DAOs can be behind NFT projects, or creative projects, thus having a small but meaningful barrier to entry. Friends with benefits, a social DAO that aims to “build a community and foster creativity,” has a barrier to entry of 75 FWB tokens. However, once admitted, members can attend exclusive events and connect with like-minded people. As such, Social DAOs derive a lot of their value from exclusivity and collaboration.

❖ Collector DAOs

The aim of collector DAOs is, like the name suggests, to collect. Community members participate in collector DAOs such as FlamingoDAO to collectively invest the treasury of the DAO in art collectibles, rare wine, blue-chip NFTs, the United States Constitution (ConstitutionDAO was remarkably close to doing so), and other so-called “collectibles” that can

be found at auction houses. As such, **collector DAOs are a way to invest in expensive projects without having to risk large amounts of personal capital.**

❖ Investment DAOs

Investment DAOs aim to invest in the DAO treasury. “The DAO” was the first example of this, and learning from their lesson, new DAOs grew over the year with the same mission. **The goal is to pool capital into a DAO treasury and invest in blockchain-focused venture capital on- and off-chain.** The objective is to give retail investors access to investments that would usually not be available to them in traditional financial markets.

❖ Media DAOs

Media DAOs focus on creating content driven by the community. This is in contrast to how many news media are run today, as they usually have a top-down approach with senior management (or even politicians) deciding the content of the news medium. One such DAO is BanklessDAO, which is a community-driven DAO that focuses on driving the adoption of a “bankless money system.” Decrypt is another example of a Media DAO which allows community members to vote on the content rather than dictate it.

❖ Service DAOs

Service DAOs can be best described as talent allocators. **With the help of on-chain credentials, service DAOs allocate resources from one DAO to another.** Service DAOs can cover a wide range of areas, be it marketing, treasury management, or something completely different.

❖ Sub DAOs

Sub DAOs don’t appear in the graph above, and there is a reason for that. While they are separately presented for the purpose of this report, they represent subsets of the above-mentioned DAOs. These subsets are organized to manage specific functions such as operations, partnerships, marketing, treasury, and grants - they do not represent a separate kind of DAO, however. **Sub DAOs allow for more efficient organization of decentralized autonomous organizations.**

❖ Guilds

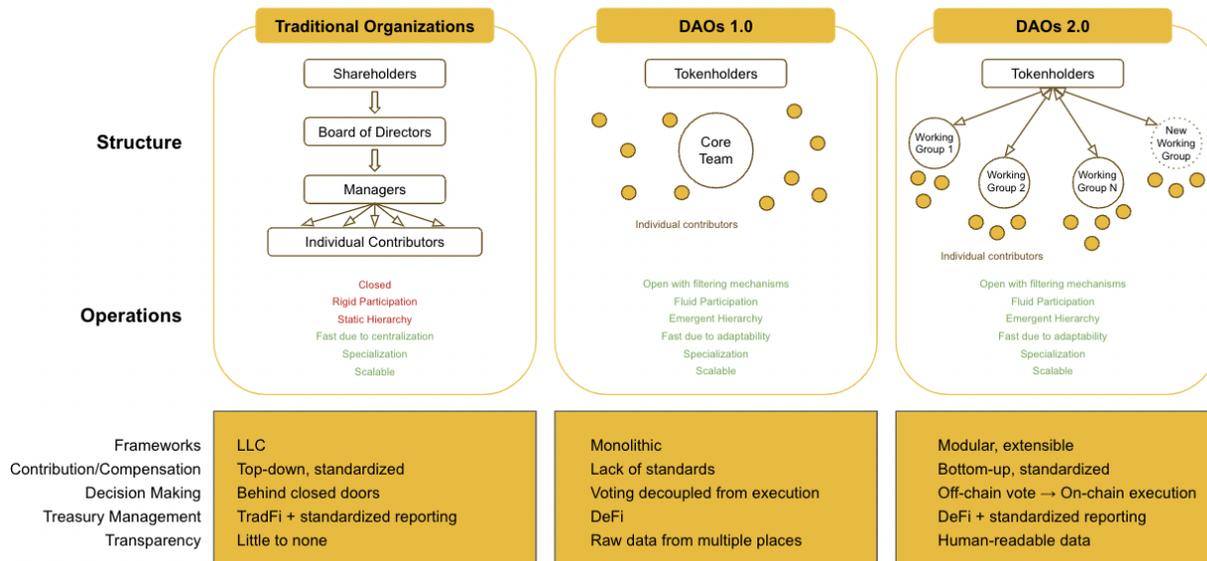
Similar to sub DAOs, Guilds should not actually be on this list. However, it is still important to mention their existence as they have some similarities with DAOs. While that is the case, they have one crucial difference from DAOs. **Guilds focus on pooling talent to offer high-quality services to clients, however, they do not need to be structured in a decentralized manner.**

Design aspects

How to design a DAO? While this is quite a straightforward question, the answer might not be as straightforward. Good design empowers and incentivizes individual members yet still allows for depth and efficiency.

Compared to more traditional LLC structures, it is easier for a DAO to take on responsibility and create innovation - at least in theory. In reality, **DAOs** - at least for the time being - **have to find a balance between decentralization and efficiency**. A consequence of this was the creation of SubDAOs, pods, guilds, and so-called functional committees that aim to bring more classical organizational structure into a DAO (Figure 2).

Figure 2: DAO Organizational Structure - As of now, there is no one size fits all, and constant innovation is happening to balance decentralization and efficiency



Source: *Binance Research, 1kxnetwork*

DAO membership can be achieved in multiple ways. A more “traditional” approach would be a share-based approach. The share-based approach allows the share-owner to participate in the DAO and vote on issues. A recently more common approach to membership is token membership. **Token membership - while still coming with some hurdles - is more openly accessible**. Through the use of governance tokens, holders can vote based on their relative ownership and participate in a DAO.

Since it is hard to “control” who contributes to a DAO, specific tools can be used to quality-control and quantify different types of contributions. For example, there can be DAO-specific metrics or bounties that can be used to achieve targets. They help to define a shared understanding of priorities and motivation.

Having a closer look at Figure 2, we can see that **traditional organizations have a very hierarchic structure that is generally closed and static**. Transparency is close to none, and decision-making happens behind closed doors. It seems even the slighted improvement here can go a long way.

The improvement we’ve seen with early DAOs is a shift toward a more open and transparent structure. **DAOs themselves have evolved and moved from a more monolithic to a modular structure, allowing for more specialization and scalability through delegation from a ParentDAO to smaller, more specialized SubDAOs**. Delegation, in general, plays a critical role as it helps to overcome low participation rates. As such, despite the overlap between DAOs and traditional organizational structures in many aspects, there are key differences that come into play when looking at the design aspects of DAOs.

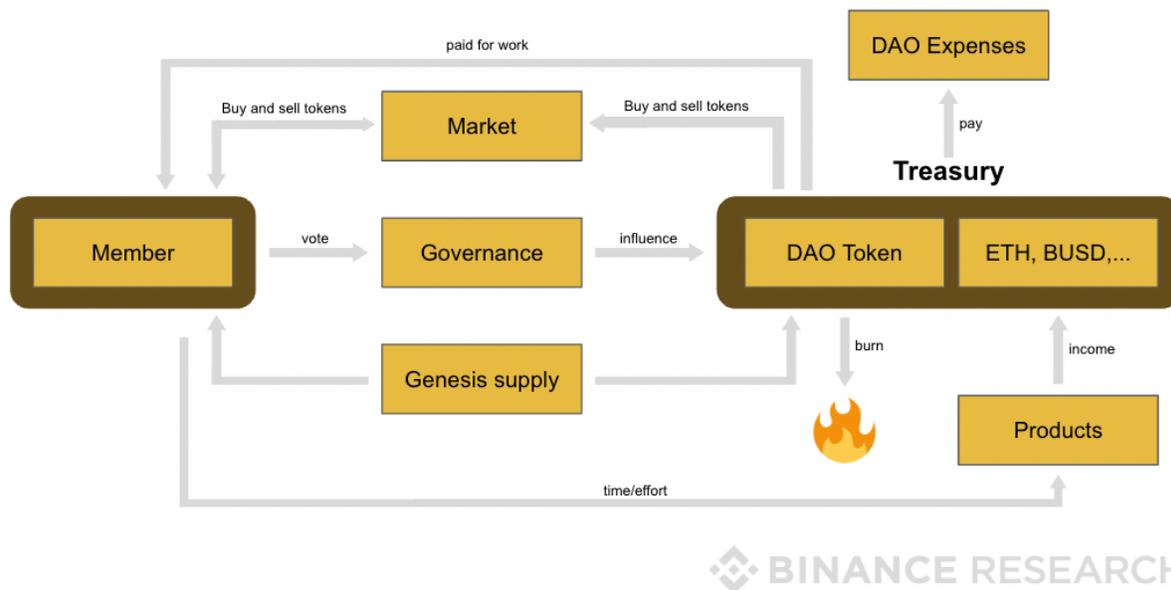
DAOs oftentimes also lack formal managers, and membership can be anything but long-lasting. Members might join for a limited period of time and exit a DAO as fast and as easily as they joined. Looking closer at the management of DAOs, we can observe that an increasing number of DAOs is managed by what you could call a “distributed consensus” - essentially smart contracts that aggregate votes for decision making.

A vital element of a DAO is its treasury, which helps to keep the organization alive. The treasury can have many uses, reaching from fundraising and rewarding contributions to grants and investments. **A very common way to design a DAO treasury is as a multi-signature wallet tied to a treasury committee, which can authorize transactions.**

❖ Tokenomics

Without touching on the mechanics of DAO tokenomics too much in this report, let us still look at the role that tokens play. Tokens can often provide a barrier to entry for DAO participation and, in many cases, represent voting tools by which individuals can have voting power based on their respective share of the token supply. These tokens, like many other cryptocurrencies, rely on supply and demand dynamics. The overall tokenomics can be complicated, covering things such as buybacks, overall distribution, inflation rate, etc. Considering the depth and breadth of this, it is worth looking at Tokenomics in more detail in a separate report.

Figure 3: DAO Operational Design - Members and Treasury are two crucial components of DAOs. Tokens are an essential building block to connect these two.



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Source: *Binance Research, [1kxnetwork](#)*

As visible in Figure 3, even a simplified version of a DAOs operational design can still be quite complex. With Members and the Treasury at the core of a DAO, we can point out a few observations. **Members, like employees in traditional organizations, play the most crucial role at the end of the day. They are responsible for the strategic structure by voting of governance, which can make or break a DAO.** They further participate in implementing the proposed changes and work on new products, making them the backbone of the output and progress. The treasury plays an important, though less critical role. It is essentially paying and encouraging members for their participation and work in a DAO. It plays an essential role when it comes to the tokenomics and design of a DAO, though this is beyond the scope of this report.

Benefits and risks

Benefits

After comparing DAOs to traditional organizational structures, a few benefits become apparent right away. **Using the “DAO” approach, decision-making becomes effectively more transparent, secure, and autonomous.** As such, they are seen as the key organizational structure for web3 companies, helping them to organize in a way that aligns with the ethos of crypto. Let’s look at a few of the benefits in more detail.

❖ Transparency

We have seen that traditional organizations are the opposite of transparent. Decision-making takes place behind closed doors, and the hierarchical structure makes it hard for people at the bottom to have an insight into what management is planning. **DAOs, on the other hand, are operated on a decentralized blockchain, thus making every transaction transparent and viewable by the public.** Not only this, but since most of the decision-making takes place via voting, everyone can see the votes (at least once the voting closes⁽⁷⁾) and have an insight into the operation of the DAO.

❖ Autonomous

DAOs, as we have learned, will implement rules on the blockchain directly. As such, these **rules are enforced continuously without external decision-making being involved, leading to less manipulation and errors that are oftentimes associated with human intervention.** Furthermore, no third parties are needed to carry out transactions or operate a DAO, and there is (as of now) less legal oversight of such institutions.

Considering the above, we can conclude that the benefits of DAOs include a more streamlined and more cost-effective way of operation. Decision-making becomes easy and transparent, which also explains why we see votes happening on an ongoing basis. More reliable and transparent voting and operation of DAOs also come with higher levels of democratization. All members of a DAO can vote and participate in the operation of the DAO. This, in return, creates a flat and more equal organizational structure without the commonly known hierarchy hurdles. The design of a DAO is more meritocratic as evaluation happens based on output, not the time spent creating a proposal, thus fostering freedom and less discrimination based on credentials.⁽⁸⁾

Considering that we talked about benefits to a great extent already in previous sections, we will have an overly proportional weight on the risks of DAOs in this section to keep the overall article balanced. It is important to remember and emphasize that DAOs in their current state are not flawless and that there are still a lot of hurdles to overcome.

Risks

DAOs are still young, and as such, there are still many risks and hurdles that come with DAOs that are important to be aware of.

❖ Execution

While there are some aspects that make DAOs more efficient than traditional organizations, there are also some aspects that pose a risk to the organization's development, progress, and speed to act when necessary. In contrast to traditional organizations where management consists of a small number of people with the ability to execute fast, a DAO involves all its members in a vote, resulting in slower and less flexible management. As such, **quorum voting is likely to inhibit DAOs from moving quickly. This poses a risk in periods where fast decision-making is of importance, such as periods of market distress.** A way to overcome this problem is so-called “progressive decentralization,” where a DAO starts centralized first and moves to a decentralized structure over time. Another approach to this is increased delegation. This, however, still does not overcome the inability of DAOs to act fast when necessary once fully decentralized⁽⁹⁾.

❖ Security

While there are aspects that can make a DAO more secure, there are also those that can lead to the opposite. For one, developers cannot ensure the flawlessness of the code that is building the foundation of the DAO. As mentioned earlier, when having a closer look at “The DAO,” this can pose a substantial risk to the overall security of a DAO.

Another security risk is that of bad actors that are willing to override the governance voting system to enhance themselves at the expense of the DAO. A famous case is that of Build Finance DAO, where a single actor has put forward and succeeded in taking control of the Build token contract, giving the malicious actor control over governance contracts, minting keys, and treasury⁽¹⁰⁾.

Missing transparency can be added to this list. **When credentials and prior criminal records cannot be checked, and anonymity is guaranteed in a DAO, there is a substantial risk of bad actors using this opportunity,** as we have seen in the recent Wonderland (TIME) example⁽¹¹⁾.

❖ Governance Issues

DAOs, as we learned, are based on the general principles of blockchain technology, and as such traditional governance models (such as regulation of those) don't always fit the need of DAOs. In a DAO, a community interacts in a transparent way, with a democratic voting system at its core. While the goal is to create fairness, the current model carries inherent flaws. One is the problem of plutocracy, which we will touch on next. Another problem is that **not all decisions are best reached by a broad consensus since this limits the speed of execution, as seen above**. Furthermore, certain decisions may require a specific skill-set and level of expertise that not every DAO participant might have. As a consequence of this, we have seen the development of SubDAOs and working groups and the growth of a delegation process in which DAO members can cast their vote for a qualified delegate. While this can work and also help to improve the speed of the decision-making, it requires an underlying level of trust. As such, **Soulbound tokens (non-transferable, public-verifiable digital tokens) will likely play a more critical role for DAOs in the future as they help to signal qualification and skills**. As of now, the space of Soulbound tokens is still young, and current Soulbound tokens mainly serve as an engagement tool⁽¹²⁾.

❖ Plutocracy

Since governance tokens are required to vote, and since they are freely traded on centralized and decentralized exchanges, it is relatively easy just to buy voting power. For newer projects with low token value, it is possible that a bad player or even a competitor buys up enough voting power to break the DAO effectively, similar to what we have seen at Build Finance DAO. This could turn DAOs – while not intentionally - into plutocratic systems. **Having a system that is controlled by wealth and income is undesirable not only since it can lead to class conflict, corruption, greed, and hedonism but also because it goes against the hopes of many that increased adoption of cryptocurrencies and crypto-native products will lead to more equality**.

Justin Sun, the founder of TRON, has previously been accused of attempting a governance attack on the DeFi protocol Compound. On-chain governance of DeFi protocols is often token-weighted. Data showed that Sun's wallet borrowed 99,000 COMP tokens worth over US\$13M. The next day, an address that received US\$9M worth of COMP tokens proposed adding TUSD as a collateral asset on Compound, which would allow Compound users to take out loans against their TUSD holdings. While taking out a loan can be seen as a "governance attack," there is nothing explicitly prohibiting users from taking out loans to vote on proposals they back. This, however, underlines the problems with plutocracy in a DAO⁽¹³⁾.

❖ Competence

There is an additional way in which DAOs are flawed, which relates to the aforementioned governance. **The misconception is that decentralization will automatically lead to better results. However, we should not confuse decentralization with competence.** Being richer can give you more decision-making ability, and this can go as far as weighting influence towards an outcome that would not be favored by subject-matter experts. The same can happen when influencers with big followings can convince a majority of governance holders of their potentially wrong opinion. **At this point, DAOs still lack the necessary flexibility to consider reputation and qualification, and adding such layers could come with its own limitations.** As of now, Soulbound tokens are a potential solution for this and something we want to explore in more detail in a separate report.

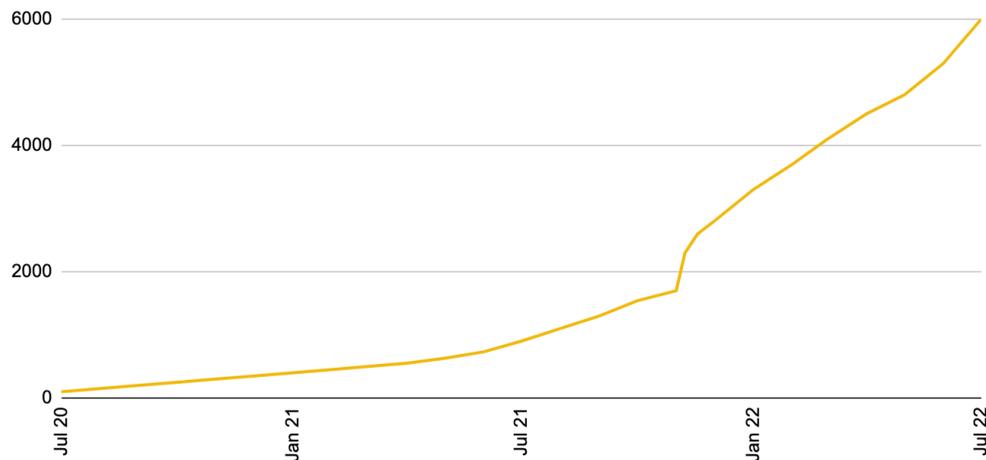
While DAOs can replace aspects of legal contracts with code and save a tremendous amount of operational overhead, in some cases, there are no legal protections outside of the rules outlined by the smart contracts facilitating the DAO. This can create issues if control of the DAO is centralized or vaguely defined. Some DAOs may thus also form legal entities behind the DAOs themselves.

Much of the organization design today is based on the legacy of line-centric workplaces of the 20th century. Innovation around DAOs will also take unlearning outdated ideas of how human coordination can work.

Development of DAOs

DAOs have come a long way since the idea was first circulated. Especially the last two years, which have played a significant role in the ecosystem's growth. With higher adoption of cryptocurrencies, increased number of use-cases, and more capital flowing into the space, we saw how a decentralized autonomous structure became the preferred option for crypto-centric companies. As seen in figure 4, **the overall number has been increasing**, and while there is some discrepancy between the reported numbers between DeepDAO (currently showing around 4800 DAOs) and Snapshot, both show the same underlying trend of further adoption.

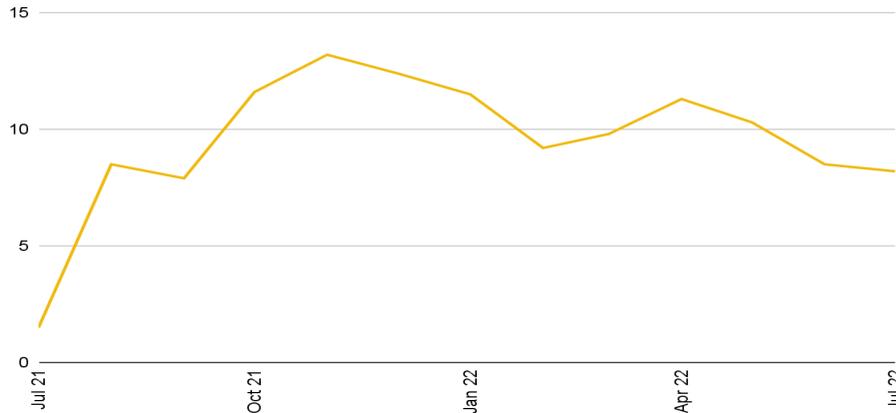
Figure 4: Total number of DAOs - The total number of DAOs has continued to increase



Source: Snapshot, Electric Capital (@n4motto)

The importance of DAOs becomes even more pronounced when looking at the total number of AUM in DAO Treasuries (Note this is excluding the AUM of the protocols, which would drive the number significantly higher). During the time of writing, DeepDAO reported a Total AUM of more than US\$9B. Considering this, we can see how DAOs govern important Crypto projects and build a foundational layer for future financial infrastructure and core crypto developments.

Figure 5: DAO Treasury - With the total number of DAOs increasing, DAO treasuries have not seen the same amount of drawdown most crypto assets did in H1 2022.

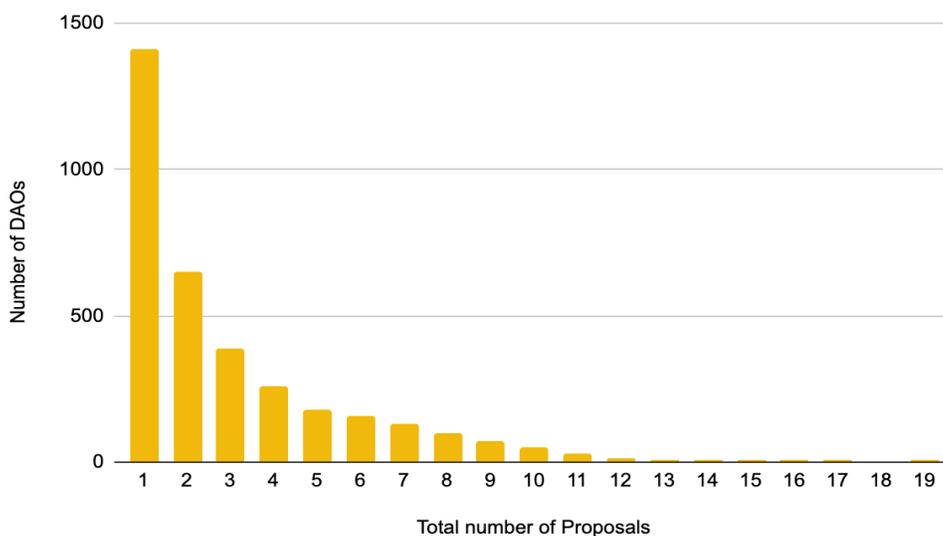


Source: Snapshot, DeepDAO

Especially during 2021, we could observe tremendous growth in the DAO ecosystem. DAO treasuries grew more than 40x from an initial US\$400M in January to around US\$16B by December 2021. In line with the growth in treasuries came a growth in overall participation, which grew more than 130x during the same period.

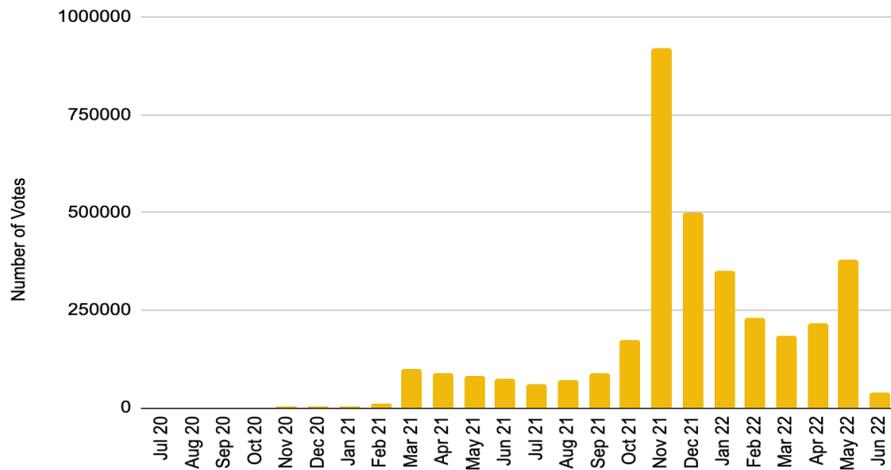
Having a closer look, we can see that further industry development still needs to happen for a healthy DAO ecosystem to exist. **As of now, the majority of proposals are driven by just a few DAOs.** Over 65% of all proposals come from just 10% of DAOs. Furthermore, 60% of DAOs have voted on 3 proposals or less (Figure 6), indicating that activity levels are still low.

Figure 6: Total number of Proposals - 60% of DAOs have voted on 3 proposals or less



Source: Snapshot, Electric Capital (@n4motto)

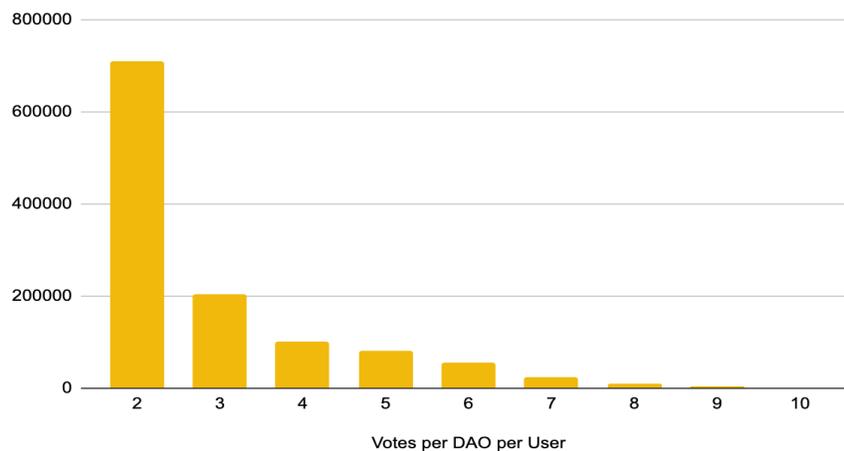
Figure 7: Monthly Vote Count - Indicates increasing vote activity, with a peak during November 2021, when ConstitutionDAO was bidding for a copy of the US Constitution



Source: Snapshot, Electric Capital (@n4motto)

Figure 7 shows us a clear picture of increased voting in DAOs, indicating increased participation. At first glance, it might show that while there is a concentration in proposals in just a few DAOs at least, we have an overall increase in participation through a higher number of votes. Yes and no. **While we see an increase in the voting activity, there are two things to note here. First, while voting increased, most DAO participants still only voted less than two times, with more than 50% of users only having voted once** (Figure 8).

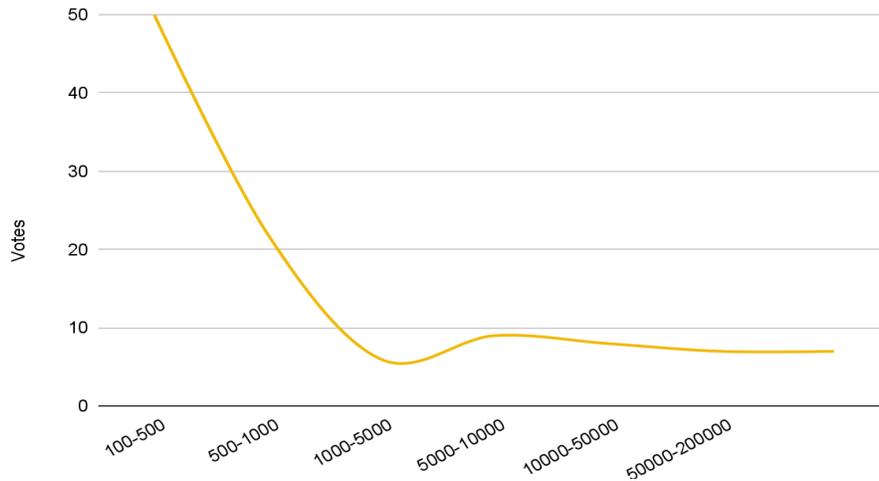
Figure 8: Vote per DAO per user - The majority of participants are voting less than twice



Source: Snapshot, Electric Capital (@n4motto)

Second, we can also observe that **voter participation is concentrated in smaller DAOs**. Thus while we have a few DAOs accounting for the majority of proposals (Figure 6) we observe that larger DAOs have lower voter participation than smaller ones (Figure 9).

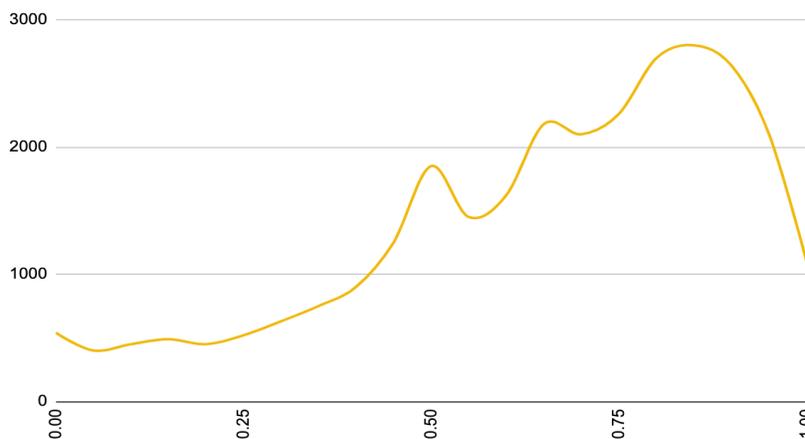
Figure 9: Votes vs DAO size (Members) - Smaller DAOs show more voter participation



Source: Snapshot, DeepDAO

Looking at the data from the DAO voting tool Snapshot on this, we can observe that **DAO proposals are heavily skewed toward a small number of powerful votes** - indicated by a Gini coefficient of 0.8 for more than 25% of proposals and an average of 0.6 (Figure 10).

Figure 10: Gini Coefficient Count- still a high level of dispersion and skewness in power



Source: Snapshot, Electric Capital (@n4motto)

As such, a key question remains at the end. How decentralized are DAOs really? Optimism⁽¹⁴⁾ and Solend⁽¹⁵⁾ both made us question this again, and for now, we still need further development and transparency in the space to create a more decentralized ecosystem. **Thus, while we are moving in the right direction (The average Gini coefficient decreased from 0.8 to 0.6 on average over the last year), we still have a long way to go.** Even transparency is an element that is still evolving, with Snapshot now allowing DAOs to hide votes with threshold encryption until the vote is closed.

There is another development we should touch on in this chapter. While evaluating the legal frameworks a DAO could use is worth a separate report, there has been exciting progress in Wyoming regulation this and last year. Wyoming decided to amend the DAO Supplement, which permits DAOs to incorporate and obtain legal status as limited liability companies (LLC) under Wyoming's Limited Liability Company Act⁽¹⁶⁾. The Supplement now allows DAOs to establish their definition of quorum voting, thus allowing for more forms of government models. As such, Wyoming's amendment paves the way for further adoption, allowing these entities to redefine the quorum paradigm in this age of digital companies with new organizational structures. The initial legalization and the ongoing development in regulation concerning DAOs is a healthy development that will help to overcome some of the risks and disincentivize bad actors in the space.⁽¹⁷⁾

Closing thoughts

DAOs today are trying to solve some tough problems and reinvent the way we used to organize Organizations since the start of the industrial revolution. **As of now, DAOs are still in their infancy and have found a way to balance speed, efficiency, transparency, and decentralization.**

Nowadays, DAOs are representing the backbone of the crypto industry as many if not most crypto companies are organized as decentralized autonomous organizations. There are a lot of interesting use-cases for DAOs that go beyond the “classic” organizational structure. Futarchy and the use of prediction markets could be used for decision-making would be one of use-cases. A meta-governance DAO that participates in multiple protocols could be another.

With developments in DAO tooling, like SuperDAO for DAO creation, Snapshot for governance and voting, and many more, we see how the industry is setting itself up for further adoption.

However, before concluding, it is important also to remember that further development needs to take place for a healthy future for DAOs. Direct democracy is still at the center of DAOs and is slowing down the decision-making process in times when fast action and execution are most important. Furthermore, this form of democracy, as seen in the development of the DAOs chapter, is leading to low participation and concerns about weak oversight and centralized decision-making of a group of selected few. **Overly concentrated voting in DAOs contradicts the goals of decentralization.**

As such, we welcome the development of subDAOs, working groups, and delegation as described in the design aspects chapter. As of now, it is hard to find the right approach to what kind of decisions are suitable for DAO voting - clearly, not all might be and take up unnecessary time and slow down the DAO.

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