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Compensation in DAOs: A Proposal

Sinclair Davidson FBBA

Blockchain Innovation Hub, RMIT University, Australia

Correspondence: sinclair.davidson@rmit.edu.au**Received:** 22 June 2023 **Accepted:** 17 July 2023 **Published:** 26 August 2023

Abstract

Compensation within DAOs presents unique challenges, particularly regarding aligning contributors' interests and motivation with organisational goals. Traditional time-based vesting schedules may not incentivise long-term commitment or performance, leading to potential misalignment and unfairness. This paper proposes an alternative approach to vesting schedules, based on the value accrual to the underlying asset. We argue that a value-based vesting schedule offers a more meritocratic and performance-driven approach to compensation that aligns contributors' interests with the DAO's long-term success.

Keywords: *Blockchain, Compensation, Decentralised Autonomous Organisation***JEL Classifications:** *L86, M52*

1. Introduction

Decentralised Autonomous Organisations (DAOs) have emerged as a novel form of digital organisation, characterised by their decentralised decision-making and transparent governance. Davidson, De Filippi and Potts [1] have described the unique characteristics of DAOs as follows:

A [DAO] is a self-governing organisation with the coordination properties of a market, the governance properties of a commons and the constitutional, legal and monetary properties of a nation state. It is an organisation, but it is not hierarchical. It has the coordination properties of a market through the token systems that coordinate distributed action, but it is not a market because the predominant activity is production, not exchange.

Hassan and De Filippi [2] define a DAO as being 'a blockchain-based system that enables people to coordinate and govern themselves mediated by a set of self-executing rules deployed on a public blockchain, and whose governance is decentralised'. It is the notion of 'decentralisation' that appears to attract most attention when discussing DAOs. When it comes to governance, DAOs are more like markets than hierarchy, i.e., modern corporations or even government.

Where the modern corporation revolves around management having extensive decision-making power, DAOs are centred on a series of smart contracts and voting power that is exercised by token holders in the DAO. There is an intuitive appeal to DAO governance mechanisms over more centralised organisations like traditional firms, not-for-profits, and even government agencies:

- **Transparency:** DAOs operate on blockchain technology, which allows for a high level of transparency. All rules and transactions are publicly viewable. By contrast, while corporations must disclose certain information, they are not required (or even intended) to be entirely transparent about all operations or decision-making processes.
- **Autonomy:** DAOs are autonomous in the sense that they can operate based on their initial coding and subsequent member decisions without the need for a central authority. On the other hand, corporations require management and employees to execute tasks and make decisions.
- **Structure and Governance:** The key distinction between DAOs and traditional corporations lies in their governance structures. While corporations are managed by a central authority (a CEO, Board of Directors, etc.), DAOs operate on pre-set rules, and decision-making is done collectively by its members, usually via voting.

Feichtinger, Fritsch, Vonlanthen, and Wattenhofer [3], however, suggest that these benefits may be somewhat over-sold.

Notwithstanding these differences and whether DAO governance is sustainable in the long run or whether DAO governance is 'immature' as Feichtinger et al. [3] suggest, both traditional organisations and DAOs face a very similar problem: how to compensate participants for their contributions.

Within traditional organisations, investors either earn capital gains, dividends, or interest, while employees earn salaries, and contractors earn fees. While that seems simple enough, there is

a massive academic literature on employee compensation and especially executive compensation. Contributors to traditional organisations are usually well-defined and have well-understood remuneration.

Contributors to DAOs are less well-defined and remuneration is less well understood. In part, this is due to the recent emergence of DAOs as an organisational form, and also due to the lack of academic study that has occurred in this area. Even now it is not clear what it means to 'work for a DAO' [4],[5]. Contributors to DAOs include founders (the equivalent of founding shareholders), investors (shareholders), developers (employees or contractors), curators and proposal submitters (employees or contractors), and service providers (contractors). As we argue below (section 3) how these different contributors get remunerated in DAOs is not as straightforward as might be expected.

This paper applies some of the learning derived from the academic literature into executive compensation in traditional organisations to DAOs. Specifically, this paper proposes a paradigm shift in compensation structures within DAOs by substituting traditional time-based vesting periods to value-based vesting periods (defined below). By aligning compensation with the value created by contributors, this proposal aims to enhance alignment, motivation, and accountability in DAOs.

In 2009, Lucian Bebchuk and Jesse Fried [6] identified two important problems in traditional executive compensation:

A good compensation plan should address two problems: executives' tendency to quickly liquidate large amounts of their equity compensation, and their ability to game the timing of equity awards and the cashing out of such awards.

Some 14 years later, this may still be a problem in publicly listed firms' compensation systems, but the problem is well recognised. It is also a problem in the crypto economy, and although recognised as being a problem, it is little discussed, to the best of our knowledge. Certainly, there is little, if any, academic work that addresses issues relating to compensation within DAOs.

What is particularly problematic in DAO compensation is that contributors are often paid in the native token of the DAO. As is explained below, this can have unintended consequences and result in perverse outcomes.

In section 2 we briefly discuss the extant academic literature on executive compensation and the incentives those compensation schemes are intended to provide. We then introduce, in section 3, the 'problem of DAOs' and the unique challenges that DAOs raise around issues of compensation. In section 4, we discuss the idea of value-weighted vesting periods replacing the current practice of time-weighted vesting periods. A conclusion follows.

2. Compensation and Incentives

Compensation plays a crucial role in large public companies, serving as a mechanism to attract, motivate, and retain favoured or talented employees, as well as align their interests with those of shareholders. Compensation packages usually consist of several components. To spell these out, they consist of cash payments, deferred cash payments, cash payments payable under differing states of nature, options and financial derivatives, equity and low-interest debt, non-cash transfers of value, and post-working life payments. In short, there are a wide variety of mechanisms and instruments to reward employees for their efforts. As we will argue below, DAOs could, but do not, deploy all these mechanisms when designing their own compensation schemes and policies.

It is also true that the compensation mechanisms and policies of large corporations (and increasingly not-for-profits and even government agencies) are often controversial. There is a long-running debate as to whether compensation is overly generous or whether it achieves its stated objectives.

Jensen and Murphy [7] had argued that traditional compensation mechanisms, which then primarily consisted of fixed salaries, did not effectively motivate senior employees (they were discussing chief executive officer compensation) to maximise shareholder value. They proposed using incentive-based compensation plans, such as stock options and equity ownership, to align the interests of senior employees and shareholders. By contrast, Bebchuk and Fried [8] argue that there is often a significant disconnect between pay and performance. They contend that compensation packages, particularly those based on stock options and equity (i.e., precisely what Jensen and Murphy had proposed) have failed to consistently align employee incentives with shareholder interests.

Nonetheless there is much to learn from examining the arguments of both Jensen and Murphy and Bebchuk and Fried. Both sets of authors highlight issues relating to short-term thinking and the manipulation of compensation structures. Jensen and Murphy caution against short-termism and the focus on immediate stock price appreciation, while Bebchuk and Fried draw attention to the ability of executives to game the timing of equity awards and cash-outs. It is apparent that compensation policies require careful consideration that strikes a balance between providing incentives for performance and addressing concerns such as excessive pay, misalignment of interests, and short-termism. Enhancing transparency, accountability, and shareholder input in compensation decisions, as suggested by Bebchuk and Fried, can help align compensation practices with shareholder interests. Additionally, incorporating longer vesting periods, performance-based metrics, and rigorous evaluation processes can further align executive incentives with sustainable organisational success, as advocated by Jensen and Murphy.

3. The 'Problem' of DAOs

One of the key aspects of DAOs is their emphasis on decentralised decision-making. Rather than relying on a centralised authority or management team [9], decision-making power is distributed among the participants. This decentralised governance model is typically achieved through voting mechanisms, where participants can vote on proposals, changes to the organisation's rules, or the allocation of resources. Participants in a DAO can hold voting rights, propose and debate ideas, contribute their skills or resources, and even receive rewards or compensation in the form of native tokens or digital assets.

There are various compensation mechanisms that DAOs can adopt:

- **Token Compensation:** The most obvious form of compensation in a DAO is through the native token. This can incentivise participants to contribute towards the DAOs success, as the value of their tokens may increase as the DAO grows and succeeds.
- **Bounties:** DAOs can set up bounty programmes for specific tasks or goals, offering an amount of tokens to whosoever completes the task or achieves the goal.
- **Funding Pools:** DAOs could establish funding pools to distribute compensation to participants. For instance, a DAO could collect a percentage of all transaction fees and distribute it among its participants.
- **Revenue Sharing:** DAOs could distribute a portion of their revenue among participants. This could be proportional to the amount of work done or tokens held.
- **Salary or Fee for Service:** Similarly to traditional organisations, DAOs can also set a fixed salary or fee for service for certain roles, like legal or auditing services. This could be paid in tokens or in other cryptocurrencies.
- **Staking Rewards:** Participants could earn compensation by staking their tokens, i.e., locking them up for a period of time to support network operations such as securing the network or voting. In return, they receive a portion of the DAOs revenue or newly minted tokens.

Clearly these mechanisms are not appropriate for all contributors. Token holders, who provide capital and governance to the DAO should be compensated via some revenue-sharing model such as a buy-back scheme (or even dividends). This both aligns them with their role as stakeholders and motivates them to make decisions that increase the DAO's value. Founders or creators usually receive an initial token allocation for setting up the DAO, which may be subject to a vesting schedule to promote long-term involvement and dedication. Developers may be rewarded through bounties for specific tasks, a regular salary in native tokens or some other cryptocurrencies such as a stable-coin,

or a vesting schedule similar to that of founders, all of which incentivise their sustained high-quality work. Curators, who bear the responsibility of filtering and suggesting proposals for voting, should receive a flat fee for each proposal they curate or a consistent salary that aligns their interests with the DAOs success and efficiency. Encouraging members to submit valuable proposals might be achieved by offering a reward for accepted and implemented proposals, whether that is a flat fee or a percentage of any resulting cost savings or generated revenue. Finally, service providers, such as legal counsel or graphic designers, could be compensated on a fee-for-service or contractual basis in alignment with the value they bring to the DAO.

There is an additional challenge, however, as Orlando [10] indicates:

One of the biggest challenges I have seen in the DAO space is compensation; knowing when you will get compensated, how you will get compensated, and trust that it will come in.

These are very different problems to what employees may experience in large corporations. Orlando describes DAO compensation in the following terms:

Many DAO members benefit from the flexibility DAOs offer their contributors. The flexibility is because, unlike traditional organisations, DAOs use multiple unique compensation mechanisms. Their payout models range from paying governance tokens to stablecoins and crypto for grants, bounties, and role-assigned tasks.

While it is clear that DAOs make use of compensation mechanisms that are different to those of traditional organisations, it is not clear that DAOs make use of as many different compensation mechanisms as do traditional organisations. For example, the payment of stablecoins or crypto for grants and bounties is the equivalent of paying cash for project work. That is not quite ongoing employment. Role-assigned tasks are more like ongoing employment but in the DAO context this is problematic – who assigned the tasks? Who decides if the task has been adequately performed? (See [11] and [12] for discussion on these points). But again, the payment of stablecoins is the equivalent of paying cash. The payment of governance tokens could (controversially) be considered as being equivalent to equity grants. All the other mechanisms available to traditional organisations, however, appear to be absent.

Paying employees in the native token (or governance token) could give rise to several problems:

- **Uncertainty and instability in income.** Many tokens – especially for smaller and younger projects – may have limited usability outside their native ecosystem and may also experience significant price volatility. These problems may well be exacerbated by a lack of

liquidity in secondary markets when employees attempt to redeem their tokens for cash that can be expended to defray living expenses.

- Misalignment with the long-term goals of external token holders. Token-based compensation may encourage short-term thinking and a focus on immediate price appreciation rather than the long-term success of the DAO. For example, DAO contributors might prioritise activities that drive short-term token price increases, potentially neglecting important factors like product development, user experience, or community building.
- Wealth inequality. Token-based compensation can exacerbate wealth inequality within DAOs. If early contributors or founders hold a significant portion of the native tokens, they may have disproportionate influence and financial power compared to later contributors.

It is possible to inform our understanding of DAO compensation by bringing the insights of Jensen and Murphy and Bebchuk and Fried to bear.

Bebchuk and Fried's work highlights the potential misalignment between pay and performance. This concern extends to DAOs, as contributors are often compensated with native tokens. The volatile nature of these tokens raises questions about short-term liquidation and the potential disregard for long-term organisational goals. To address this problem, DAOs often implement vesting schedules but as we argue below, these schedules themselves can be gamed. Jensen and Murphy emphasise the importance of accountability and effective incentive structures in compensation. DAOs must strike a balance between motivating contributors and preventing abuses in timing token awards and cash-outs. Transparent and predetermined processes for token distribution are crucial, ensuring fairness and preventing manipulative behaviours.

It seems that DAOs rely, quite heavily, on vesting as the mechanism to drive incentive compatibility between founders, early contributors, later contributors, and other external token holders. The purpose of vesting schedules is to incentivise long-term commitment, align interests, and prevent immediate liquidation or exploitation of token compensation. A typical example of vesting may be as follows: when an individual joins a DAO as a contributor, they are granted native tokens that are not immediately accessible. The so-called vesting period, possibly spanning months or years, defines when the tokens become available and the rate at which they become available. Some vesting schedules include a 'cliff' period, where no tokens vest initially, ensuring commitment before earning tokens. After the cliff period, vesting commences, facilitating long-term engagement within the DAO. Adding to the complication is that different types of contributors may have very different vesting periods.

The argument set out in the previous paragraph seems reasonable to align the interests of DAO contributor and according to Hedgely Finance [13] those arrangements seem to be typical in the DAO space. The difficulty with this sort of arrangement is that it simply does not address the problem identified by Bebchuk and Fried and cited at the very beginning of this paper. Contributors (especially founders and early contributors) still have an incentive to liquidate their token holding as soon as they can, and they still have control over when they can do so. Early contributors and founders get to choose the timing of their vesting contracts.

4. A Proposal

A possible solution to the timing problem (and favoured employees liquidating their holdings as quickly as possible) – and the proposal contained in this paper – is to link vesting contracts to the value of the underlying token and not simply the passage of time.

Consider the following example: a contributor undertakes to do a job of work that might be valued at, say, \$10. If the DAO token had a current market value of \$1, then the contributor gets paid 10 tokens. There may be a vesting schedule that prevents them from selling the 10 tokens for, say, 6 months. This situation is intended to align the interests of the contributor with the long-term interest of the DAO or other contributors or DAO participants. It also is intended to avoid downward price pressure on the DAO tokens in the present – this is especially important if the DAO is young and the DAO tokens not particularly valuable or currently trade in illiquid markets.

Now consider an alternative vesting mechanism. The contributor does a job of work valued to be \$10, the current market value of the token is \$1, but rather than receiving 10 tokens, the contributor receives, say, 5 tokens. Now the contributor has no incentive to sell the tokens on the market until they have reached a market price of \$2 each. Alternatively, if they need cash now for living purposes, they can sell their tokens now on the market for \$1 each. In this approach, contributors are paid immediately for their work, but only realise the full value of their payment when all other contributors and DAO participants realise additional value too. Of course, it would be easy to combine this proposal with a deferred compensation mechanism where the previously withheld tokens are paid out when the token price reaches the targeted market price (in this example \$2).

This alternative approach offers, at least, three potential advantages:

- Aligning with performance: By basing vesting periods on the value accrued to the underlying token, contributors are directly tied to the performance and success of the DAO. If the value of the token increases, it indicates positive outcomes and progress, rewarding contributors accordingly. This approach

establishes a direct link between the value created by contributors and their compensation, promoting alignment between their efforts and the DAO's success. Time-based vesting provides, at best, an indirect link between contributors' contribution and value created. Time-based vesting schedules *assume* that the value of the DAO token will appreciate over time, or at least will not depreciate, and so align interests – but that is an assumption unrelated to value creation.

- **Motivating long-term commitment:** Traditional time-based vesting schedules may not necessarily incentivise long-term commitment or sustained effort. Contributors may (passively) fulfil their time obligations without actively contributing to the growth and success of the DAO. In contrast, value-based vesting encourages ongoing engagement and dedication, as contributors are motivated to enhance the value of the asset to maximise their own compensation. It aligns the interests of contributors with the long-term growth and sustainability of the DAO.
- **Reflecting contribution quality:** Time-based vesting schedules do not differentiate between various levels of contributions, or the quality of work performed. By incorporating the value accrued to the underlying token, contributors who make substantial and impactful contributions can be appropriately rewarded. It provides a more meritocratic approach, where compensation is tied to the value added by contributors rather than simply the passage of time.

The obvious question, of course, is, how can anyone know that a particular contributor was responsible for value appreciation? The answer is that nobody can ever know for certain – yet that is the case under existing compensation schemes. What this proposal offers is a deferred compensation scheme that aligns the interests of contributors with the financial interests of all DAO participants. The question of interest is simply how deep the discount should be when tendering for any job of work. Right now, the question is, 'how long should the vesting period be?' That too is a somewhat arbitrary number, yet by linking vesting to valuation DAOs can establish clear targets and expectations as to value accrual. What is important, however, is that the compensation design space available to DAOs is expanded by having another compensation tool available for use.

5. Conclusion

This paper proposes a simple change to vesting schedules – that they target value and not merely the passing of time. In this way, compensation within DAOs can be better aligned with the long-term interests of other DAO contributors and DAO participants. Furthermore, it better aligns compensation practice with principles that have been learnt from observation of compensation problems in large public corporations.

Compensation is a fraught topic, yet the crypto economy avoids tackling this issue [14]. If DAOs are to provide employment opportunities, going forward it will have to adopt policies and processes that cater to the unique attributes of DAOs while attracting and retaining individuals able and willing to do the work of establishing and running those DAOs.

The paper contains a proposal for DAO compensation. A significant limitation of this proposal is that it is entirely theoretical – no DAO has adopted such a scheme, to the best of our knowledge. Furthermore, it is unclear if contributors to a DAO would be willing to work on such a basis. Nonetheless it is also unclear if existing vesting schedules work as well as intended.

Finally, it is obvious that much more academic work needs to be undertaken to better understand what it is that DAOs do and how they do it, and flesh out what it means to work for a DAO.

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