

PWN DAO - "Whitepaper"

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Abstract

PWN DAO represents the decentralized governance framework for PWN, a protocol that enables peer-to-peer lending using digital assets as collateral. This paper outlines the DAO's structure, purpose, and operational principles, emphasizing its role in steering the protocol's growth, ensuring sustainability, and fostering community participation. The DAO operates as a mechanism for decentralized decision-making, with token holders actively influencing proposals related to protocol updates, treasury management, and ecosystem development. By leveraging decentralized governance, PWN DAO seeks to empower stakeholders and align interests across its global community.

The document explores the foundational values of PWN DAO, including transparency, inclusivity, and autonomy, which are critical for maintaining trust and fostering collaboration. It details the governance processes, voting mechanisms, and funding strategies that enable the DAO to function efficiently while adapting to the evolving needs of the protocol and its users. With a focus on decentralized finance (DeFi) innovation, PWN DAO aims to position itself as a leader in enabling trustless, permissionless lending and shaping the future of decentralized asset management. Specifics of each version of the PWN Protocol will be explained in separate whitepapers.

1 Introduction

This document describes the motivation and mechanics of the PWN DAO, the vehicle providing access to advanced borrowing and lending instruments such as non-custodial collateralized loans, mortgage-like contracts and non-liquidating loans to owners of digital assets.

Further, the document includes a thesis for the token model of the DAO, including usage of the governance token, issuance schedules and distribution schemes.

1.1 Motivation

Traditionally, mortgages allowed people with limited access to capital to become land- or home-owners. Access to credit and mortgages can enable people to bridge their initial wealth gap and provide them with an opportunity to stop paying rent to landlords and instead to lock their money into long-term investments such as real estate, thus exiting

mortgage loans can act as a tool for re-distribution of certain types of long-term valued property in exchange limited debt exposure.

Of course an irresponsible use of debt can lead to a damaging spiral and these instruments have to be used reasonably and with caution. Debt is a useful servant but a terrible master. The newly unlocked capital efficiency meant that the land and real estate owned only by the higher class could be purchased by lower income individuals which at the verge of generations resulted in more people owning real estate than before. One could however argue that there was never an actual shift of wealth as the same landowners would lend the money to the middle class and they would just earn interest on top, perpetuating the wealth gap even further. At this stage the wealth gap is even more apparent given that Millennials, considering the US an example market for simplicity, the largest demographic group making over 24% of society in the US, hold only about 5% of the overall wealth. Surely, one can assume that the wealth is eventually going to get transferred into the hands of Millennials, but the same pattern will likely repeat, unless there are other means and novel emerging economies the new generations will bootstrap. Today, the majority of mortgage financing comes from bank deposits (banks borrowing from their depositors and lending with higher interest) or government programs yet the tools for individuals to voluntarily participate on the mortgage yield directly (without a bank taking a cut from their deposit) are limited.

1.2 PWN DAO Mission

In the age of DAOs and participative economies anyone can become a lending institution and anyone can benefit from providing capital to the borrowers. Today, we can create global unions with minimal coordination costs. The structures of borrowers and lenders can be interlinked. People who borrow assets can at the same time be stakeholders of the protocol which they utilize themselves. Moreover, they can become part of the credit union which lends them the funds and thus they can decrease their overall lending costs.

Today we stand at the very beginning of such a new emerging market - cryptocurrencies, non-fungible tokens, DeFi-assets and the whole transformation of traditional finance into the more efficient and trustless era - an interlinked global system of value attribution and exchange - an economy which is fulfilling the potential to allow recognition of the value generated by Millennials, GenZ and the digital-native generations yet to come.

PWN DAO is here as a collective to pursue creation and maintenance of open, permission-less and immutable financial tools. It will operate and govern the PWN Protocol and its tooling.

2 PWN Protocol Overview

PWN is a smart-contract based lending protocol allowing setup and execution of non-custodial over-collateralized fixed-term loans between any lender and borrower using any standard asset.

The protocol enables:

- defining fixed term DeFi loans
- usage of any ERC20, ERC721, ERC1155 or their bundle as collateral
- usage of any ERC20 as a loaned/credit asset

- customizable loan setups, eg.:
 - custom logic for interest & repayment terms
 - advanced - liquidation setups - like (default) liquidation triggered by missed installments rather than unpredictable price movements
 - etc.
- secondary transfers of Lenders rights of claim (ERC721 LOAN token)
- via associated tools:
 - creating custom collateral bundles, combining many asset types (via Token-Bundler)
 - access to utility functions of the collateral for borrowers (via PWN Safe)

Additionally, there is a variety of functionalities being developed:

- gradually paid loans
- dutch auction based LTV setting
- partial liquidations in case installments are missed
- crowd-managed loans (both as borrowers or lenders)
- setting up loans across multiple L1 and L2 blockchain networks

The PWN Protocol itself is further described here: <https://whitepaper.pwn.xyz>
 Its current implementation can be found here: <https://prot-v1.pwn.xyz>

3 PWN DAO Functions

The primary objective of the DAO is to rule and maintain the PWN protocol and be beneficiary of the protocol fees. That includes:

- ability to set the adjustable parameters such as:
 - borrowing fee size
 - governance voting reward size
 - all governance related parameters
- declaring new protocol versions (without impacting existing loans)
- appending new loan and offer types
- configuring tooling such as PWN Safe token lists

The function of the DAO doesn't end here. There are a multitude of additional value generating actions the DAO can take. For instance, the DAO can expand its impact using its treasury as a lender to allow instant loans based on protocol-level offers. To obtain additional capital, the DAO can leverage its own tokens and lock them as yield-generating collateral in a repayable crowd-loan. The DAO may also play a major role in settlements of partially paid loans, having an edge in the auction system. None of these features are however considered in the current fee oriented business model.

4 Governance

The core principle of PWN DAO is that active contributors will reap the rewards. The PWN DAO will only benefit those who commit their tokens for a fixed period of time. Additionally, those who actively participate in the protocol governance will be shielded from governance process imposed token inflation.

4.1 Commitment

Similarly to the Curve protocol, committing the tokens will be the only way token owners will be able to participate in governance and to claim any protocol fees.

Commitment (also referred to as “Stake” due to wide use of the term) will mean locking up the PWN token for an extended period of time to ensure commitment to the effects of such a vote.

The period of time one decides to lock in their PWN will influence the power of their vote as follows:

Lockup Period	Vote Weight Multiplier
1 year	1.0
2 years	1.15
3 years	1.3
4 years	1.5
5 years	1.75
10 years	3.5

The vote weight multiplier decreases the closer the stake’s maturity date. For example, if the maturity date is less than or equal to two years, the vote weight multiplier will be 1.15, even if the initial lockup was for five years.

Contrary to the Curve protocol, owners can make multiple commitments, depending on their strategy. The voting power will be a sum of all commitment powers, determined by multiplying the number of locked tokens in a commitment by the vote weight multiplier.

Time will be tracked in epochs, where one epoch is four weeks. One year is then 13 epochs. The current epoch is always immutable, so any voting power update will happen at the beginning of the next epoch.

Stakers can stake for any number of epochs between 13 and 65 (1 year and 5 years) or for 130 epochs (10 years).

Stakes will be non-transferable by default, but the DAO can enable transferability.

Every stake will be tokenized - this would additionally allow any staker to use the active stake as collateral in DeFi, and still hold power granted by the stake.

4.2 Voting

Any stakeholder can vote on proposals using their staked PWNs - while the weight of their vote will be based on the duration of the staked commitment. Anyone can, however, motivate a discussion around potential proposals using the community channel & forum.

4.3 Dual optimistic governance

DAO will be embracing a dual optimistic governance as a dynamic approach to prevent voter apathy and facilitate swift execution of protocol changes. This means that there are two groups which can create proposals:

- **Collective:** Including votes of every staker. Slower-paced mechanism enabling every stakeholder to participate in governance including a token voting reward for each passed proposal.
- **Stewards:** Fast-paced 66% majority multi-signature scheme - Initially including the core-team member which will be replaced by delegates later.

Proposals can be made by both the Collective & Stewards, yet only the Collective has a right to veto any decision of the Stewards within the veto period.

Collective proposals must reach a voting quorum of 20% and a support threshold of 60% to pass. Steward proposals are successful by default unless the Collective vetoes them with at least 10% of the total voting power.

In this model, the core team is granted the authority to make decisions efficiently without being hindered by delays and gas costs caused by extended voting processes, ensuring a responsive and adaptive ecosystem. However, the design recognizes the importance of balancing power and maintaining a decentralized structure.

To safeguard against potential centralization of power and to uphold the principles of decentralization, stakers within the DAO are bestowed with the power to exercise a veto or propose their own decisions. This dual-layered governance structure seeks to strike a harmonious balance between the need for rapid decision-making and the desire to incorporate diverse perspectives within the community.

4.4 Creating a proposal

Initially those with at least 1 voting power or the Stewards can create proposals to be voted on directly. This parameter can be adjusted by a DAO vote.

4.5 Delegation

The roll-out model has deliberately chosen to forego delegation initially, emphasizing the importance of encouraging all stakeholders to participate actively in voting. It's important to note that this decision doesn't preclude the possibility of implementing delegation in the future if the community expresses a genuine need for it.

4.6 Voter apathy & Inflation

The DAO introduces a compelling incentive structure to counter potential voter apathy and promote a sense of involvement. For each Collective proposal, stakeholders engaging in voting become eligible for a claimable reward equal to 0.2% of the current total supply (the DAO can update this value up to 1%). It's crucial to clarify that this incentive is per proposal, and voters can claim a proportional part based on their used voting power and only if the vote passes. In addition to this positive incentive, stakeholders who choose not to participate in the voting process may experience an inflation of their staked holdings. This mechanism aims to discourage passive staking and ensures that

those actively contributing to the governance decisions are rewarded, while the staked holdings of non-participants face a proportional reduction.

4.7 Protocol Fees Collection

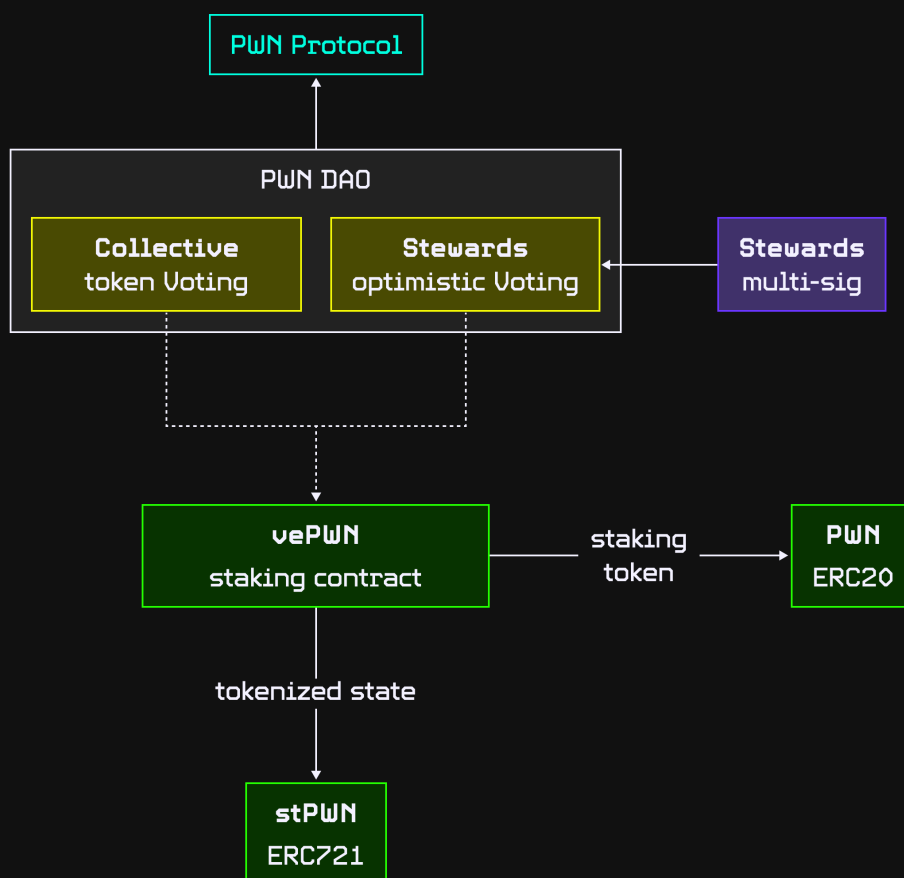
The PWN Protocol can collect fees on all loans provided. The fees may be deducted from the amount borrowed and may be charged to the borrower at the time the funds are being transferred from the lender to the borrower. Initially the fee will be set to 0% from the amount borrowed. All protocol fees will be stored in the PWN DAO treasury. The fees can be practically generated in any ERC20 token.

4.8 Treasury distribution

Initially, the treasury from fees will only accumulate - there are multiple ways the treasure could be distributed or reused in the protocol - however it's left to the discretion of stakeholders to decide this in the future.

4.9 Visualization

Below you can see the structure of the proposed Governance setup, functionality of PWN DAO token and its integration into the PWN Protocol.



4.10 Contract structure breakdown

4.10.1 Token contracts

PWN DAO introduces three tokens. PWN DAO token (PWN), StakedPWN token (stPWN) and VoteEscrowedPWN token (vePWN). PWN token is a simple, fungible token with a cap on a mintable supply by the DAO set to 100M. The DAO cannot mint more PWN tokens even if it burns some. The only way to increase total supply beyond 100M will be via voting rewards, which will mint new tokens to voters per proposal. The DAO can set the voting reward ratio from 0 (turn off rewards) to 1% of the current total supply. StakedPWN token is an NFT representation of one commitment (stake). Any stake update will burn an old stPWN and mint a new one to enable compatibility with PWN Safe. Staked PWN is only transferable once the DAO votes to enable the feature. VoteEscrowedPWN token is a fungible, non-transferable token whose balance is equal to voting power. It is the main contract that locks staked PWN tokens and implements an ERC20 and IVotes interfaces for convenience. VoteEscrowedPWN contract implements functions for managing owners' stakes, explicitly creating, increasing, splitting, merging, and withdrawing stakes. The contract will be implemented as an upgradable proxy to allow future feature extensions like voting power delegation.

4.10.2 Governance

The DAO has two governance contracts, Token and Optimistic, for the Collective and the Stewards to create proposals. Anyone with at least 1 voting power can create a proposal in the Token governance. The proposal can be executed after a voting period if at least 20% of the voting power votes and the proposal has more “for” votes than “against” votes. Proposals in Optimistic governance can be created only by the Stewards and executed after a veto period if not more than 10% of voting power vetoed the proposal. Vetoing a proposal will not reward voters with PWN tokens.

4.10.3 AragonOSx

PWN DAO is using the Aragon OSx framework as a DAO infrastructure. The DAO contract is the owner of the PWN protocol and PWN tokens. Only Token and Optimistic governance can call the execute function on the DAO contract, enabling the dual governance. The DAO contract is used as the main DAO treasury. A DAO vote can change it in the future.

4.10.4 Cross-chain bridge guardians

Any bridged governance execution will first sit in a bridge timelock where the same set of stewards from Ethereum will have time to cancel any execution not initiated from the PWN DAO on Ethereum. It should act as a safety net in case a bridge is compromised. The stewards are, in this context, called guardians. The guardians must not cancel any execution that correctly passed the DAO governance. Cross-chain bridge guardians can prevent any execution on chains other than Ethereum, but it's implausible because they are already trusted on the mainnet.

5 DAO Principles

5.1 Mission

PWN DAO is created to follow the mission, yet the DAO can re-define the mission.

5.2 Minimal initial setup

The initial DAO setup sets the basic framework for governance and handling protocol deployments. The rest is left to the DAO participants to decide.

5.3 Bootstrap

Many of the components such as treasury distribution or delegated stewardship setup are intended to be developed and discussed openly after the PWN DAO has been deployed and after has attracted a critical mass of stakeholders. Despite the initial Stewards not being voted in the DAO can pass a proposal to replace them at any point - the Stewards can't veto such a decision.

5.4 Protocol upgrades CANNOT affect the past

None of the decisions about protocol setup will affect the loans made in the past which may be currently running. Given that all loans on PWN have an expiration, the upgrades will simply happen by deploying a new version and committing the DAO treasury towards a new version/contract as that won't affect the loans which are in progress already. The old loans will simply run as programmed until they are either paid back or they default.

5.5 Multi-chain/-layer deployments

Ethereum mainnet is the home base of the PWN DAO. All global decisions of the mainnet DAO will be broadcasted via general bridges to DAO proxies on other chains. In case of a compromised bridge, bridging timelocks will give time to a set of stewards to cancel any malicious transaction that was not initiated from the mainnet DAO.

6 DAO Token Distribution

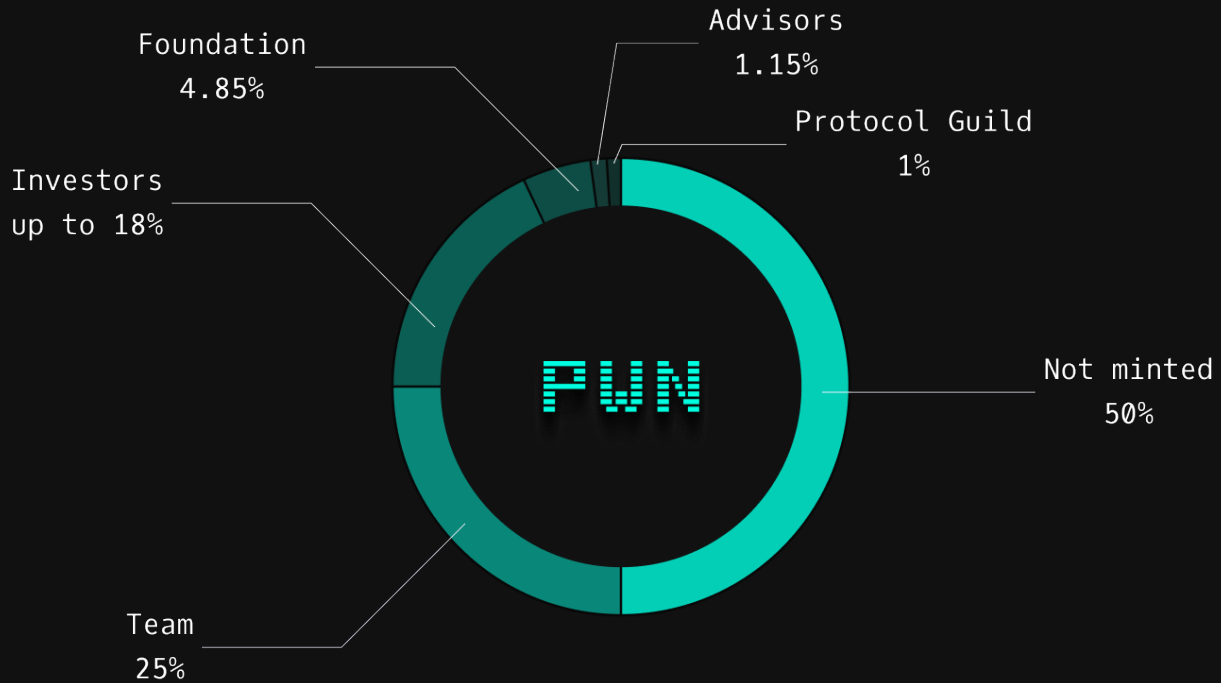
6.1 Token Vesting

The token vesting/issuance schedule will be set as follows:

Cohort	Duration	Form
Founders	10 y	50% across year 1 - 5 50% after 10 years
Core team	2-5 y	2 y unlock for salary incentives 5 y annual unlock for core team
Advisors	2 y	Yearly cliffs unlocking 1/2 of the allocation

Investors	2-4 y	6 or 12 month cliffs unlocking 1/4 of the allocation
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6.2 Initial Allocation Split



7 Acknowledgments

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8 Disclaimer

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