



Decentralized Autonomous Money Market System Built on the
Top Layer of Vexanium Public Blockchain

Whitepaper

Introduction

VYNDAO is a DAO (Decentralized Autonomous Organization) community owned project consisting of a decentralized balance sheet of VEX cryptocurrencies collateral and others cryptocurrencies built on the top layer of Vexanium Public Blockchain, with the vision of creating a vibrant ecosystem of tokens pegged to the value of real-world assets. It allows users to mint (mining) and retire (burn) pegged assets, while also providing market makers with clearly defined arbitrage opportunities. The initial iteration of VYNDAO platform will support the minting and retiring of USD-pegged assets referred to as USDV.

Background: Volatility Problem in Cryptocurrency

For a digital currency can be used as a medium of exchange for transactions, it must have low volatility and have price stability. Volatility also always has been a negative part of crypto currency; especially when price stability is an essential element in the token design. There are several ways to achieve such stability, but the approach that is more appealing to the crypto community or even general public is a decentralized (trustless) stabilized mechanism.

One most common stablecoin type is IOU (I Owe You) centralized stablecoin that is requiring the trust of an issuing party, it means the stability and reliability relies on the reputation of the specific centralized issuing parties. Centralized stablecoin also has a challenge of transparency and it lacks trustworthiness so it needs a lot of public marketing to build its credibility. Although a mechanism binding by blockchain and smart contracts is more favorable, it is not easy to develop, deploy and maintain for most startups.

Solution For Stability :

To avoid network congestion problems, VYNDAO chose VEXANIUM , the best performance public chain at this moment, as the development platform. Besides, the high performance and the great real-time transaction demands derived from the high performance are expected to significantly benefit the future scalability and the product iterations of VYN token system.

For the most challenges we face - the potential risks from the instability of the token price itself, the system is building various feasible hedging mechanisms available for developers. And for the liquidity of deployed tokens, the system has various features available for deployer/developers to reinforce the stability.

Short overview of Stable coin solutions

While cryptocurrencies spread over the world and aim to participate in regular business transactions, they remain highly volatile in value. Unstable value limits use of cryptocurrencies and actually prevents them from taking main functions of money: being the store of value, means of exchange and unit of account.

Stablecoins is a group of cryptocurrencies which try to fulfill these three functions of money more effectively using different price stabilization mechanisms

Currently, we can find lot of stablecoin projects on the market with different models, starting from straightforward (using fiat in a bank as collateral) and ending with questionable ones, promising to create stable money based on nothing other than program code.

We believe that stable money of the future should develop three important features:

- have a clear and solid long term stabilization model;
- be decentralized and independent from governments and fiat banking system;
- be scalable in order to get any meaningful role in the economy.

USDV Stablecoin Concept

In the early stage, USDV is the stablecoin collateralized with VEX cryptocurrency as its value base. It is pegged to USD. Later USDV will be open to accept other cryptocurrencies as collateral. so later BTC, ETH and VEX and any cryptocurrency holder that acceptable can obtain a proportional amount of USDV by pledging VEX Coin to CDP (Collateralized Debt Position) and the amount depends on the collateralization rate chosen by the users. Collateralization rate is the ratio between the value of VEX assets and the value of USDV obtained. Over-collateralization is used in the system rules, which means that the Pledgor must pay VEX more than the value of USDV to complete the transaction.

There are two ways to destroy USDV. First, the Pledgor redeems the asset by sending USDV and the incurred stable fees to the normal CDP (the collateralization rate is greater than 150%). Second, the system will perform mandatory clearing rules to close the undercollateralized CDP (with collateralization rate less than 150%). The system immediately destroys the received USDV either way.

In order to maintain the stability of the value of the stablecoin, the system must ensure that there is enough decentralized asset as collateral behind each issued USDV to endorse it.

Therefore, a clearing system is introduced to liquidate CDPs that are insolvent. A risk reserve is also prepared to cope with the potential fluctuations on cryptocurrency caused by the black swan event.

To ensure the sound operation of the system, a governance coin VYN is introduced to the system. VEX holders share the benefits of stable fees and fines during the operation of the system, as well as the obligation to govern and resist financial risks. In terms of the liquidity of the stablecoin, the various applications on Vexanium and third-party cooperation will create continuously expanding demand for USDV, and reciprocally stimulate the development of Vyndao .

Collateralization System and Generate USDV Method

Vyndao CDP (Collateralized Debt Position) is used to keep and protect the asset pledged by users.

The USDV collected by the Pledgor from Vyndao CDP represents the debts owed by the Pledgor. To redeem the pledged asset, the pledgor has to repay USDV. Like the collateral practice used in the legal tender system, the amount of debts will be lower than the value of the pledged assets.

The crypto assets that can be pledged at the initial stage is Vexanium public chain coins (VEX), following later any other cryptocurrencies, other valuable assets will also be accepted as collateral.

Here are the simple steps.

1. Creating CDPs to deposit collateral assets

Login with VEX Account then Deposit VEX coins or any cryptocurrencies that accept in platform as collateral asset to Vyndao CDP Platform to create a CDP, to generate USDV Token

2. Generating USDV through VYNDAO CDPs

The CDP holder sends a transaction to specify the amount of USDV generated in the CDP. Meanwhile, the same amount of debt will be created, and the collateral asset is locked up and not available for redemption until the debt is repaid.

3 . Redeeming the collateral

To redeem the collateral, the debt must be repaid with USDV along with a stability fee paid (if any) with Vyndao platform token VYN. Finally, CDP holders can send a transaction to Vyndao to retrieve all collateral assets.

If a price slump of the collateral makes it at risk of being unable to cover the debt, the CDP liquidation will be triggered to auction the collateral for repayment. Any remaining value net of the debt and the penalty fee will be kept in the CDP for withdrawal.

Core Functionality of VYNDAO Platform

1. Positions contract

The position contract stores a user's liquid digital assets in a unified pool, allowing for the management of this pool with help from on-chain governance. VYNDAO enables a family of Vexanium Blockchain native assets whose values are managed using a stability mechanism. These assets are backed by a reserve of liquid digital assets supplied by users.

The first stablecoin is USDV, pegged to USD. The positions contract also sets the logic for a user's position management. It stores the framework's global risk parameters, which specify how the system behaves, and governs the position creation process and a user's position interactions.

2. Governance contract

Vyndao global risk parameters are configured by a governance mechanism, which means that VYN holders get to vote on proposals to change the framework's parameters. If the majority agrees on new parameters, those become the norm.

Another important aspect of the Governance contract is the ability of VYN token holders to direct their liquidity pool to additional revenue streams available inside the Vexanium Blockchain ecosystem, including (but not limited to): VEXREX resource lending, VEX block producer voting, and profit sharing.

Last but not least: the Governance contract allows VYN token holders to create proposals and vote on them for effective decentralized autonomous management of the entire framework.

3. Rates contract

Vyndao provides access to real-time market prices thanks to its rates smart contract. Any third party account or smart contract can subscribe to the price feed and receive timely updates required for business logic. Outside of accurately knowing collateral prices for risk management, the Vyndao framework needs relevant prices for the VYN utility token to calculate the corresponding fees within the framework.

The Vyndao framework will work with some oracles provider to obtain timely market data on-chain. The system uses three different oracles for redundancy and calculates the median rate based on the data provided by these oracles. The median value is a final reference price used in all of the on-chain calculations.

4. Liquidator contract

Normal framework operations are only possible when each position's collateral-to-debt ratio is above the liquidation ratio (`critical_ltv` parameter on positions contract currently set at 130%). When checking position safety, the external reference price is used in order to establish the USD value of the collateral, while the USD par price is used to price the USDTV liability.

Thus, position safety is assessed in terms of USD at a target price $1 \text{ USDV} = 1 \text{ USD}$. By liquidating positions that fall below the liquidation ratio, the system can ensure that the USD value of collateral backing circulating USDV remains within determined parameters. Liquidated positions accrue balances on the Liquidator contract.

Collateral balance accumulates on the liquidator contract from positions that get margin called. This collateral is sold in exchange for USDV— a so-called “collateral auction.” Collateral auctions cover USDV liabilities originating from liquidated positions.

The Liquidator contract sells VEX collateral at a discount from the reference price to incentivize USDV liability liquidation. It's a fixed price sell-off rather than an auction.

All interactions with the Liquidator contract are done via transfers from any VEX account: Transfer USDV when there is non-zero "bad debt" on the liquidator contract and receive VEX collateral at a 3% discount.

Transfer VYN when `vyn_collat_balance` is non-zero to buy out excess VEX collateral at a 6% discount. Transfer VEX when `surplus_debt` is non-zero (non-zero equilibrium fee, which is not the case right now) on the liquidator contract to buy out USDV at a 3% discount.

5. Genesis Mining Contracts

Users can Stake VEX Token or USDV to Get VYN Tokens on genesis mining

VYN TOKEN

Vyn Token is inspired by Bitcoin Spirit and has a mission of democratizing the crypto space that is operated by communities using Decentralized Autonomous Organization. There is no token sale for VYN Tokens; all tokens are given away to the community using Genesis Mining and Farming.

VYN Token Total Supply: 150,000 VYN

Genesis Mining Phase 1 – 85,000 VYN (56.7%)

This program will run for 1 month. Stake VEX into VYN's smart contract. Users can un stake anytime. The smart contract will generate 1 VYN every 60 Vexanium blocks (30 seconds), with no handling fees when users un stake the VEX coins.

Genesis Mining, Phase 2 – 30,000 VYN (20%)

This program is 2-3 months long. During regular mining, users can stake VEX, USDV, and other community project tokens. After that, the liquidity mining pools will be set up. Users can participate in mining by staking different tokens.

Platform Liquidity Mining (Phase 2) – 30,000 VYN (20%)

This program is 2 years long (VEX, VYN, and USDV). The details of this program will be announced later (TBA).

VynDao Foundation and USDV Backup Liquidity Treasury – 5000 VYN (3.3%)

VYN Token Utilities and Governance token

1. Internal Platform currency

One of VYN's main applications in the Vyndao Platform is to serve as an internal currency for all the products and services built on top of it.

VYN is a gateway to paying commissions, getting discounts, and taking part in revenue distribution.

All acquired VYN gets burned to maintain its deflation model (the supply of the token is permanently reduced). We also intend to establish a VYN fund to support further framework development, and a portion of VYN fees will be transferred to this fund instead of getting burned.

2. Fee coverage

Vyndao USDV stablecoin has a few fees.

1. The VYNDAO fee (an interest rate on users' USDV holdings)
2. Admin Fee: VYN can be used for covering a third fee, called an admin fee.

This is a commission set for withdrawing VEX collateral from VynDAO's smart contracts.

In other words, people who want to close their USDV positions and get back their VEX funds should pay an admin fee that accrues in VYN. This is currently set to 1% APR.

3. Voting governance & Platform Management

VYN is the governance Token of USDV, and the user holding VYN is the Governor of the system.

Any Governor that meets the system rules can submit a proposal. Whether or not such a proposal shall be passed and put into practice will be decided by voting.

To receive stable fees and penalties, the Governor (similar with Blockproducers / Validator on Vexanium Public Blockchain) is playing a key role in the stablecoin system and maintaining the stable operation of the system.

All VYN holders are actually stakeholders in the decentralized governance process they can participate in governance of the entire system.

Qualified proposals will be submitted for voting, and all VYN holders can vote to determine whether or not such proposals shall be passed and implemented. Proposals are mainly about setting operational parameters of the system, such as interest rate and penalties.

4. Access to discounted collateral

The liquidator contract constantly offers undercollateralized USDV positions (and the collateral associated with them) for sale at a discount.

Arbitrators are those looking for these risky positions and buying their “bad debt” USDV or collateral from the contract. For this reason, arbitrators may submit VYN to the liquidator contract to buy back liquidated collateral at 6% off the current oracle price.

5. Profit from VEXREX redistribution

USDV's integration with VEX REX lets collateral holders have the same passive income as before, combined with our REX revenue distribution mechanism.

So how does it work? USDV smart contracts stake the VEX collateral pool to the REX (resource exchange) market. VEX REX lends VEX to the system, earning fees on that stake when others borrow it in the form of CPU/NET resources. USDV smart

contracts receive REX profits and transfer a portion of it to the liquidator smart contract.

The received VEX stake can be bought with VYN tokens there at a 6% discount. The remaining portion of REX profit goes to VEX collateral holders in proportion to the amount of collateral they hold.

6. Transaction fee redistribution

The system aims to take a small portion of USDV from every on-chain transfer, similar to real-world payment systems. Received USDV gets partially distributed among the position holders who generated the USDV supply. Another portion of acquired fees will be offered to arbitrators in exchange for VYN at a discount.

7. Block producer voting

VYN holders can vote for Vyndao block producers with the VYNDAO Voting Portal on Vyndao on-chain voting system.

The block producers that get the most votes will be added to Vyndao's USDV proxy, and they'll be staked with USDV's entire collateral pool.

BP candidates compete for the community's votes by pledging a daily reward paid in VEX coins or of rewards from applied BPs will be distributed to collateral holders, and VYN holders and VYNDAO Foundations

8. VYN Staking

Vyn Holder can Get VYN Rewards by Stake their VYN on VYNDAO Staking Portal

Disclaimer: The whitepaper only depicts the phase one planning of VYNDAO Platform and VUSD. Any necessary system upgrade hereafter will be announced in the community and implemented after the voting by the VYNDAO governor (if passed).