Cake Monster (MONSTA)

A hyper-deflationary and elastic supply token that has unique reserve and reward mechanisms featuring an automated hybrid monetary policy.

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Abstract

DeFi is poised to revolutionize the financial markets by cutting out costs for intermediaries, such as banks or legal departments, and offering new and compelling ways to earn interest in digital assets or gain easy and straightforward access to credit. Normally, DeFi tokens should aim to establish new standards in terms of transparency, access, and monetary models, but instead, the majority of DeFi tokens are controlled by malicious actors or/and use inadequate economic models that are on the verge of implosion due to their archaic monetary policies. Interest rates fast become unprofitable for holders while emission blocks reduce to fight inflation, often leaving later entrants with an irrecoverable financial loss.

A current solution for a sustainable ecosystem is represented by elastic supply tokens that aim to balance the splits between inflation and deflation of native supply through rebasing mechanisms, trying to solve the inelasticity problem of fixed supply token through rebasing of supply and maintaining steady interest rates.

In this paper, we present Cake Monster (MONSTA), a hyper-deflationary and elastic supply token that has unique reserve and reward mechanisms featuring an automated hybrid monetary policy. We describe the components that Cake Monster provides to maintain a fair, sustainable, and rewarding ecosystem. We introduce our monetary policy and reserve system, describe Cake Monster's deflationary cycles, how they end, and how they start. Then we describe how the generated yield is calculated and generated. Finally, we will lay out our plans for the future of Cake Monster.

Contents

1 Introduction

DeFi tokens (Decentralized Finance Tokens) are financial applications that run on blockchains and mirror concepts that have been successfully used in traditional banking and finance. The key idea is to recreate financial services in a decentralized way without a third party, such as a bank, intervening. Instead, trust is placed in written code (smart contract) that is deployed on a blockchain network and allows interest to be earned, loans to be obtained or (synthetic) assets to be traded, and more, without relying on a third party.

If holders of a typical DeFi token want to earn high interest on staking or yield platforms, they typically must expose themselves to several risks, such as loss of control of their holdings, insecure/badly written smart contracts (bugs, hacks, backdoors), and extremely volatile market conditions, coupled with an immature token economy whose value is only supported by its own underlying token and its experimental utility (e.g., extreme tax, clones). In most cases, the applied monetary policy does not allow for sustainability or longevity of these projects, which creates a bubble that will inevitably implode due to its corrupt and inflexible nature.

In addition, the associated gas costs (Ethereum) and the numerous transactions/interactions that users must initiate along the way make this system error-prone and expensive. These inefficiencies ensure that the public cannot be effectively reached due to low accessibility, high financial risks, unprofitable trades, and general fear factors (e.g., fraud rate, unregulated markets).

The introduction of frictionless yield generation has opened up DeFi to a wider audience, as it simplifies most user interactions via automated logics and rewards holders by passing a portion of the protocol tax to all holders of the token (reflection), while another tax portion seeks to preserve token value via deflationary measures (burning token).

But the problems that remain are overall profitability and equitable distribution of rewards over time, the insufficiently maintained sustainability and stability of the protocol's ecosystem (implosion/monopolization), the inability to update the smart contract logic, and the lack of an advanced and well-executed long-term marketing strategy aimed at achieving mass adoption through high, fast, and low-cost accessibility of the project.

Cake Monster proposes a solution that combines the benefits of perpetual, easily accessible, and profitable rewards for all with a smart and complex monetary solution that allows the protocol ecosystem to stay healthy in all market conditions, where fixed-supply or simple reflection tokens are vulnerable to supply or volume shocks. In addition, there is a "memeable" artwork design, an upgradable contract, and an overly ambitious, dedicated, and well-connected team. Supporting many (new) investment strategies, Cake Monster is a credible financial tool for holders and traders alike and can be used, for example, as a hedge during difficult markets or simple speculation for short, medium, and long-term strategies.

Whitepaper roadmap

In this whitepaper*, we provide an overview of the protocol architecture (Section 2) and a general overview of the tax and cycle functions (Section 3). We describe Cake Monster's relaunch process (Section 4) and follow with information about the applied yield generation within the multi-asset vault (Section 5) and staking (Section 6). We then describe a proposed long-term development strategy (6). Finally, we present a legal disclaimer (7).

2 Architectural Overview

The core functional goal of Cake Monster is to maintain an automated hybrid monetary policy with cyclical supply rebasing and a zero-emission reward model that protects and stabilizes the ecosystem while accumulating non-correlated assets (e.g., BNB or CAKE) within its own reserve for MONSTA token holders and enforcing persistent deflation and volume. Below, we describe the architecture of each component of Cake Monster, which will initially be built on BNB Chain. We intend to integrate Cake Monster with other leading smart contract networks that support integrated reserve assets, complex smart contracts, and cheap gas costs. Cake Monster is designed with modularity in mind and every part of the Cake Monster system is upgradeable, allowing various components to be replaced as better techniques and competing implementations emerge or to battle unforeseen issues in the complex smart contract logic. The protocol logic is based on three fundamental pillars: management, policy, and volume. Their interactions with each other are critical to the underlying protocol functions and the overall token valuation. They feed the vaults at the core of the economic model and use their integrated functions: Yield, Tax, and Deflation.
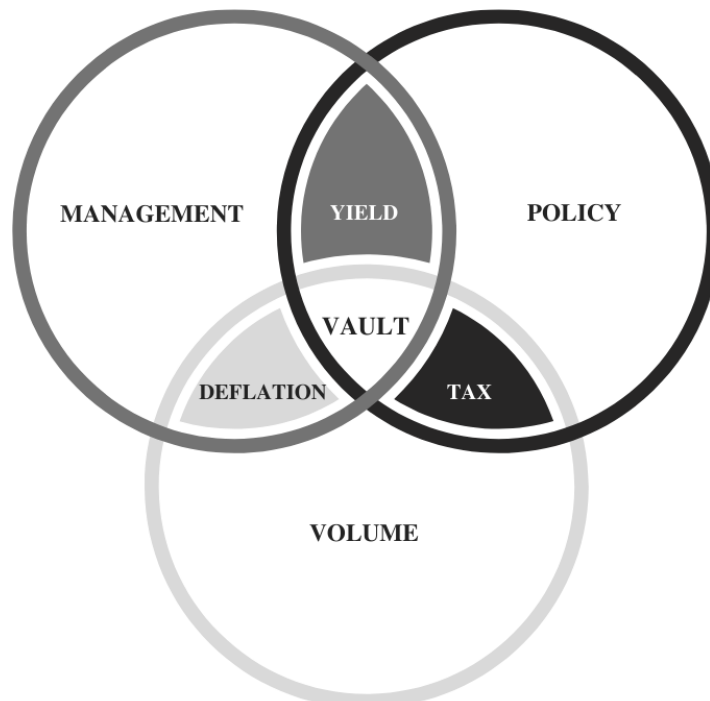
2.1 Management

Allows holders to
- manage the aggregation of reserve and reward assets for the multi-asset vault (MAV)
- add liquidity to the "in house" LP on PancakeSwap
- tax inactive holders and swipe dust in wallets to stay compliant with the monetary policy
- earn rewards generated by protocol features
- re-launch the protocol when conditions are met

2.2 Policy

Will allow the protocol to
- ensure flexibility, stability, and execution of vital functionalities
- maintain constant asset yield generation for the MONSTA ecosystem
- maintain the tax/burn system to ensure constant deflation of MONSTA supply and aggregation of non-correlated assets for the MAV
- maintain price floor by adding non-correlated monetary value to the protocol ecosystem

2.3 Volume

Allows the ecosystem to ensure
- all sells, buys and transfers are contributing to overall multi-asset vault yield and holder reward generation
- acceleration of the protocol value and a rising cyclical price floor
- tax collection and MONSTA deflation

3 General Overview

The Cake Monster protocol is designed to run in perpetual cycles (2 years), during which it burns as much initial supply as possible or until it reaches its programmed minimum of 1 million (99.99% deflation) token. At the same time, it builds up a protocol backing reserve (MAV) of non-correlated and (in best case) deflationary assets (e.g., BNB, CAKE), which act as price anchor for MONSTA, and will be utilized as end-cycle rewards for MONSTA holders. This is accomplished by making use of a protocol tax (5%) on every on-chain transaction. The ecosystem will be driven by all kinds of on-chain games during protocol cycles and aims to apply high level game theory for investors, while adding deflationary extra pressure.

Cake Monster Cycle
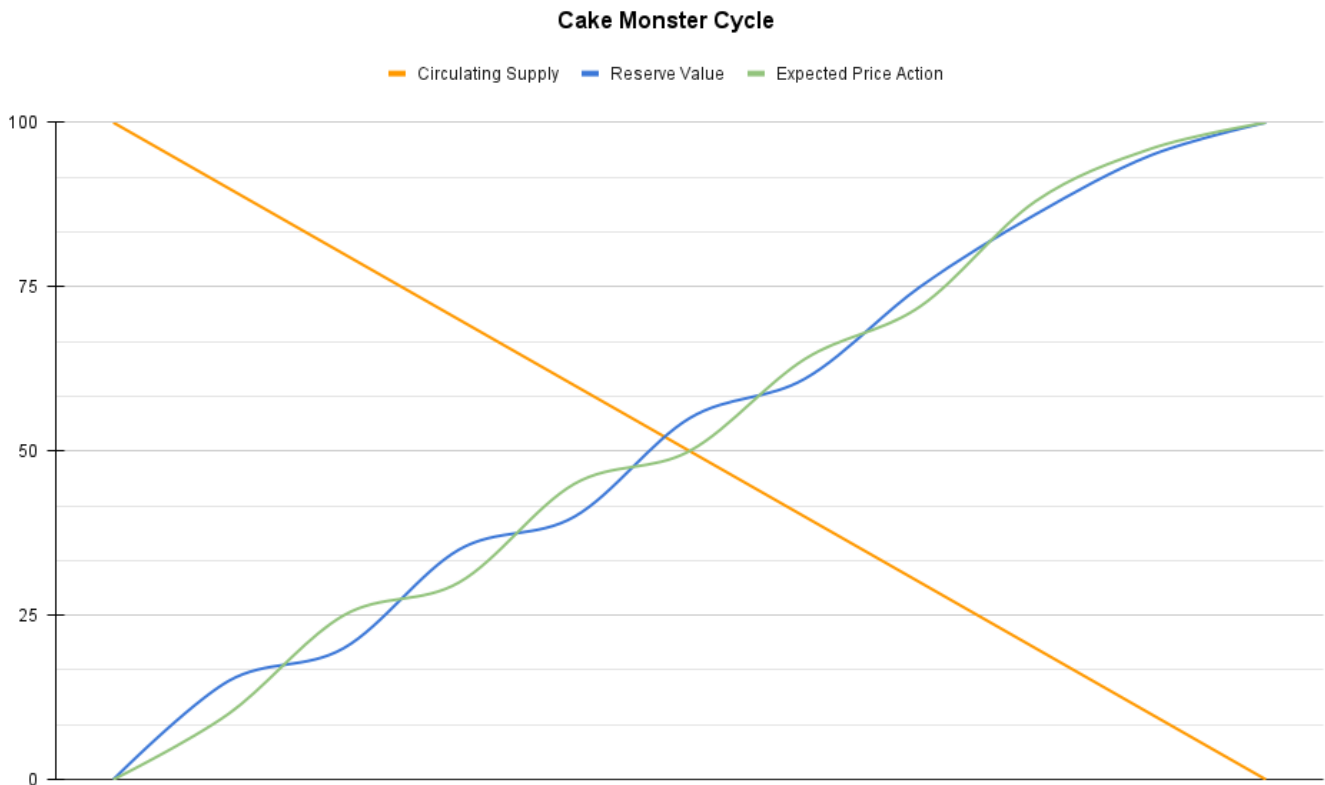
3.1 Tax System

The protocol applies a total tax of 5% on each transaction (sell, buy, transfer). A portion of the protocol tax (2.5%) is used to replenish the temporary asset vault (Kitchen Vault) with MONSTA, which in turn serves the multi-asset vault by adding non-correlated assets to the ecosystems' reserve.
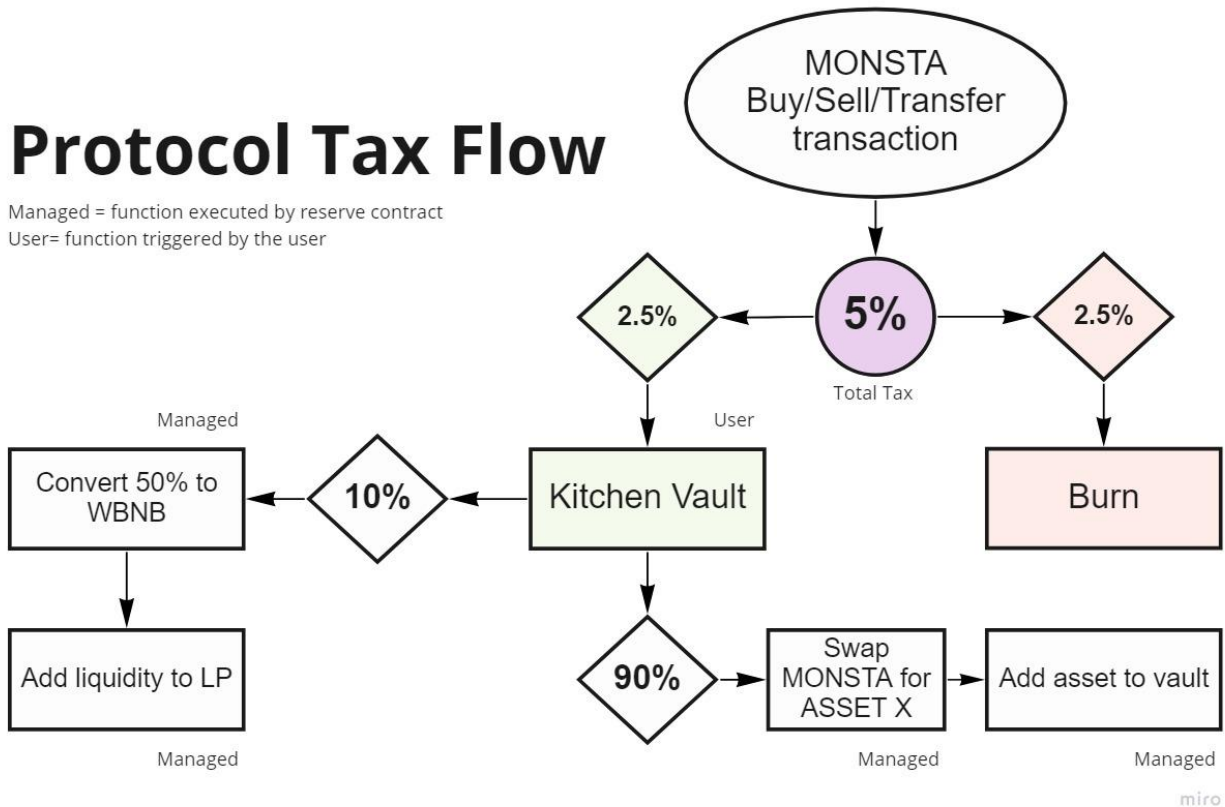
Temporary Vault (or Kitchen Vault)
- Add a portion of MONSTA (10%) as locked liquidity to liquidity pool (50% converted to WBNB, 50% MONSTA)
- Convert MONSTA to MAV asset and add to the MAV (e.g., MONSTA > WBNB > BNB)

Another part of the protocol taxes (2.5%) is used to burn MONSTA.

Protocol Tax Flow

Managed = function executed by reserve contract
User= function triggered by the user

MONSTA Buy/Sell/Transfer transaction

5% Total Tax

2.5% (User) → **Kitchen Vault**

2.5% → **Burn**

Kitchen Vault → **10%** (Managed) → **Convert 50% to WBNB** → **Add liquidity to LP** (Managed)

Kitchen Vault → **90%** → **Swap MONSTA for ASSET X** (Managed) → **Add asset to vault** (Managed)

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3.2 Cycles, Functions, Rewards

Each deflationary MONSTA cycle is driven by a few distinct and rewarding protocol management functions, that can be called via the dAPP once predetermined parameters are met. Additional functions reward non-correlated assets to MONSTA holders.

- MAV Management
- Inactivity Tax
- Crumbs
- MAV Staking
- MAV Slice

Multi-Asset Vault Management

If the Kitchen Vault MONSTA balance (collected through tax) has grown bigger than 0.005% of the current total supply, the PANCAKE SWEETNESS reaches 100% (or more), the MAKE function becomes available and can be called by anyone that is connected to the dAPP and meets the predetermined requirements.

Diamond Claw NFT holders have a head start for this function which triggers the following events, executed by the MONSTA smart contract:

1. 10% of the MONSTA balance from the Kitchen Vault is added to the PancakeSwap LP (50% converted to WBNB, 50% MONSTA, locked in the main contract)
2. The remaining 90% of MONSTA from the Temporary Vault (or Kitchen Vault) is converted to a non-correlated asset, which is then added to the MAV smart contract.

EXAMPLE

- The supply is 10 billion MONSTA
- The Kitchen Vault is filled up with 1 million MONSTA (0.005% of total supply)
- The "MAKE" function becomes available on the dAPP
- The connected user initiates the transaction to manage the MAV
- After a successful transaction, the user gets a reward of 20,000 MONSTA (2% of the 1 million MONSTA in the Kitchen Vault)
- Liquidity is added to the LP, non-correlated assets (like BNB) are bought and added to the MAV

Inactivity Tax

If no MONSTA transaction of more than 5% (purchase/transfer/sale) is recorded by a MONSTA wallet for 50 consecutive days, the INACTIVTY TAX function can be triggered by anyone meeting the specified requirements via the reporting section on the dAPP. This is crucial to the hyper-deflationary logic of the protocol and the growth of the MAV and the underlying reward mechanics.

If users don't want to sell/buy to trigger a timer reset, they can use the RESET function on the dAPP to initiate a self-transfer and reset the inactivity timer for their wallet back to 50 days. The RESET function transfers 5.01% of the user's MONSTA holdings to themselves. This transaction is taxed with 5%, so each reset every 50 days costs the holder 0.25%.

More details
- Transfers 2.5% of the holders MONSTA tokens as a reward to the caller
- Converts 15% of the holders MONSTA token for asset X and adds it to the MAV
- An equivalent of 25% of the MONSTA in the inactive wallet will be burned
- The inactive user can claim a refund of 10% from the dashboard
- If no activity is proven after another 50 days (total of 100 days inactivity), a second iTax strike takes place
- If no activity is proven after another 50 days (total of 150 days inactivity), a third iTax strike takes place, burning all remaining MONSTA
- If the MONSTA token value is too low to sell (e.g., $0.1), the function will just burn the tokens (100%) out of the bearer wallet instead of trying to sell it

- Liquidity provided to the BNB/MONSTA liquidity pool on PancakeSwap is whitelisted from this function and therefore cannot be disbursed
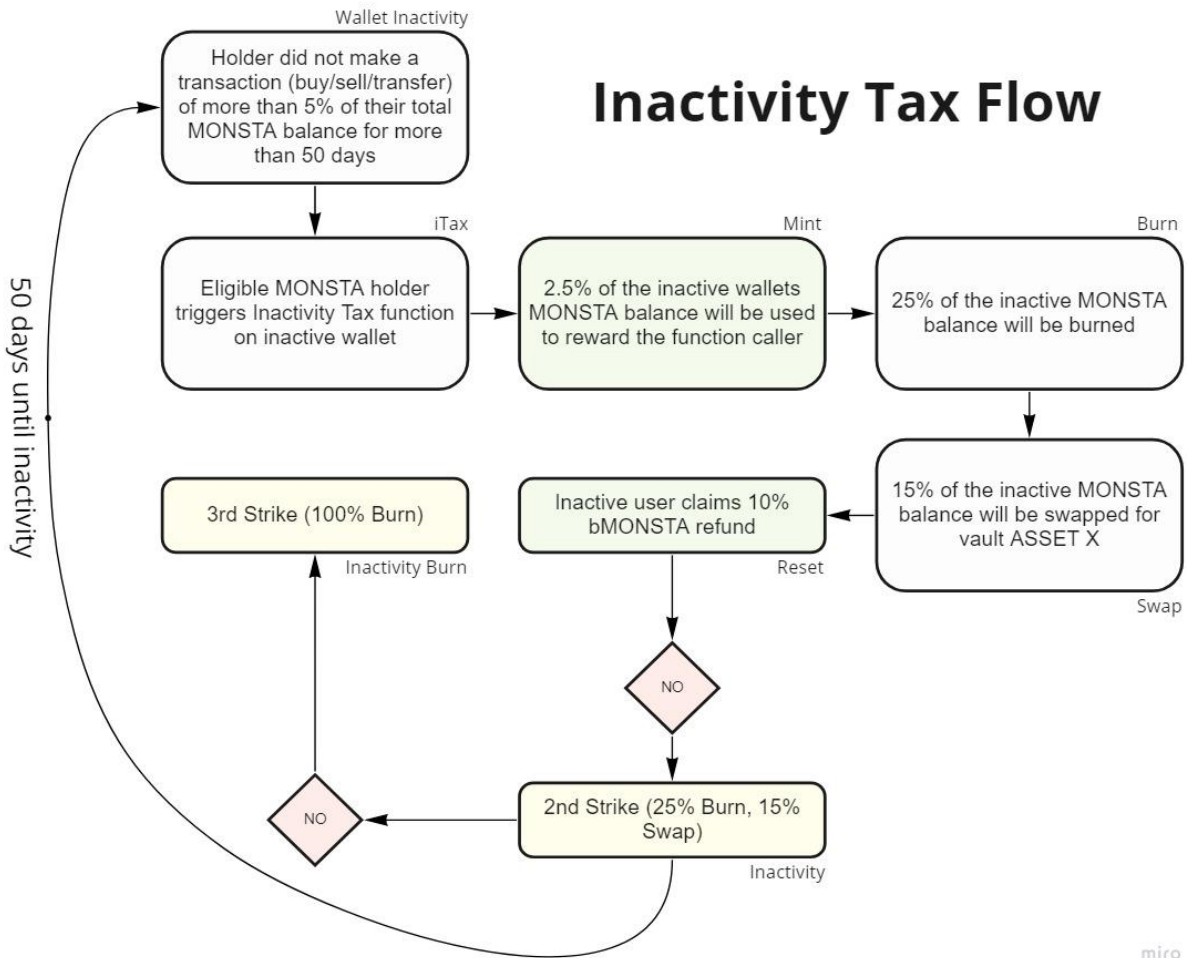
Crumbs
Each time the current total supply of MONSTA has decreased by 1%, holders are entitled to earn Crumbs from the MAV equal to their share of the current MONSTA supply. These rewards are a frequent bonus to those that wait for their reward share (Slice) of the multi-asset vault at the end of a deflationary cycle.

More details
- The total Crumbs are 25% of the assets collected by the MAV during the last 1% deflation of MONSTA supply
- A holder must claim the Crumbs before another 1% of MONSTA supply is burned
- Unclaimed Crumbs will stay in the MAV

EXAMPLE

- A user holds 1% of the total supply (100 million MONSTA at 10 billion supply) when the Crumbs becomes available

- If the MAV has collected 100 BNB since the last 1% deflation, a total of 25 BNB (25%) would become available for claiming
- The user holding 1% of the total MONSTA supply will be eligible to receive 1% of the 25 BNB from the Crumbs
- The community/deployer wallet and LP are blacklisted from earning Crumbs

Multi-Asset Vault Staking

A part of the MAV (CAKE portion) is staked on the PancakeSwap Syrup Pool, earning compounded staking rewards. These rewards are used to further grow the MAV and therefor the cycle-end rewards for MONSTA holders.

Multi-Asset Vault Slice

At the end of each protocol cycle (at 1M MONSTA supply or after 2 years have passed) the MAV opens to all MONSTA holders. The amount of non-correlated assets a holder can claim is determined by the percentage of MONSTA supply held.

- A user holding 1% of the total MONSTA supply will be eligible to receive 1% of the total assets accumulated by the MAV from each completed cycle
- If the MAV accumulated 1 million CAKE and 1000 BNB during a cycle, the holder would receive 10000 CAKE (1%), and 10 BNB if he holds 1% of the remaining MONSTA supply
- The community/deployer wallet and LP are blacklisted from earning the Slice
- More details in 'Relaunch Process'

4 Relaunch Process

The end of each protocol cycle (at 1M MONSTA supply or when 2 years have passed) is controlled by three functions that can be called by anyone. The relaunch rewards all MONSTA holders with their share of the multi-asset vault (Slice), relaunches the protocol by resetting, and protects the ecosystem from monopolization or implosion by opening completely new trading strategies with the beginning of a new deflationary cycle.

Legend: Circulating Supply — Value (Backed by Reserves) — Supply Monopolization
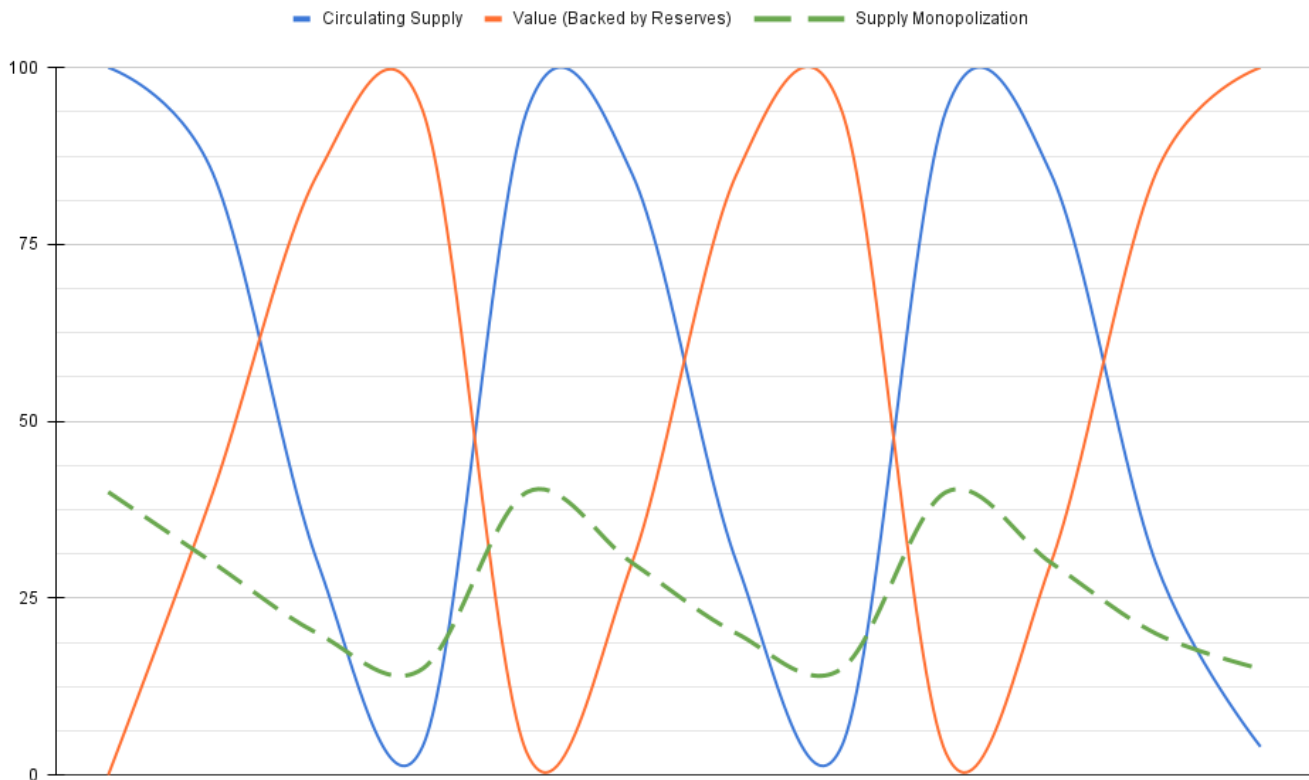
Finish

If supply <= end supply (1 million) or 2 years have passed, the CLAIM VAULT function becomes available to anyone, and all trading will be halted for 35 days.

- The collected liquidity from the cycle will be removed from the LP and temporarily stored in a smart contract
- The FINISH function becomes also available when there is no vault management activity for more than 124 days

Claiming Multi-Asset Vault

For 35 days anyone can claim their share/slice of assets, equivalent to their MONSTA holdings versus total supply at the time of the trading halt.

- Upon claiming all MONSTA tokens in the bearer wallet will be swapped for the assets from the MAV and will be burned hereafter
- Unclaimed assets stay in the reserve smart contract and will be used to boost the new cycle

EXAMPLE

- Minimum supply of 1 million MONSTA is reached
- The MAV is worth $100 million worth of assets
- A user owns 1% of the total supply (10000 MONSTA at 1 million supply)

- They are eligible for $1 million worth of assets

Relaunch

After 35 days claiming period, the RELAUNCH function can be called by anyone to kickstart a new cycle.

- MONSTA supply will be minted back to the initial of 10,000,000,000 (10B)
- Adds liquidity previously stored in the SC back to the LP on PCS to relaunch the protocol
  and start trading
- Holders of the previous cycle receive the shares back with which they claimed their MAV Slice. If a holder owned 1% of MONSTA supply at the end of a cycle, he gets reminted 1% for the new cycle
- * **IMPORTANT**: Holders which have not claimed their MAV Slice/Share will lose it and will not get re-minted tokens relative to the initial supply. Unclaimed CAKE rewards will be used for the upcoming cycle
- Token distribution will only be split between minted tokens for holder of the previous cycle and tokens in liquidity. No team tokens, no community wallet.

5 Multi-Asset Vault Yield Generation

The MAV APY (Multi-Asset vault annual percentage yield) is calculated via the growth rate of the MAV (reserve asset: e.g., CAKE, BNB), holding cost of MONSTA (wallet resets), and the total MONSTA deflation happening within a calculated timeframe of 30 days, which is then compounded over 12 months. This gives a relative estimate for MAV growth per year and each holders share/slice of the MAV.

Relative Formula

("MAV Growth %" (30 days)) / ("Deflation %" (30 days)) - Cost of holding (30 Days) = monthly growth (compounded over 12m) = MAV asset APY (relative)

Code

```
assetInVaultGrowth = (assetInVaultToday -
assetInVault30DaysAgo) / assetInVault30DaysAgo;
deflation = supplyToday / supply30DaysAgo;
holdingCosts = ((5 * 0.05) / 50) * 30;
monthlyGrowth = assetInVaultGrowth / deflation - holdingCosts;
APY = monthlyGrowth^12 * 100;
```

EXAMPLE

- If APY = 2500% and Slice of holder = 10 BNB, then estimated Slice after 12 months = 250 BNB

- If APY = 25000% and CAKE in MAV = 30000 CAKE, then estimated CAKE after 12 months = 7.5M CAKE

Friction or Frictionless

The generated yield is frictionless for the most part, as holders do not have to stake or farm for potential non-correlated asset rewards, and thus do not have to give up control of their holdings or go through the hassle of a lot of interactions and transactions.

However, the Crumb rewards, potential NFT dividends, or the MAV Slice must be actively claimed by holders via the dAPP as they become claimable within a snapshot range determined by trading volume and subsequent token deflation.

6 Staking

We offer MONSTA holders a unique and single-sided staking solution that complies with our hyper-deflationary principles. Zero token minting, new game theory, and a sustainable emission curve are the major drivers of this programs. [Read more](#).

7 Long-Term Technical Strategy

The long-term technical strategy for Cake Monster proposed in this whitepaper includes four key directions: Gamification & NFT Art, Infrastructure changes, General expansion, and Charity.

Gamification & NFT Art

We are developing sophisticated gameplay and art aspects that help engage the community, gain new holders, and add value through professional artwork designs, and an intertwined gameplay system with a focus on adding and preserving value for the MONSTA ecosystem. This includes the development of collectible NFTs that are built around the MONSTA ecosystem to support drive and stability.

Infrastructure Changes

Cake Monster is built to become a community project. And, as such, we plan to build a DAO around Cake Monster and hand the project over to the community. We will ensure that, from our perspective, everything necessary is in place by then so that we can say with a clear conscience that the project is safe and sound. We plan to build an intra-exchange (Monster Swap) to help the community swap other reserve assets, native tokens, or NFTs for benefits.

General Expansion

We plan to expand our reach to other promising blockchains (multi-chain) that support a qualifying asset in use of this or another project we are developing or partnering with. Cake Monster has the potential to spread to other blockchains.

Charity

When Cake Monster is established, we plan to create Cake Monster For Good. An initiative that sees Cake Monster committing to bespoke charity programs, decided by the community, to combat mental health, inequality, abuse, poverty, and any other endeavor the community decides.

8 Legal Disclaimer and Risk Caution

Trading of cryptocurrencies is a high-risk activity and is intended only for experienced professionals who are familiar with blockchain technology, cryptocurrency trading, and trading in other marketing tools. By participating in trading a crypto asset of any project, the Buyer is aware of and accepts the risks related to security, possible failure to achieve technical and economic results and total or partial loss of its capital. Finally, the Buyer declares to be aware of the legal uncertainty of this type of transaction and to have carried out its own legal consultation in accordance with the applicable law to which it is subject. The Token does not in fact grant any financial (income, capital, or dividend) or voting rights in the project. The Token is a crypto asset issued by the Decentralized Autonomous Platform (Project) through the IDO and used by Cake Monster team members and the community. No other rights are transferred to the IDO. More specifically, the only obligation of the Project is to distribute the Cake Monster token under the conditions defined in the official publications.