

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 is 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.

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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.

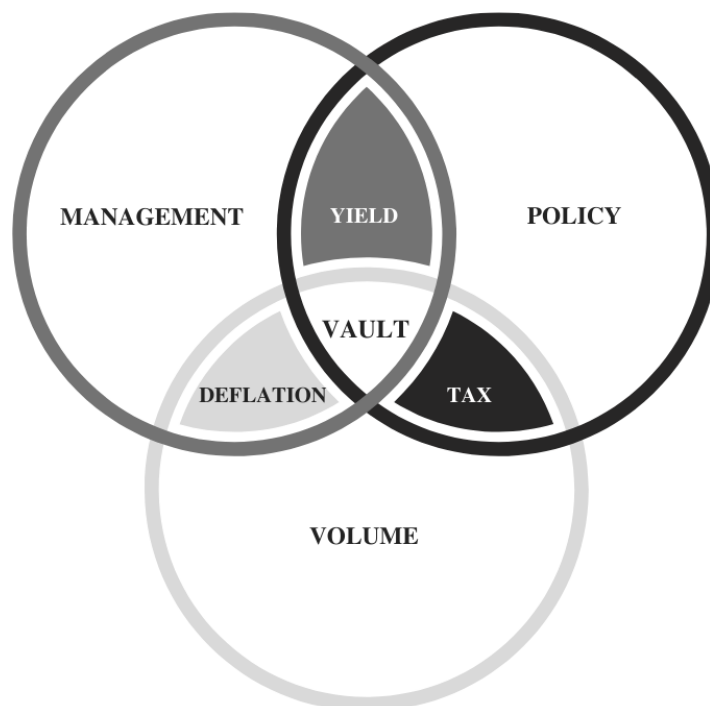
Cake Monster proposes a solution that combines the benefits of perpetual, easily accessible, and profitable rewards for all with a smart and complex monetary solution that allows the protocol ecosystem to stay healthy in all market conditions, where fixed-supply or simple reflection tokens are vulnerable 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 Gravity Vault (Section 5). 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 a non-native asset (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 Binance Smart 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 CAKE as reserve and reward asset for the Gravity Vault
- add locked liquidity to the LP on PancakeSwap
- cash out inactive holders and swipe dust in wallets to stay compliant with the deflationary 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 CAKE yield generation for the MONSTA ecosystem
- maintain the tax/burn system to ensure constant deflation of MONSTA supply and aggregation of CAKE and MONSTA for the respective vaults
- maintain ever-rising price floor by adding non-native monetary value to the protocol ecosystem

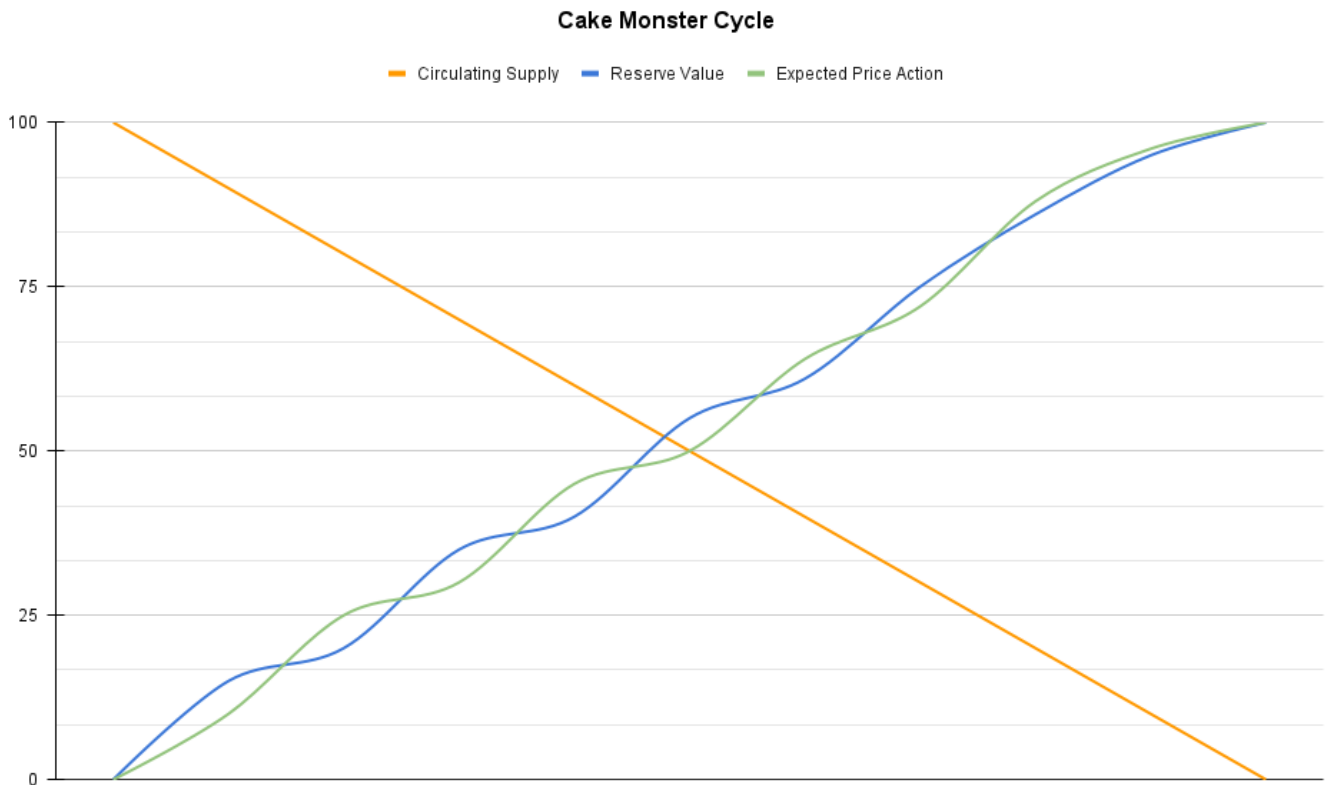
2.3 Volume

Allows the ecosystem to ensure

- all sells, buys and transfers are contributing to overall CAKE Gravity 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, during which it burns off its initial supply of 10 billion tokens until it reaches its programmed minimum of 1 million (99.99% deflation). At the same time, it builds up a protocol backing reserve (Gravity Vault) containing CAKE, which acts as a price anchor for MONSTA and makes itself available as a sophisticated reward system for holders.



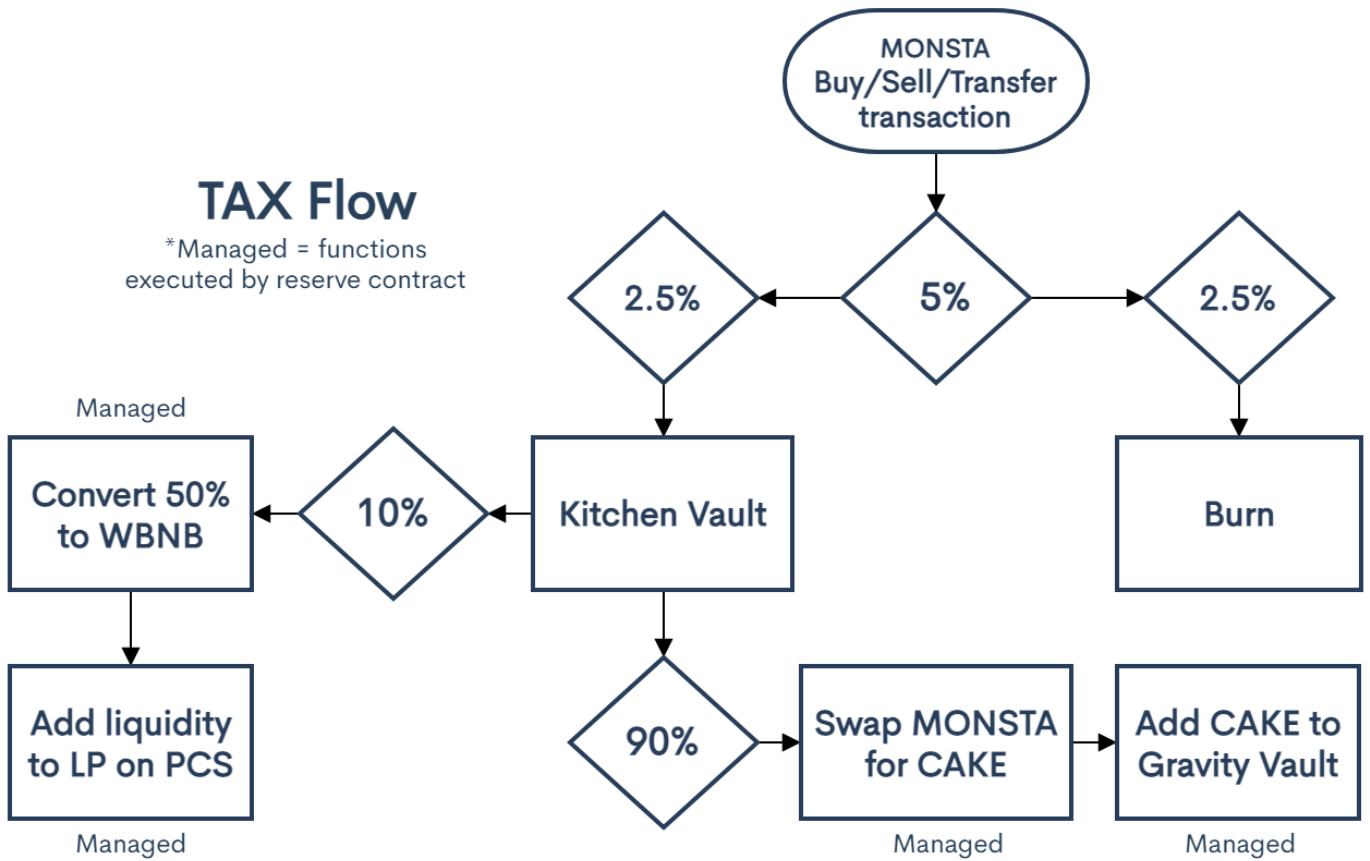
3.1 Tax System

The monetary policy 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 Kitchen Vault with MONSTA which in turn serves the Gravity Vault, which holds CAKE in reserve.

Kitchen Vault

- Add a portion of MONSTA (10%) as locked liquidity to PancakeSwap liquidity pool (50% converted to WBNB, 50% MONSTA)
- Convert MONSTA to CAKE and add to the Gravity Vault (MONSTA > WBNB > CAKE)

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



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 CAKE tokens to MONSTA and Diamond Claw Level 5 NFT holders.

- Vault Management
- Automatic Cash out
- CAKE Crumbs
- Gravity Vault Staking
- CAKE Slice

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 Kitchen Vault is converted to CAKE, which is then added to the Gravity Vault contract

More details

- A Kitchen manager receives a reward of 2% from the total collected MONSTA in the Kitchen Vault
- The Gravity Vault is staked on the Syrup Pool on PancakeSwap to earn CAKE staking rewards, therefore it is unstaked for the new addition of CAKE from the Kitchen, compounds generated yield and is added back to the Syrup Pool to further increase staking rewards
- Manager queue size = 100 — To prevent spamming on this function, each managing wallet address is added to a list of managers. Managers on this list will be blocked from calling the MAKE function until they move out of the queue

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 vaults
- After a successful transaction, the user gets a reward of 20,000 MONSTA (2% of the 1 million MONSTA in the Kitchen Vault)
- Locked liquidity is added to the LP, CAKE is bought and added to the Gravity Vault which compounds staking rewards from the PCS Syrup Pool and adds back a bigger CAKE stake

Automatic Cash Out

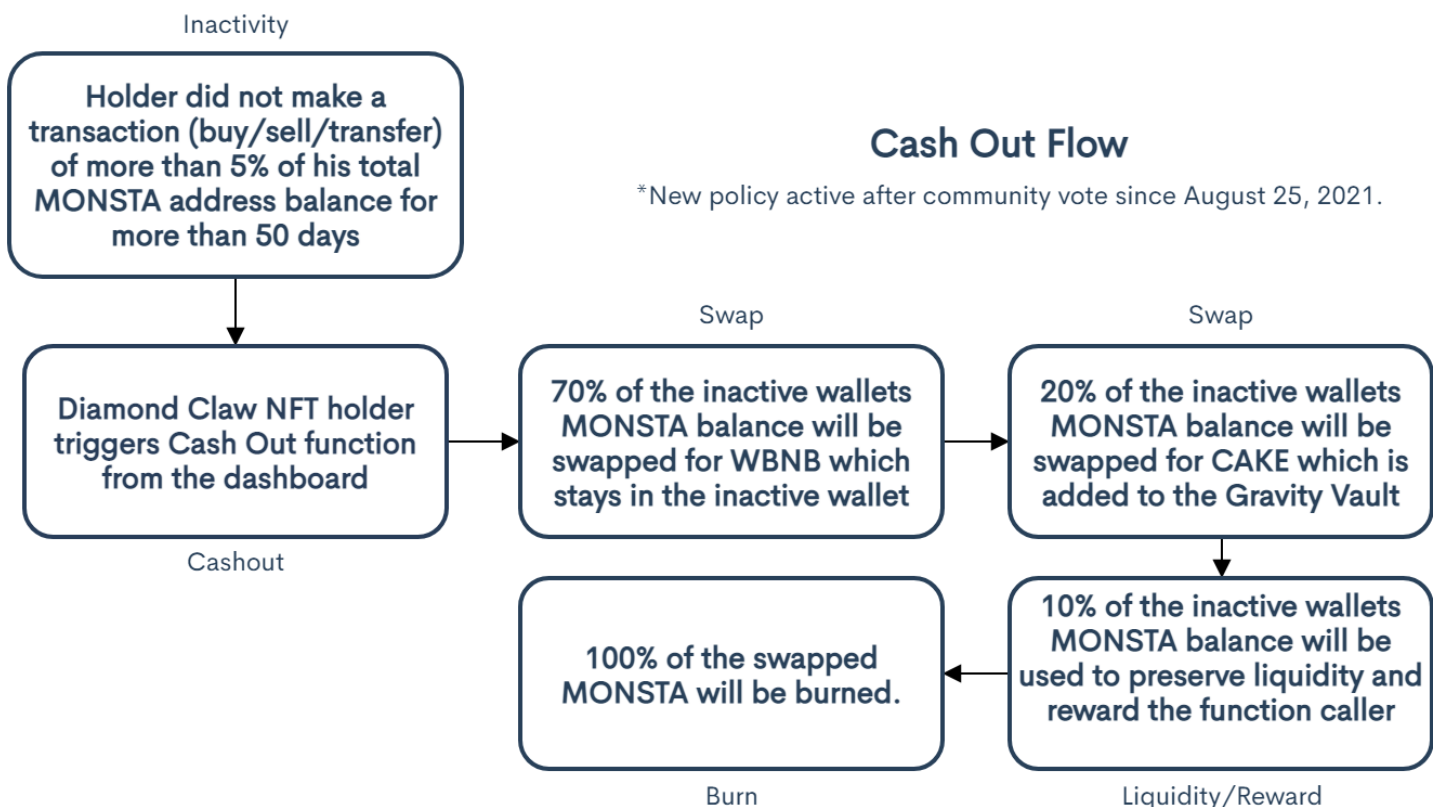
*New policy active after community vote since August 25, 2021.

If no MONSTA transaction of more than 5% (purchase/transfer/sale) is recorded by a MONSTA wallet for 50 consecutive days, the AUTOMATIC CASH OUT function can be triggered by anyone meeting the specified requirements via the reporting area on the dAPP. This is crucial to the deflationary logic of the Protocol and would mean that the target final supply would never be reached before the end of the maximum two-year cycle.

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 cash-out 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 at 5%, so each reset every 50 days costs the holder 0.25%.

More details

- Swaps 70% of the holders MONSTA tokens for BNB, which is returned to the holder
- Transfers 2.5% of the holders MONSTA tokens as a reward to the caller
- Converts 20% of the holders MONSTA token for CAKE and adds it to the Gravity Vault
- Leave BNB worth 10% of inactive holders MONSTA in the LP (7.5% Liquidity addition, 2.5% to account for the caller reward).
- 100% of the swapped MONSTA token will be burned out of the LP, decreasing the available MONSTA supply in the LP
- If the holder MONSTA token value is too low to sell, 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



EXAMPLE

- A user bought 5 million MONSTA on June 19
- 50 days later, the same user has not made a single purchase/sale/transfer of at least 5.01% of his holdings and the MONSTA wallet becomes inactive
- Another user goes to the Cake Monster dAPP report and cashes out this inactive user
- The overall tax for an inactive wallet is 30%. 20% are used to buy and add CAKE to the Gravity Vault, 7.5% to preserve liquidity and 2.5% for the reward
- Since the user holds 5 million MONSTA, the caller of the cash-out function will earn 2.5% of the users 'holdings (125,000 MONSTA)
- The inactive user will get the BNB value for the rest of the holdings (70%). This is done by buying their MONSTA for BNB from the PancakeSwap liquidity pool

- The sold 4.75 million MONSTA (95%) now residing in the LP will then be burned, to reduce price impact and ensure deflation

CAKE Crumbs

Each time the current total supply of MONSTA has decreased by 1%, holders are entitled to earn CAKE Crumbs from the Gravity Vault equal to their share of the current MONSTA supply. These rewards are a frequent bonus to those that wait for their reward share (CAKE Slice) of the Gravity Vault at the end of a deflationary cycle.

More details

- The total CAKE Crumbs is 25% of the CAKE collected by the Gravity Vault during the last 1% deflation of MONSTA supply
- A holder must claim the CAKE Crumbs before another 1% of MONSTA supply is burned
- Unclaimed CAKE Crumbs will stay in the Gravity Vault

EXAMPLE

- A user holds 1% of the total supply (100 million MONSTA at 10 billion supply) when the CAKE Crumbs becomes available
- If the Gravity Vault has collected 10000 CAKE since the last 1% deflation, a total of 2500 CAKE (25%) would become available for claiming
- The user holding 1% of the total MONSTA supply will be eligible to receive 1% of the 2500 CAKE from the CAKE Crumbs (25 CAKE)
- The community/deployer wallet and LP are blacklisted from earning Crumbs

Gravity Vault Staking

The Gravity Vault is staked on the PancakeSwap Syrup Pool, earning compounded staking rewards (CAKE). These rewards are used to pay out dividends for Diamond Claw Level 5 NFT holders (75%) and for further growth of the Gravity Vault (25%).

- CAKE is automatically added to the Syrup Pool each time a holder uses the Kitchen
- Unclaimed NFT dividends are added to the Gravity Vault to further boost growth
- Diamond Claw NFT holders are locking up a substantial amount of token supply. To make use of the applied NFT utility, users must hold a specified amount of MONSTA depending on NFT level, and remaining supply.

CAKE Slice

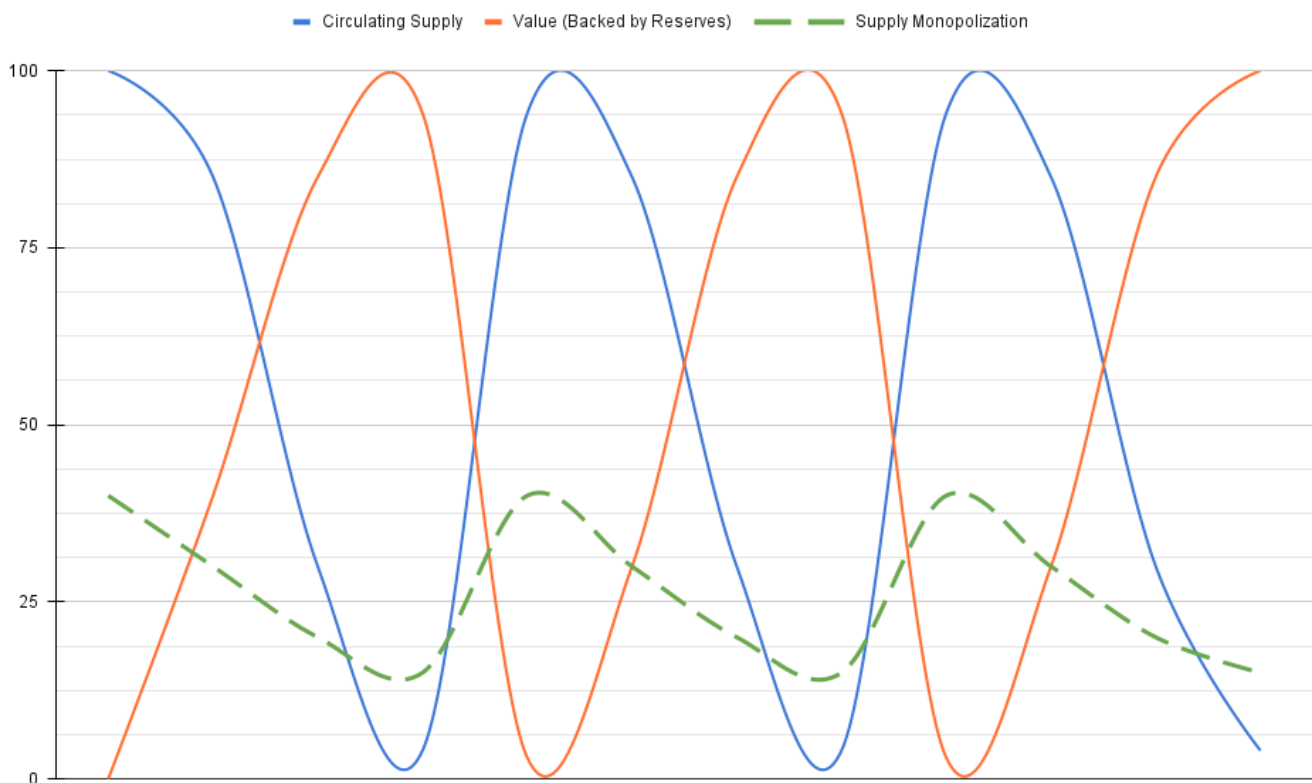
At the end of each protocol cycle (at 1M MONSTA supply or after 2 years have passed) the CAKE Gravity Vault opens to all MONSTA holders. The amount of CAKE a holder can claim is determined by the percentage of MONSTA supply held.

- A user holding 1% of the total MONSTA supply will be eligible to receive 1% of the total CAKE accumulated by the Gravity Vault from each completed cycle
- If the Gravity Vault accumulated 1M CAKE during a cycle, the holder will receive 10000 CAKE (1%) if he holds 1% of the remaining MONSTA supply
- The community/deployer wallet and LP are blacklisted from earning the CAKE Slice

- More details in ‘Relaunch Process’

4 Relaunch Process

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



Finish

If supply \leq end supply (1M) the CLAIM GRAVITY 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 the smart contract
- The FINISH function becomes also available when two years have passed since protocol launch/relaunch
- The FINISH function becomes also available when there is no vault management activity for more than 124 days

Claiming Gravity Vault

For 35 days anyone can claim their share/slice of CAKE, 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 CAKE from the Gravity Vault and will be burned hereafter
- Unclaimed CAKE stays in the reserve contract and will be used to boost the new cycle

EXAMPLE

- Minimum supply of 1 million MONSTA is reached
- The Gravity Vault is worth \$100 million worth of CAKE
- A user owns 1% of the total supply (10000 MONSTA at 1 million supply)
- They are eligible for \$1 million worth of CAKE

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 CAKE 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 CAKE Slice/Share of the GV 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 CAKE Yield Generation

The Gravity Vault APY (annual percentage yield) is calculated via the growth rate of the Gravity Vault (reserve asset: CAKE), 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 the Gravity Vault growth per year and each holders share/slice of the vault.

Relative Formula

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

Code

```
cakeInVaultGrowth = (cakeInVaultToday - cakeInVault30DaysAgo)
/ cakeInVault30DaysAgo;
deflation = supplyToday / supply30DaysAgo;
holdingCosts = ((5 * 0.05) / 50) * 30;
monthlyGrowth = cakeInVaultGrowth / deflation - holdingCosts;
APY = monthlyGrowth^12 * 100;
```

EXAMPLE

- If APY = 25000% and CAKE Slice of holder = 100 CAKE, then estimated Slice after 12 months = 25000 CAKE
- If APY = 25000% and CAKE in GV = 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 CAKE 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 CAKE Crumb rewards, NFT dividends, or the Gravity Vault CAKE 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 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 plan to develop sophisticated gameplay and art aspects that will 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 would include the development of collectible NFTs (3D, augmented reality, and P2E) 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 reserve asset in use of this project or another project we are developing or partnering with. Cake Monster can easily be spread to more chains.

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.

7 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.