PROJECT MERCURY

ME COLLATERAL

AN INTELLIGENT STORE OF VALUE TO ENHANCE MEME ECONOMICS

Dec 2023

V3.0

ABSTRACT

This Whitepaper introduces MERCURY COLLATERAL (ME), an intelligent alternative for MEME-themed crypto assets. Pioneering a revolutionary shift in meme token mechanics, ME transitions from a price-based trading strategy to a time-based system, ensuring enhanced reliability and price independence. Governed by the Mercury protocol, it incorporates a unique time-bound sell ratio lock mechanism with liquidity protection, preventing large investors from manipulating the market price. Additionally, MERCURY is backed by a pool of stable assets locked in a crypto reserve called Burn Vault to provide minimum guarantee price support, where the investors can cash out without impacting the market price. As a result, the investors are encouraged to HODL for an extended period, which fundamentally makes the economic model much safer than MEME and other reflection-based cryptocurrencies without disrupting its fun culture.

Disclaimer: Project Mercury is loosely based on the three-dimensional asset class model published by a protocol research firm at the Dubai Blockchain Summit in Oct 2023 called JOKER protocol. Our project draws inspiration from certain philosophies outlined in the JOKER protocol whitepaper, envisioning an enhancement of MEME and reflection economics.

While the JOKER protocol focuses on advancing the DeFi and flatcoin asset class dynamics such as liquidity owned protocols like Olympus DAO, Mercury Protocol addresses the volatility affecting MEME token economics. It is essential to note that before the complete implementation of the Mercury Protocol project, the underlying logic may change without prior notice. We intend to transparently communicate our vision and objectives, providing clarity on the project's alignment with the principles of the JOKER protocol.

1. INTRODUCTION

1.1 THE MAJOR CRYPTO MARKET PROBLEM

Unpacking the Challenges: MEME Assets and Their Impact on the Crypto Industry

In the ever-evolving cryptocurrency market landscape, MEME economics has emerged as a unique asset subset, often characterized by its playful branding and viral nature. While these assets may capture attention and garner a dedicated community, their underlying economics have raised concerns beyond humor.

The Volatility Quandary: MEME assets tend to be highly volatile by their very nature. While volatility is inherent in crypto, the extreme price fluctuations associated with MEME assets pose a significant challenge. This volatility not only discourages everyday users from considering these assets as a reliable investment class but also introduces an element of unpredictability that affects market stability.

Speculative Trading Takes Center Stage: One of the primary issues plaguing MEME assets is their susceptibility to speculative trading. Traders often engage in short-term maneuvers, manipulating prices for quick gains. This speculative dominance distorts the market and shifts the focus away from the fundamental utility and value creation that these coins could offer.

Governance Woes: Governance structures within MEME ecosystems often need improvement, leading to decision-making challenges and protocol upgrades. Effective governance is paramount for adapting to market changes and addressing issues promptly. With it, MEME assets can avoid stagnation and a loss of user trust.

Limited Use Cases: Despite their popularity, MEME assets often need more diverse and practical use cases. This limitation constrains adoption and utility, preventing these coins from contributing meaningfully to the broader crypto industry beyond speculative trading.

BITCOIN CORRELATION AND PRICE FLUCTUATION

Synthetic commodity money is a new classification for scarce assets (like GOLD, SILVER, AND DIAMOND). Bitcoin is an example of Synthetic commodity money that could reform money and be a better alternative to traditional assets. Gold is one of the best stores of value for its unique properties, interwoven into cultures for thousands of years. People continued to hold gold for various reasons throughout the centuries. Modern economies have placed value on gold, thus perpetuating its worth. The concept of money is changing drastically, with cryptocurrency revolutionizing the world as a vital forefront runner.

The birth of Bitcoin solves many financial trust issues and, at the same time, introduces more problems. One of the critical crypto market investment risks we are facing nowadays is that the value of almost all crypto projects is pegged to Bitcoin. As a result, the entire market comes down when Bitcoin goes down. High correlations in the decentralized market prohibit diversification due to several price fluctuations affecting all other cryptocurrencies.

The main factor for such price fluctuations is the need for adequate control when big investors cash out in bulk, which completely crashes the token price. Innovative experiments to create other forms of money to bet against Bitcoin have been going on for so long that computer scientists introduced several protocols to minimize price fluctuations and de-correlate market dependencies.

In theory, to design such price-resistant crypto-asset models,

1) A mechanism must exist where significant large investors' cashouts are controlled to preserve small investors.
2) A mechanism must also exist where investors can exchange crypto assets for FIAT or other stable assets without impacting the market price.

1.2 TARGET AND SOLUTIONS

Team MERCURY designed an innovative, risk-free, price-resistant investment class for the crypto economy with the following two fundamental characteristics.

A) Minimal price volatility footprint resisting bitcoin corrections

B) Growing Purchase Power

For example, suppose an investor buys $1000 worth of an asset class as a long-term investment. Their purchase power will gradually grow like a plant, irrespective of the crypto market position, bitcoin price, or other economic shocks.

After experimenting with several price-resistant models and testing, we are proud to introduce a novel smart meme asset class called ME COLLATERAL, an intelligent store of value powered by MERCURY PROTOCOL designed to bet against bad actors by solving several cryptocurrency market corrections

2. ME – A BETTER ALTERNATIVE TO MEME ECONOMICS

ME aims to be an intelligent, NON-DEPRECIATING alternative to meme token standards with all the characteristics of playful trends by introducing three innovative protocol operations that help increase purchasing power significantly over time.

A. **TIME-LOCK SELL RATIO** is a novel design that prevents investors from selling their assets in large quantities. This mechanism regulates purchase power by enforcing a time lock on the holder's wallet, which prevents one from selling or transferring more than 1% of the asset in 24 hours. By enabling the time-lock, asset holders, especially whales, can't manipulate the price significantly, increasing long-regulated purchase power.

B. **BURN VAULT MECHANISM** is a new decentralized reserve pool similar to the Bretton Woods FIAT-Gold Reserve system that provides a minimum collateral price guarantee to investors irrespective of the market condition during the panic period.

C. **AUTOMATED LIQUIDITY POOL (ALP) MECHANISM** prevents exchange liquidity fluctuation to a greater extent by locking a portion of every transaction back in the liquidity pool, enhancing the overall market price of the crypto asset.

3. WHAT PROBLEMS DOES MERCURY SOLVE?

A. DIGITAL ASSET INTRA-CORRELATION

Since the inception of Bitcoin in 2009, dozens of other cryptocurrencies (and synthetic commodities) have spun off, representing a financial value on an electronic, data-driven ledger of some sort. Most synthetic commodities' price and weight depend highly on the cost of Bitcoin, leading to a homogeneous system of synthetic commodities. Ideally, a digital asset would exist with almost no correlation to traditional asset groups and existing digital assets. That's where ME collateral comes in. The entire ethos of this project is a paradigm shift from price-based to time-based trading strategies.

B. TIME-BOUND BUY-SELL RATIO

ME controls the time-demand equilibrium every 24 hours using the Time-Lock mechanism tied to the number of tokens each investor holds in their wallets. Time-Lock ensures that the market cap of the collateral persists and the growth is consistent by adjusting the selling threshold dynamically.

C. WHALE-PROOF DEFI FARMING

Due to their extensive portfolio allocation, whales usually eat a higher percentage of all DeFi farming benefits than average users. MERCURY protocol fundamentals potentially limit the staking percentage across all wallets, and as a result, the benefits are evenly distributed to the users.

D. INFLATION HEDGE

ME will be an excellent hedge against inflation because its price will rise over time as the supply decreases. When other crypto assets lose their purchasing power to inflation, ME tends to be priced in those currency units and rise along with everything else, making it one of the best collaterals for DEFI protocols.

E. DEFLATION PROTECTION

People choose to hoard cash, and the safest place to hold cash is GOLD at any point in time. ME fundamentally has the same GOLD characteristics as a store of value, making it a worthy investment to de-risk from the value collapse.

F. EXPONENTIAL REWARDS

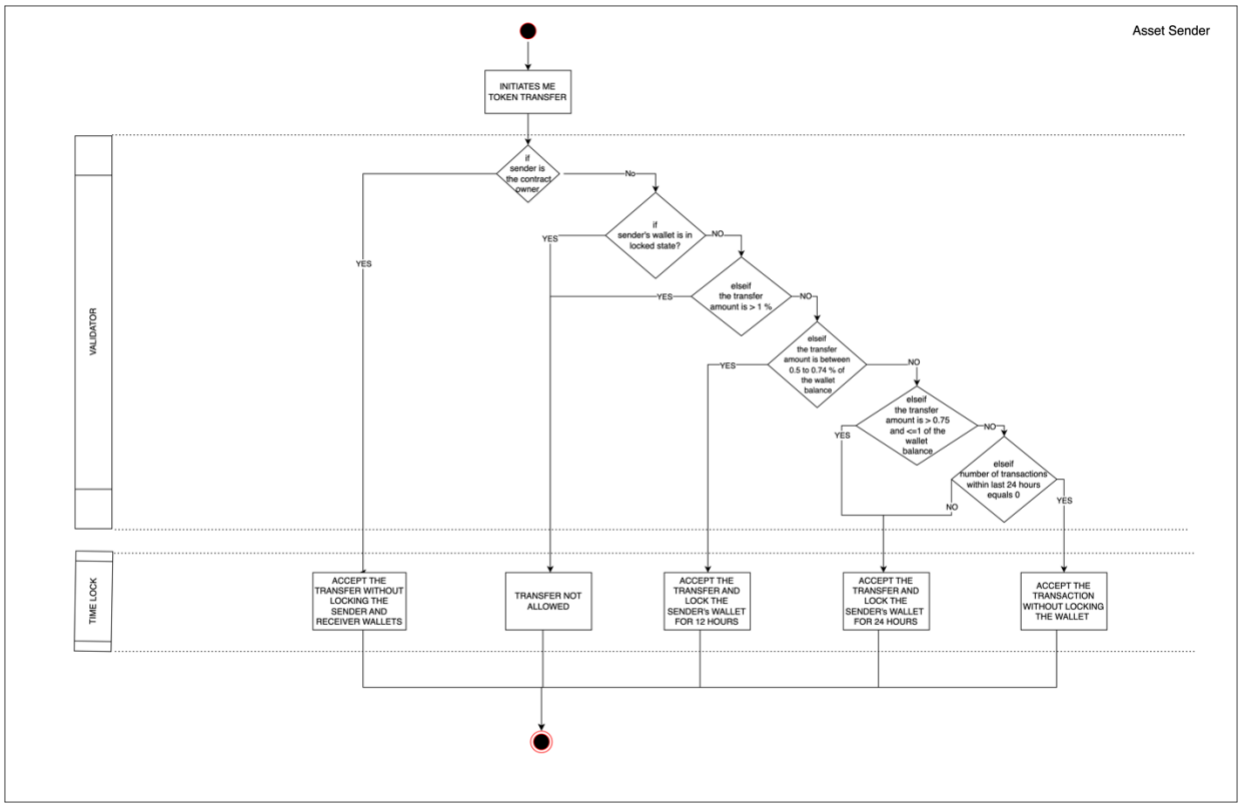
With the novel deflationary mechanics, ME holders earn passive trustless rewards instantly without staking needs. The benefits are directly proportional to the holding time, similar to traditional bonds and certificates.

G. DIVERSIFICATION OF CRYPTO PORTFOLIOS

Since ME is resistant to crypto corrections, it offers a different model to minimize portfolio classification risks, making it one of the best low-risk strategies for long-term asset holders who want to bet against Bitcoin.

4. TECHNICAL ARCHITECTURE

MERCURY PROTOCOL will be implemented as Smart Contracts, including an Open Zeppelin layer to assist with corrections as required. The contract enforces several rules to maintain price balance when a transaction or sale occurs.



A) If the transaction originates from the Owner's Wallet, the receiver gets 100% of the transaction amount without a fee; otherwise, 10% will be deducted as tax.

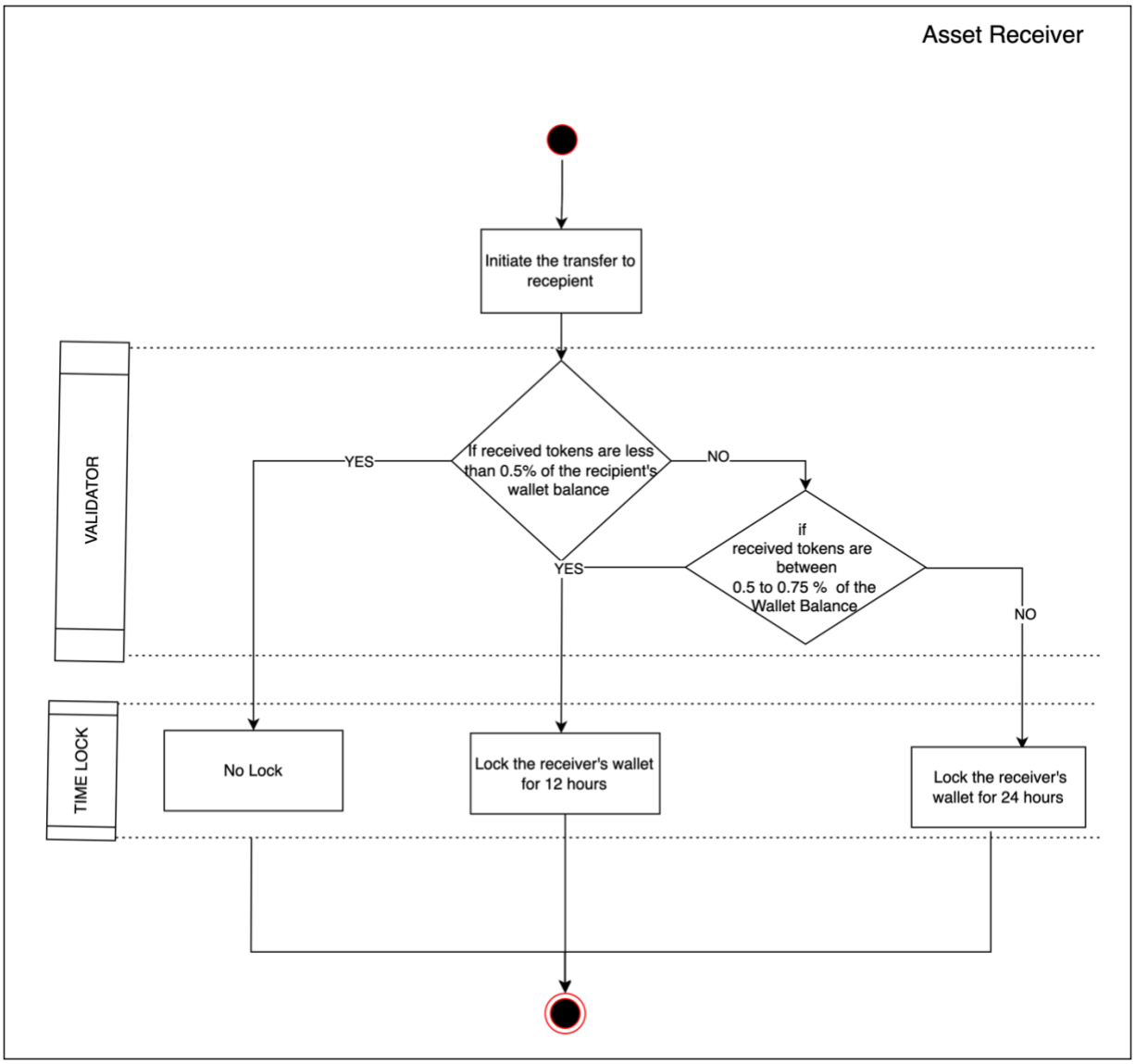
B) The contract will enforce the following when a user initiates a transaction

i. If the transfer amount is 0.75 % of the sender's balance, the address will be locked for 24 hours.

ii. If the transfer amount is between 0.5% and 0.75% of the sender's balance, the address will be locked for 12 hours.

iii. If the transfer amount is below 0.5 % of the sender's balance, No lock occurs.

iv. A sender can make only two transactions within 24 hours.



C) The contract also enforces the following when a user receives a transaction.

i. If a recipient receives more than 0.75 % of the wallet balance, the contract will lock the wallet for 24 hours.

ii. If a recipient receives between 0.5% and 0.75 % of the wallet balance, the contract will lock the wallet for 12 hours.

iii. If a recipient receives less than 0.5% of the wallet balance, there won't be any lock, and the user can transfer funds instantly.

4.1 **PROTOCOL OPERATIONS**

PRECHECK: The protocol rigorously enforces two levels of precheck restrictions:

Transaction Frequency Limit: Investors are restricted from making more than two transactions from a single wallet within a 24-hour period.

Transaction Amount Limit: Investors are prevented from transferring more than 1% of their wallet balance within a 24-hour timeframe.

POST CHECK: The protocol establishes consistent purchase power increase after each transaction, utilizing four innovative protocol dynamics:

A) **Circulating Supply Regulation:** 4% of the transaction amount is permanently burned, regulating the token supply.

B) **Reward Distribution:** 4% of the transaction amount is equally distributed among holders, regulating exponential rewards.

C) **Selling Pressure Regulation:** 1% of the transaction amount is accumulated in the Burn Vault, regulating selling pressure fluctuations.

D) **Liquidity Provision:** 1% of the transaction amount is locked in the Liquidity Pool (LP), regulating exchange liquidity fluctuations.

These post-check operations collectively contribute to a balanced and dynamic protocol, ensuring sustained growth and stability in the ecosystem.

4.2 TIME-LOCK DYNAMICS AND ALP DEMONSTRATION

Let's examine the application of time-lock mechanics and Automatic Liquidity Provision (ALP) in various scenarios using Sam's wallet with 20,000 ME tokens:

SCENARIO 1: Sam attempts to sell 1000 tokens, but the validation precheck fails as it exceeds the 1% daily limit. Consequently, the contract disallows the transaction.

SCENARIO 2:

Sam sells 100 ME tokens, with the validation precheck passing due to the transfer amount being 0.5% of the wallet balance, within the acceptable 1% daily limit. The contract approves the transaction, initiating the following six protocol operations:

i. Increases the daily transaction counter by 1.
ii. Locks the wallet for 12 hours since it reaches 50% of the 1% limit.
iii. Accumulates 1% (1 ME token) of the transaction amount in Burn Vault.
iv. Sends 1% (1 ME token) of the transaction amount to the exchange liquidity pool.
v. Burns 4% (4 ME tokens) of the transaction amount forever from circulation.
vi. Distributes 4% (4 ME tokens) of the transaction amount as rewards equally among holders.

SCENARIO 3:

Sam sells 200 ME tokens, meeting the 1% daily limit criteria. The contract approves the transaction, initiating the same six protocol operations with adjusted quantities:

i. Increases the daily transaction counter by 1.
ii. Locks the wallet for 24 hours since it reaches 100% of the 1% limit.
iii. Accumulates 1% (2 ME tokens) of the transaction amount in Burn Vault.
iv. Sends 1% (2 ME tokens) of the transaction amount to the exchange liquidity pool.
v. Burns 4% (8 ME tokens) of the transaction amount forever from circulation.
vi. Distributes 4% (8 ME tokens) of the transaction amount as rewards equally among holders.

SCENARIO 4:

Sam initiates three consecutive sell transactions of 50 ME tokens each:

TRANSACTION 1:

The 1st transfer is 0.25% of the wallet balance, satisfying the 1% daily threshold. The contract approves the transaction, implementing five protocol operations:

i. Increases the daily transaction counter by 1 (Total Transaction in 24 hours = 1).
ii. Accumulates 1% (0.5 ME tokens) of the transaction amount in Burn Vault.
iii. Sends 1% (0.5 ME tokens) of the transaction amount to the exchange liquidity pool.
iv. Burns 4% (2 ME tokens) of the transaction amount forever from circulation.
v. Distributes 4% (2 ME tokens) of the transaction amount as rewards equally among holders.
vi. Note: There won't be any wallet lock since the % of the transaction amount is less than 0.5%.

TRANSACTION 2:

The 2nd transfer is also 0.25% of the wallet balance, within the 1% daily threshold. However, the wallet locks for 24 hours as the total transactions reach the 24-hour limit. Six protocol operations are executed:

i. Increases the daily transaction counter by 1 (Total Transaction in 24 hours = 2).
ii. Locks the wallet for 24 hours because the total transaction reaches the 24-hour threshold.
iii. Accumulates 1% (0.5 ME tokens) of the transaction amount in Burn Vault.
iv. Sends 1% (0.5 ME tokens) of the transaction amount to the exchange liquidity pool.
v. Burns 4% (2 ME tokens) of the transaction amount forever from circulation.
vi. Distributes 4% (2 ME tokens) of the transaction amount as rewards equally among holders.

TRANSACTION 3:

Although the transfer amount complies with the 1% daily threshold, the wallet is already locked after the 2nd transaction. Consequently, the contract disapproves the 3rd transaction.

4.3: BURN VAULT

The primary objective of the burn vault design is to provide investors with a way to cash out their holdings without impacting the market price. After every transaction, 1% of the transaction amount is deducted as tax and accumulated in a separate contract as stablecoins called Burn Vault. The protocol does the following two steps once a transaction amount is deposited.

1) Convert the received amount into a stable asset through an exchange
2) Lock the converted stable asset in the Burn Vault

With this accumulation process, the assets stored in the vault always grow proportionally to the daily transaction volume. When a holder decides to cash out and send the token asset to the Burn Vault address, the Burn Vault, in turn, credits his wallet back the proportional amount of stable assets to the Vault price set by the protocol.

VAULT PRICING MODEL:

The Burn Vault Swap price varies every minute and depends on the following two variables

a) Total ME Supply (A)
b) Total USD Value locked in Vault (B)

The protocol sets a new price dynamically in the Vault using the following formula.

Vault Price Per Asset = (Total USD Value locked in Vault)/ (Total ME Supply)

The protocol brings forth significant benefits and carefully implemented restrictions to optimize user interactions. For example, consider a scenario where the total circulating supply is 100,000 tokens, and the total Value Locked is $2,000, resulting in a Vault Price set at $0.02 (calculated as 2000 / 100,000). If users send 100 token assets to the Burn Vault, they receive $2 in return (calculated as 100 tokens multiplied by $0.02). Notably, the protocol goes a step further by restricting a holder from swapping more than 0.01% of the total circulating supply using the Burn Vault within a 30-day period. This strategic limitation ensures balanced utilization and prevents potential misuse of the Burn Vault feature. Moreover, tokens swapped via the Burn Vault are permanently removed from circulation, fostering scarcity and contributing to sustained increases in the token's price, ultimately enhancing the overall investment value.

5. FINAL THOUGHTS

In essence, ME COLLATERAL represents a groundbreaking financial crypto experiment, introducing a smart safe haven MEME asset class for crypto investors, guaranteeing perpetual value growth.

ME Collateral pioneers a revolutionary shift in meme token mechanics by transitioning from a price-based trading strategy to a time-based system, ensuring enhanced reliability and price independence. This innovation unlocks diverse opportunities in DeFi, fostering intelligent economics that genuinely benefits all participants.

We firmly believe that ME will fuel extensive innovation in the future crypto landscape due to its scarcity, non-dilutive nature, immunity to market distortions, resilience to economic shocks, and backing by another crypto asset, reinforcing integrity and trust.

6. REFERENCES

[1] J. Rickards (2015). "The Death of Money" - The Coming Collapse of the International Monetary System

[2] Peter Schiff (2012). "The Real Crash" - America's Coming Bankruptcy.

[3] Niall Ferguson (2013). "The Great Degeneration" - How Institutions and Economics Die.