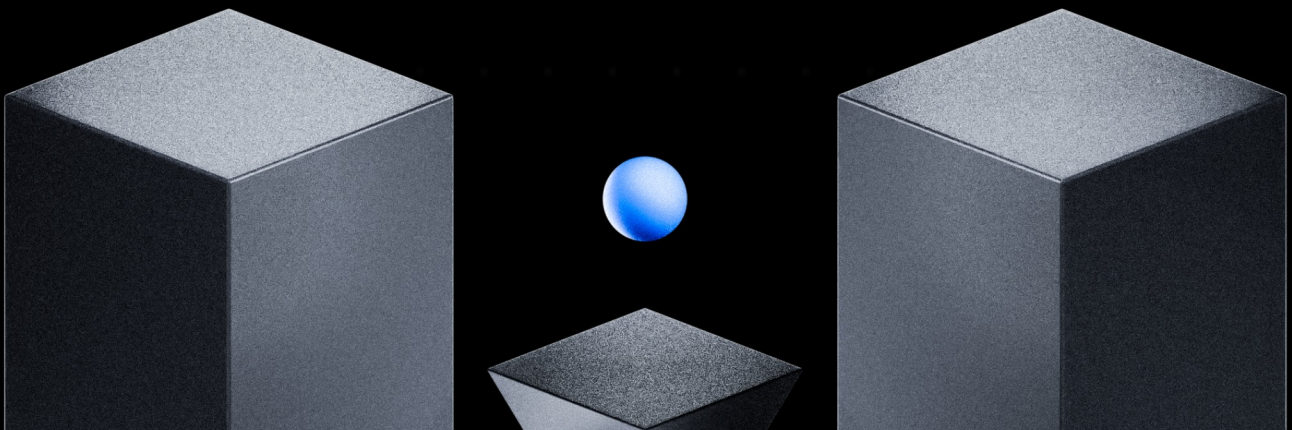# Obymare

Litepaper

Stability, Simplified

By Big BLYMP

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Executive Summary

Obymare is a decentralized stablecoin protocol designed for the Cardano blockchain that offers $**OBYUSD**, a derivative stable asset pegged to the United States Dollar (USD).

Obymare primarily operates through overcollateralization, requiring a minimum collateralization ratio of 130%, and is powered by Cardano's eUTxO architecture, enabling high scalability and parallel transaction processing. Users collateralize ADA to mint $OBYUSD while earning staking rewards on their locked collateral. All protocol parameters are immutable, ensuring governance-free and predictable operations. The protocol's sustainability is supported by its native utility token, $**OBY**, which is used to pay minting and redemption fees.

Obymare aims to be the cornerstone of Cardano's DeFi ecosystem by delivering a stable, transparent, and scalable infrastructure for decentralized finance. Its integration with the broader Big BLYMP ecosystem amplifies its utility and positions it as a critical enabler of growth and innovation in Cardano's financial landscape.

- **Decentralized and Immutable:** Obymare eliminates governance risks by fixing all parameters at deployment, ensuring secure, autonomous operations without human intervention.

- **Scalable and Transparent Architecture:** Built for Cardano's eUTxO model, the protocol offers efficient and predictable performance while providing users with clear, fixed fees and robust stability mechanisms.

- **Integrated Ecosystem Role:** As part of the Big BLYMP plan, Obymare works in tandem with Yamfore to drive liquidity, adoption, and innovation across Cardano's DeFi ecosystem.

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Introduction

In the evolution of financial systems, cryptocurrencies represent a revolutionary shift in how we conceptualize and transfer value. By leveraging blockchain technology, these digital assets have created a permissionless financial ecosystem where individuals can transact directly with one another, free from traditional banking intermediaries and centralized control structures. This democratization of finance embodies the original vision of creating a truly peer-to-peer electronic cash system.

However, this financial freedom comes with inherent challenges. The cryptocurrency market's decentralized nature, combined with its 24/7 global trading and relatively early stage of development, results in significant price volatility. Market sentiment can shift rapidly based on regulatory news, technological developments, or macroeconomic factors, leading to substantial price swings. While this volatility creates opportunities for traders and investors, it poses a significant barrier to cryptocurrency adoption for everyday transactions and business operations.

Stablecoins offer a solution—these specialized cryptocurrencies maintain a steady value by pegging themselves to established assets like the US dollar, combining blockchain's efficiency with price stability. This innovation bridges traditional and digital finance, enabling reliable transactions in a volatile crypto market.

The innovation of stablecoins represents more than just price stability; it enables a broad spectrum of practical applications in the digital economy. From cross-border payments and remittances to decentralized lending and yield generation, stablecoins combine the programmability and efficiency of blockchain technology with the predictability necessary for widespread financial adoption. This synthesis creates a foundation for a more accessible and inclusive global financial system, while preserving the core benefits of cryptocurrency's decentralized architecture.

Why Stability Matters

Stability is not just a convenience—it is a fundamental need for creating a functional and scalable financial system in the digital economy. For individuals and businesses, stablecoins allow wealth to be stored and transferred without fear of volatility, resulting in sudden losses or gains. This predictability makes stablecoins particularly suited for day-to-day commerce, where fluctuating prices can cause significant inefficiencies.

Imagine trying to pay for goods and services with an asset that could change in value between setting prices and receiving payment; such uncertainty undermines trust and usability.

For the broader cryptocurrency ecosystem, stablecoins also serve another crucial purpose. They act as a **flight-to-safety mechanism**, providing a refuge during periods of market turbulence. When crypto token prices drop sharply, investors can shift into stablecoins rather than exiting crypto markets entirely. This behavior supports Total Value Locked (TVL) across decentralized finance (DeFi) platforms, ensuring liquidity and enabling the ecosystem to weather volatility. Stablecoins are not just a tool—they are a foundational layer that helps the digital economy function more smoothly and grow sustainably.

Three Types of Stablecoins

Over time, several mechanisms have been developed to achieve the goal of price stability, each built around a distinct guiding principle. However, none of these approaches has managed to address the [stablecoin trilemma](#), leaving users to navigate trade-offs between stability, capital efficiency, and decentralization.

1. Fiat-Collateralized Stablecoins

These stablecoins are backed 1:1 by fiat reserves, such as US dollars, held in traditional bank accounts or equivalent financial instruments. For every unit of stablecoin issued, there is an equivalent fiat currency in reserve.

- **Strengths:** Their direct fiat backing makes them highly stable and easy to understand for users, and, most importantly, ensures high scalability.

- **Weaknesses:** They rely on centralized entities to manage and verify reserves, making them vulnerable to regulation, mismanagement, or a lack of transparency. Often, you have little confidence that the fiat reserves even exist.

2. Crypto-Collateralized Stablecoins

Rather than fiat, these stablecoins use cryptocurrencies as collateral. They are typically overcollateralized to mitigate the volatility of the underlying assets, meaning the value of the collateral significantly exceeds the value of the stablecoins issued.

- **Strengths:** They align with the decentralized ethos of blockchain by eliminating reliance on traditional banks. Smart contracts provide transparency and automated management of verifiable reserves.

- **Weaknesses:** Overcollateralization reduces capital efficiency, as users must lock up more value than they issue in stablecoins. Additionally, extreme market downturns can stress the system.

3. Algorithmic Stablecoins

Algorithmic stablecoins are backed by crypto assets but use algorithms and economic incentives to maintain their peg, rather than relying on individual position management. These coins aim to stabilize their value by adjusting the supply based on market demand.

- **Strengths:** They are highly capital-efficient, require no collateral, and can operate in a fully decentralized manner.

- **Weaknesses:** These systems are inherently fragile, as their reliance on market dynamics rather than assets can lead to instability during periods of extreme volatility. Historical failures have also eroded trust in these types of models.

Obymare: Combining Strengths for a New Approach

Each of the previously mentioned stablecoin models represents a promising yet incomplete solution to the problem of the **stablecoin trilemma**.
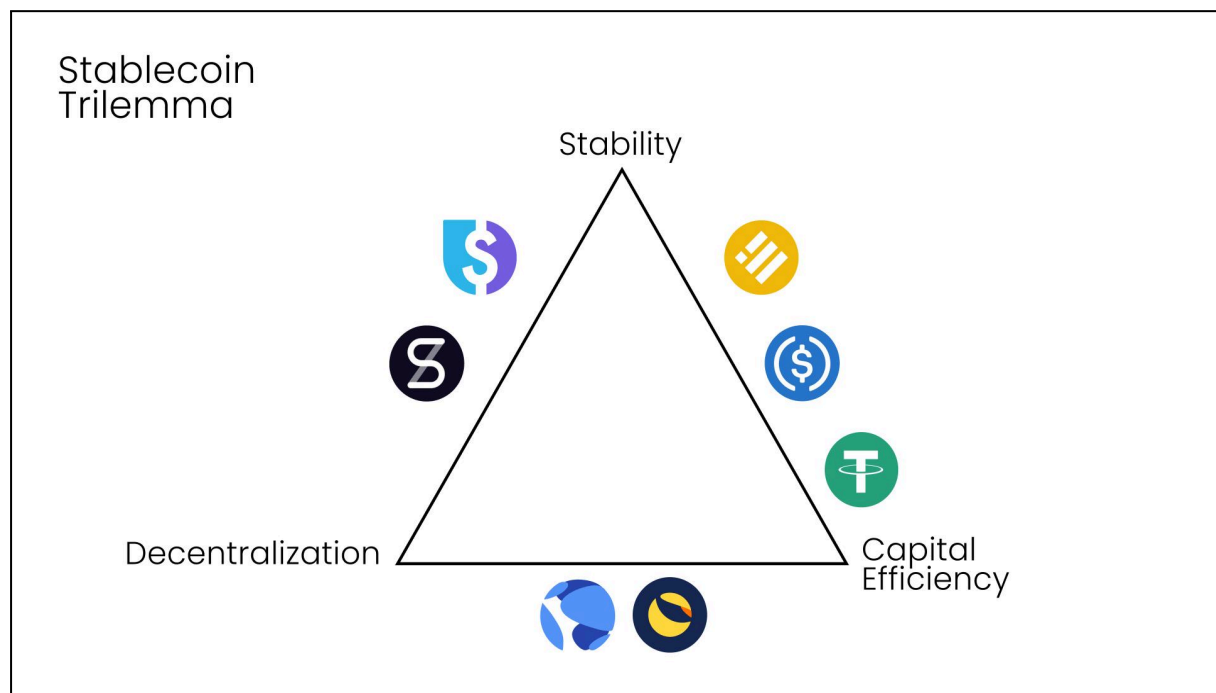
- **Fiat-collateralized stablecoins** excel in simplicity and reliability but compromise decentralization and verifiability.
- **Crypto-collateralized stablecoins** embrace transparency and trustlessness but are capital-inefficient.
- **Algorithmic stablecoins** offer efficiency and decentralization but have struggled to maintain user confidence due to their fragility and scaling issues.

To address these shortcomings, a new model is needed—one that combines the strongest attributes of each while mitigating their weaknesses. **Obymare takes inspiration from these designs, integrating their best features to create a hybrid approach uniquely suited to the Cardano ecosystem.** This innovation aims to set a new standard for stablecoins, blending decentralization, stability, and efficiency to deliver a solution that both individuals and the broader crypto economy can depend on.

The Basics

Obymare is a decentralized stablecoin protocol specifically designed for the Cardano blockchain. It offers a hybrid approach that combines the strengths of fiat-collateralized, crypto-collateralized, and algorithmic stablecoins while addressing their respective weaknesses.

At its core, Obymare revolves around $**OBYUSD**, its sole USD-pegged stablecoin, and $**OBY**, the sole utility token used for minting and redemption fees. The system is built on four key pillars:

1. The system employs **overcollateralization** to ensure security.

2. Cardano's **eUTxO architecture** provides the foundation for scalability.

3. **Algorithmic mechanisms** to enhance operational efficiency.

4. **Immutable lending parameters** enable predictable & competitive cost modeling for end-users.

How Obymare Works

Obymare is a decentralized stablecoin system where users lock ADA as collateral to mint $OBYUSD, maintaining stability with a minimum collateralization ratio of 130%. By implementing liquid staking, users can still earn rewards on their locked collateral, enhancing efficiency. Stability is reinforced through arbitrage incentives and transparent fee structures, while the protocol's immutable, governance-free design ensures trust and predictability.

1. **Collateralization**
   Users deposit ADA as collateral to mint $OBYUSD. To ensure the system's stability, a Minimum Collateralization Ratio (MCR) of 130% is required, meaning that the value of ADA locked must always exceed the value of $OBYUSD issued by a minimum of 130%. This creates a buffer to account for ADA's inherent volatility while maintaining confidence in the stablecoin's peg.

2. **Earning Yield While Collateralized**
   Unlike traditional collateralized stablecoins, Obymare integrates with Cardano's liquid staking capabilities. This allows users to delegate their deposited ADA to stake pools and earn staking rewards while their ADA remains locked as collateral. Users can change their stake key after the initial loan initiation and proactively manage their delegation at will. These rewards can be reinvested into the system, enabling users to mint additional $OBYUSD or strengthen their collateral position.

3. **Stability Mechanisms (Hard & Soft Peg)**
   Obymare utilizes a combination of soft and hard peg mechanisms to maintain the $1 value: When $OBYUSD trades above the peg, arbitrageurs can generate profits by minting new $OBYUSD at a lower cost and selling at the higher market price, which naturally drives the price downward. If the price falls below $1, the hard peg mechanism allows users to redeem $OBYUSD for ADA at full face value (minus a redemption fee), reducing the circulating supply and creating upward price pressure in the market.

4. **Transparent and Immutable Design**
   The protocol is entirely decentralized, with all parameters fixed at deployment. This governance-free model eliminates the risks of human intervention or manipulation while ensuring predictability and trust in the system's operations. There is no batching system at play; each loan position exists as its own individual UTXO and is directly managed by the user via their loan Non-Fungible Token (NFT) receipt, which serves as proof of ownership and control over the position.

5. **Fixed Low Fee Structure**
   A fixed 1% minting fee in $OBY creates a consistent revenue stream for the protocol and discourages reckless over-minting. Dynamic redemption fees of 1%-3% (depending on loan collateralization ratios) further align incentives for market participants and $OBY holders while supporting the system's stability, providing very competitive loan costs compared to existing market solutions on Cardano.

Why Obymare is a Better Alternative

Obymare overcomes the limitations of the three primary types of stablecoins by blending their strengths into a more resilient and efficient system:

1. **Decentralization without Central Points of Failure**
   Unlike fiat-collateralized stablecoins, Obymare does not rely on centralized institutions or custodians. All operations are managed on-chain via smart contracts, ensuring transparency and eliminating the need for trust in third parties, and users being able to verify reserves themselves.

2. **Efficiency with Capital Optimization**
   While crypto-collateralized stablecoins often face inefficiencies due to high overcollateralization requirements, Obymare addresses this by enforcing a minimum collateralization ratio of 130%, which is relatively low compared to many competitors, employing an equitable backup solution to combat bad debt as opposed to demanding excessive overcollateralization upfront for all loan positions.

3. **Stability Through Soft & Hard Peg Mechanisms**
   Algorithmic stablecoins often falter during periods of market stress due to their reliance on supply-and-demand adjustments alone. Obymare relies on a combination of hard and soft peg mechanisms. The protocol enforces stability through overcollateralization and a fixed 1% minting fee structure, while utilizing redemptions to incentivize safe loan management. The $OBY treasury acts as a fallback mechanism, protecting against extreme market crashes or chain congestion to maintain system-wide stability.

Another unique feature of Obymare is that your ADA collateral doesn't sit idle – it continues to earn staking rewards even while locked in your collateralized debt position. Moreover, you retain control over which stake pool your locked ADA is delegated to. This feature allows you to optimize your returns by choosing stake pools that align with your preferences for yield, decentralization, or support for specific Cardano initiatives.

You might, for instance, switch from a large, established stake pool to a smaller, up-and-coming one that's offering promotional rewards. By actively managing your stake pool delegation, you can potentially earn higher rewards on your locked ADA, effectively reducing the net cost of your $OBYUSD loan. Delegation changes don't incur any protocol fees.

By integrating the strengths of existing stablecoin models and addressing their vulnerabilities, Obymare offers a uniquely balanced solution. It combines the reliability of fiat-backed stability, the transparency of crypto-collateralization, and the efficiency of algorithmic designs, all while leveraging Cardano's advanced blockchain infrastructure. With Obymare, the Cardano ecosystem gains a truly decentralized, scalable, and robust stablecoin protocol that empowers users to participate confidently in the future of decentralized finance.

How $OBYUSD Maintains Stability

Obymare relies on a combination of **soft** and **hard** peg mechanisms to maintain $OBYUSD's stability. Hard pegs enforce strict price boundaries through arbitrage opportunities and redemption mechanisms, while soft pegs influence trader behavior and psychological anchoring to keep prices naturally close to $1.00. The hard peg defines a wide theoretical range of $1.00 to $1.31. Still, in practice, the soft peg mechanisms ensure that $OBYUSD will hover much closer to $1.00 – $1.05 for the majority of market conditions. Unlike traditional stablecoins that rely on centralized reserves or governance, $OBYUSD leverages Cardano's eUTxO model, incentivizing market participants to correct price deviations. This decentralized approach creates robust price stability without human intervention.

Hard Peg Mechanisms: Defined Boundaries

1. **Upper Price Ceiling ($1.31):**

   The upper price is calculated using the following formula:

   $$Upper\ Price\ =\ (MCR\ +\ Fixed\ Fee)\ *\ \int_0^1 dx$$

   ○ If the price of $OBYUSD rises above $1.31, arbitrageurs have an incentive to mint $OBYUSD. They do this by locking ADA as collateral and paying a 1% minting fee in $OBY. The newly minted $OBYUSD can then be sold at the higher market price. Since arbitrageurs will have already profited from selling above $1.31, they can simply abandon their collateral position, as they remain profitable regardless of liquidation. This influx of $OBYUSD increases the supply, creating selling pressure that pushes the price back down towards the $1.31 target.

   ○ For example, an arbitrageur observes $OBYUSD trading at $1.33. They lock $130 worth of ADA as collateral and pay a $1 minting fee in $OBY to mint $100 worth of $OBYUSD. They then sell this $100 $OBYUSD at the market price of $1.33, receiving $133. Having spent $130 in ADA and $1 in $OBY, their total cost was $131. Therefore, their profit is $2, being the difference between the $133 they received and the $131 they spent. Having secured their profit, they can choose to abandon their ADA collateral position, as they remain profitable regardless of liquidation.

2. Lower Price Ceiling ($1.00):

The lower price is calculated using the following formula:

$$Lower\ Price\ =\ (1\ -\ 0.01\ to\ 0.03)\ *\ \int_0^1 dx$$

- ○ If $OBYUSD trades below $1.00 on secondary markets, users can still redeem each $OBYUSD for $1 worth of ADA, minus a small redemption fee. The protocol applies a redemption fee of 1%-3% paid in $OBY, with lower fees specifically designed for redeeming riskier positions that have minimal collateralization.

- ○ This mechanism creates a powerful arbitrage opportunity. When $OBYUSD trades below $1.00, arbitrageurs can purchase it at a discount (for example, at $0.95) and redeem it for $1.00 worth of ADA, paying only the redemption fee in $OBY. This arbitrage activity generates buying pressure on $OBYUSD while simultaneously reducing its supply, effectively supporting the price and pushing it back toward the target of $1.00. The larger the price deviation below $1.00, the more attractive this arbitrage opportunity becomes.

- ○ For example, if $OBYUSD is trading at $0.95, an arbitrageur could purchase 100 $OBYUSD for $95. They could then redeem this $OBYUSD for $100 worth of ADA, paying only a 1% redemption fee in $OBY (worth $1). Their total cost would be $96 ($95 for the $OBYUSD plus $1 in fees), while receiving $100 worth of ADA, generating a $4 profit. This opportunity incentivizes traders to buy $OBYUSD when it trades below $1.00, helping restore the peg.

- ○ A crucial feature of the redemption mechanism is that it operates **without limits or caps**, systematically targeting positions from lowest to highest collateralization ratio. This design choice serves two important purposes: it incentivizes system stability by rewarding users who maintain conservative collateral positions, and it establishes a reliable **price floor** for $OBYUSD. Unlike systems that rely on governance decisions—which often lag behind rapid market movements—this automated mechanism provides immediate and predictable price support whenever needed.

Soft Peg Mechanisms: Market Dynamics and Psychology

1. Arbitrage Anticipation and Market Psychology

Market participants recognize that any deviation in $OBYUSD's price creates natural arbitrage opportunities, which reinforce $1.00 as a strong equilibrium point. This dynamic occurs because traders understand they can profit from price discrepancies, leading them to automatically align their trading behavior around the $1.00 target without requiring explicit coordination. As the price approaches its upper bounds, buying pressure naturally diminishes since arbitrage opportunities become less profitable, creating a self-balancing mechanism that helps maintain price stability.

2. Leveraging Upward Depegs

When $OBYUSD trades above $1.00, borrowers can strategically leverage the upward price movement. They can mint additional $OBYUSD at the base price of $1.00 by providing more ADA as collateral, then sell this newly minted $OBYUSD at the higher market price. The profits from these sales can be used to acquire more ADA, which can then be deposited as additional collateral to mint even more $OBYUSD. This creates a compounding leverage cycle that allows traders to expand their borrowing capacity. However, this same process generates increasing selling pressure when $OBYUSD is trading above its target, naturally helping to stabilize the price back toward $1.00.

3. Paying Back Loans via Yield Strategies

For borrowers who have retained their minted $OBYUSD and engaged in yield-generating activities, a strategic opportunity exists that emphasizes stable returns and efficient debt management over aggressive leverage. This strategy is most effective when borrowers have deployed their $OBYUSD into conservative yield-generating protocols, particularly lending and borrowing platforms that emphasize capital preservation and consistent returns.

During periods when $OBYUSD trades above $1.00, these borrowers can capitalize on the price premium to optimize their debt positions. By repaying their loans when $OBYUSD trades above its mint price, borrowers effectively reduce their

outstanding debt at a discount to their original borrowing cost, creating an opportunity to deleverage efficiently without disturbing their underlying ADA collateral position.

This conservative strategy delivers multiple advantages for borrowers. They maintain their original collateral positions and continue benefiting from staking rewards on their locked ADA while strategically reducing their debt exposure through discounted repayments. This approach to position management allows borrowers to strengthen their financial standing without incurring additional risk or compromising their core asset holdings, demonstrating how the protocol's design supports both aggressive and conservative borrowing strategies.

Price Stability Framework

The Obymare protocol establishes a robust, self-regulating framework that maintains price stability around the target peg through market participants' profit-seeking behavior. Borrowers optimize their leverage positions based on market conditions, while arbitrageurs capitalize on price discrepancies through minting and redemption activities. As prices approach the upper bound, diminishing arbitrage opportunities create natural price resistance. The redemption mechanism further strengthens the system by establishing a firm price floor, ensuring holders can exit their positions at **fair value**.

The Core Arbitrage Loop for $OBYUSD Illustrated
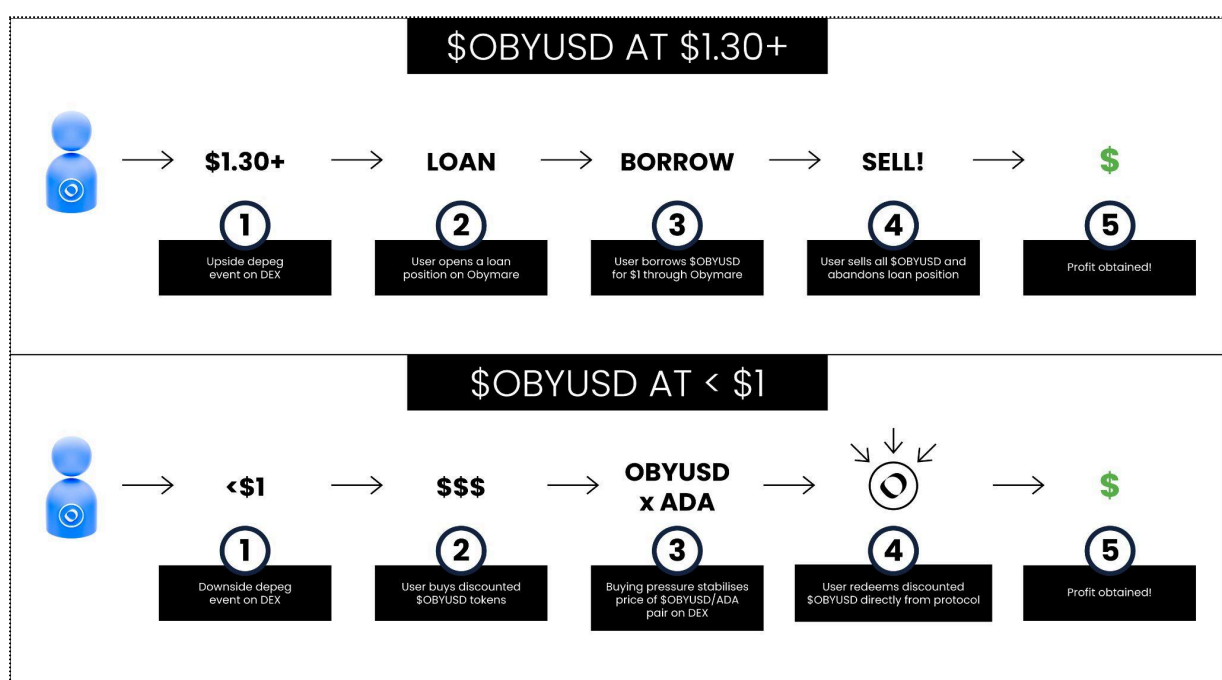
The Life Cycle of the Obymare Protocol

The life cycle of a loan in the Obymare protocol begins with minting $OBYUSD, where users lock ADA as collateral, **pay a fixed 1% minting fee (paid in $OBY)**, and receive an NFT receipt representing their loan terms.

While their collateral remains locked, it continues earning staking rewards, offering additional utility to the user. **Users can manage their position by adding more collateral** or repaying $OBYUSD debt to maintain a healthy Collateralization Ratio (CR, the ratio of collateral value to debt value).

If a loan's CR drops below the Minimum Collateralization Ratio (MCR, set at 130%), **the protocol makes the position available for liquidation.** Any user can act as a liquidator by repaying the outstanding $OBYUSD debt and receiving the remaining surplus ADA collateral as an incentive. However, Borrowers still have the opportunity to act quickly by adding additional ADA collateral or repaying some of their debt before another user or liquidator bot steps in—allowing them to maintain their position even after temporarily dropping below MCR.

Beyond maintaining MCR compliance, users must also ensure their CR remains relatively high compared to other loan positions in the system to avoid being first in line for redemptions—a process where riskier positions (those with lower CR) are prioritized for forced repayment when redemptions occur.

Users can actively manage their loan position through multiple actions: borrowing additional $OBYUSD against their existing collateral, repaying part or all of their borrowed amount, withdrawing excess collateral when over-collateralized, depositing additional collateral to increase their CR, and adjusting their staking preferences to optimize rewards.

The only cost to users when using Obymare is the fixed 1% minting fee incurred when borrowing $OBYUSD; all other actions are free. This flexible system allows users to dynamically manage their loans, maintain stability, earn staking rewards, mitigate liquidation risks, and remain fully in control of their CDP position, with no overbearing fees and immutable loan terms from day one.
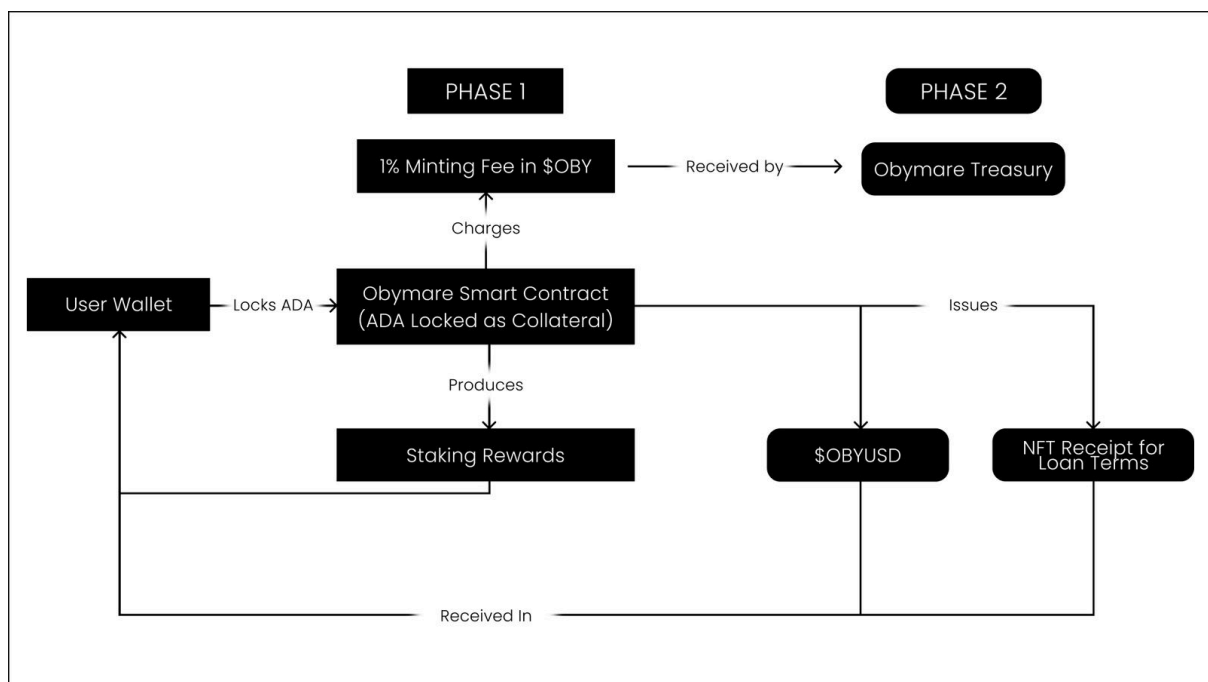
Minting

The user locks their ADA as collateral in the **Obymare Smart Contract**, which mints an amount of $OBYUSD based on the users selected amount, **up to a maximum of 76.92% Loan-to-Value (LTV), determined by the 130% Minimum Collateralization Ratio (MCR).**

The user pays a fixed 1% minting fee in $OBY tokens, calculated from the value of the $OBYUSD being minted. The exact amount of $OBY tokens required is determined by its market price at the time of minting/borrowing, and is all sent to the $OBY treasury.

Additionally, the user receives an **NFT receipt for loan terms,** which is a transferable asset used to establish ownership of the locked ADA collateral in the system and is required by the user to perform any adjustment on the loan position (deposit, withdraw, borrow, repay, stake change, etc.).

For as long as the loan is active, users continue to earn staking rewards on their locked ADA, which can be redeemed or reinvested to mint more $OBYUSD. This process ensures both utility for the user and sustainability for the protocol.

In this diagram, the process of minting $OBYUSD using the Obymare protocol is outlined step by step:

1. **User Wallet Locks ADA:**

   ○ The user transfers their ADA to the Obymare Smart Contract to be secured as collateral for their loan

2. **Obymare Smart Contract Issues $OBYUSD and NFT Loan Receipt:**

   ○ Based on the amount of ADA locked and the borrow amount requested, the smart contract mints $OBYUSD up to a maximum of 130% Minimum Collateralization Ratio (MCR), or 76.92% Loan-to-Value (LTV) of the deposited ADA's value, and sends it to the user's wallet. The user also receives an NFT receipt that represents their loan details, serving as a record and proof of ownership of the locked collateral and loan terms.

3. **1% Minting Fee Charged in $OBY:**

   ○ A 1% fee, proportional to the amount of $OBYUSD minted, is charged to the user in $OBY tokens and sent to the protocol's $OBY treasury. This fee supports protocol sustainability and contributes to protection against bad debt.

4. **Staking Rewards Produced from ADA Collateral:**

   ○ The locked ADA continues generating staking rewards, which users receive in their designated wallets. This mechanism enables users to earn ongoing returns from their collateral while it remains secured in the protocol.

5. **$OBYUSD is Ready for Use:**

   ○ The user now has $OBYUSD in their wallet, ready to use for various purposes within the Cardano DeFi ecosystem, such as trading, providing liquidity, or lending. As long as users maintain their position above the Minimum Collateralization Ratio (MCR), they can utilize their $OBYUSD freely while their collateral continues earning staking rewards.

Core Loan Actions and Their Impact on Collateralization Ratio

The Obymare protocol enables users to manage their loan positions through several key actions. Each action affects the Collateralization Ratio (CR) of the loan position in different ways. Understanding these impacts is crucial for maintaining a healthy loan position and avoiding liquidation.

1. **Borrowing Additional $OBYUSD**

Borrowing additional $OBYUSD against existing collateral decreases the Collateralization Ratio of the loan position. When a user borrows more $OBYUSD, they increase their debt while the collateral amount remains constant.

For example, if a user has 1,000 ADA as collateral (valued at $300) and an existing debt of 100 $OBYUSD, their initial Collateralization Ratio is 300%. If they borrow an additional 50 $OBYUSD, their Collateralization Ratio would decrease to 200% (300/150). Users must ensure that additional borrowing does not bring their Collateralization Ratio below the Minimum Collateralization Ratio of 130%.

2. **Repaying $OBYUSD Debt**

Repaying debt increases the Collateralization Ratio by reducing the outstanding $OBYUSD liability while maintaining the same collateral level. This action improves the loan's health and reduces liquidation risk.

Consider a position with 1,000 ADA collateral ($300) and 200 $OBYUSD debt (Collateralization Ratio = 150%). Repaying 50 $OBYUSD would increase the Collateralization Ratio to 200% (300/150), creating a significantly safer position.

3. **Withdrawing ADA from Collateral**

Withdrawing collateral decreases the Collateralization Ratio by reducing the value securing the loan while maintaining the same debt level. Users can only withdraw collateral if doing so would not bring their Collateralization Ratio below the Minimum Collateralization Ratio of 130%.

For instance, with 1,000 ADA collateral ($300) and 100 $OBYUSD debt (Collateralization Ratio = 300%), withdrawing 500 ADA ($150) would reduce the Collateralization Ratio to 150%. While still above the Minimum Collateralization Ratio, this significantly reduces the safety margin against market volatility.

4. **Depositing Additional ADA to Collateral**

Depositing additional collateral increases the Collateralization Ratio by adding more value securing the loan while keeping the debt constant. This action strengthens the loan position and provides greater protection against market volatility & liquidation risk.

*If a position has 1,000 ADA collateral ($300) and 200 $OBYUSD debt (Collateralization Ratio = 150%), depositing an additional 500 ADA ($150) would increase the Collateralization Ratio to 225% ((450/200) * 100), creating a much more robust position.*

5. **Stake Key Changes**

Changing the stake key delegation for locked collateral has no direct impact on the Collateralization Ratio. This action allows users to optimize their staking rewards without affecting their loan health. Users can freely change their stake delegation at any time while maintaining their existing loan parameters.

However, users should consider that staking rewards can be an important tool for maintaining loan health over time. Choosing effective stake pools can provide a steady stream of rewards that can be used to:

- Pay down existing debt
- Add to collateral
- Create a safety buffer for market volatility

The Collateralization Ratio after any action can be calculated using the following formula:

$$CR = \left(\Sigma\left(ADA \cdot P_u^{d}\right) / D_{o\beta\gamma}\right) \times 100$$

<u>Where:</u>
CR = Collateralization Ratio
ADA = Amount of ADA collateral
P_u^{d} = Current ADA/USD price
$D_{o\beta\gamma}$ = Total \$OBYUSD debt outstanding

$\therefore CR \geq 130\%$

Users should monitor their Collateralization Ratio regularly and take appropriate actions to maintain a healthy buffer above the Minimum Collateralization Ratio, especially during periods of market volatility. The protocol's NFT receipt system makes it simple to track these metrics and manage loan positions effectively.

Liquidation & Recapitalization

One of the pillars through which Obymare maintains its stability is a comprehensive liquidation system that ensures all circulating $OBYUSD is **always** and fully backed by active Collateralized Debt Positions (CDPs). Operating as an open, permissionless system, anyone can participate as a liquidator on a first-come, first-served basis. This decentralized approach forms the foundation of the protocol's risk management framework.

When users lock ADA as collateral to borrow $OBYUSD, they create a Collateralized Debt Position (CDP) that must maintain a minimum collateralization ratio (MCR) of 130% to remain active. Liquidations serve as the protocol's primary defense mechanism against market volatility and are triggered when a CDP's collateral ratio falls below this MCR threshold. The open nature of the liquidation system ensures efficient market operation, as multiple participants compete to monitor and liquidate at-risk positions.

During periods of network congestion or rapid market movements, flash crashes can cause a CDP's collateral value to plummet below its outstanding debt before liquidation can occur. To address this risk, Obymare implements a **Critical Collateral Ratio** (CCR) of 103%. When a CDP's collateralization ratio falls below this CCR threshold, liquidators can step in to stabilize the system, with the protocol compensating them up to 105% of the owed debt value through a combination of remaining collateral and $OBY tokens from the treasury.

> *For example, if a CDP's ADA collateral value drops to 80% of the outstanding $OBYUSD debt, the liquidator receives both the available ADA collateral (80% of debt value) and $OBY tokens worth 25% of the debt value from the treasury, bringing their total compensation to 105%. This mechanism ensures that liquidators remain incentivized to participate in the liquidation process even under challenging market conditions, maintaining the protocol's stability regardless of market volatility.*

The $OBY treasury serves as a critical backstop to ensure liquidator participation during extreme market conditions, flash crashes, or network congestion. This treasury is continuously replenished through fees collected from $OBYUSD minting and redemptions. The $OBY tokens in the treasury are effectively removed from the circulating supply, as they remain locked unless used for liquidation subsidies, with **no other access to the treasury permitted.**

The following chart illustrates two potential outcomes when the value of ADA collateral falls.
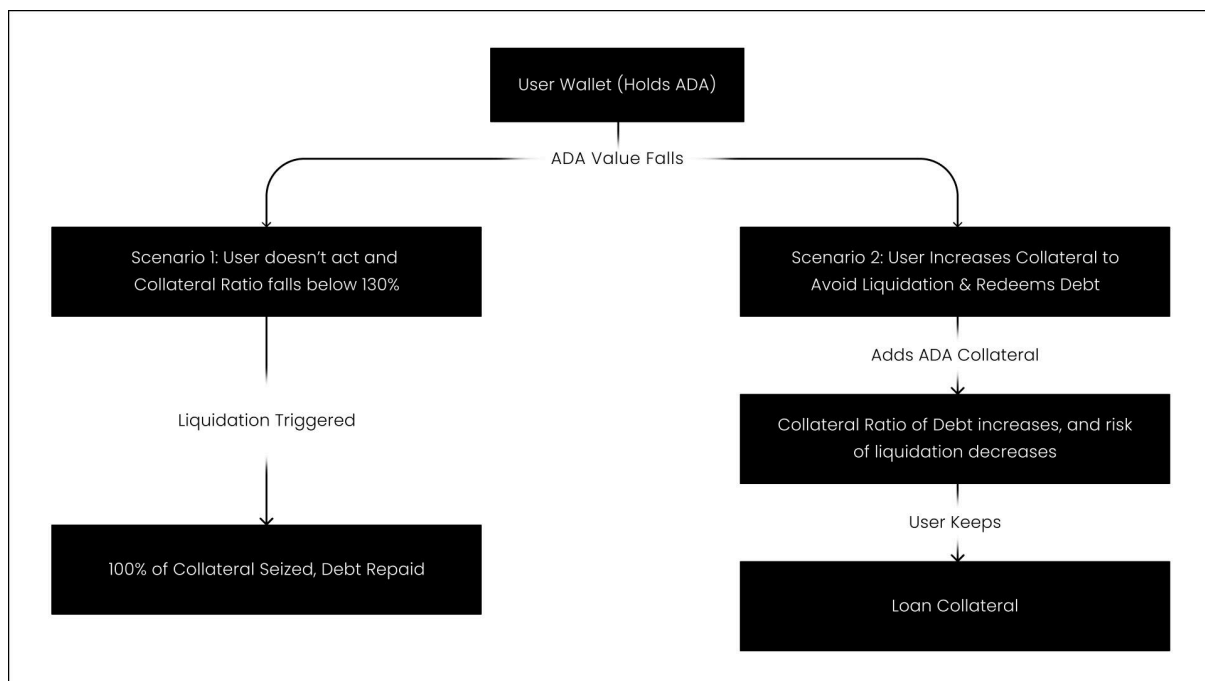
Scenario 1: User Doesn't Act, Leading to Liquidation

When a position's collateralization ratio breaches the 130% Minimum Collateral Ratio (MCR) threshold, the protocol's liquidation mechanism automatically activates. This opens the position to liquidation by any market participant who can recover the locked collateral by settling the outstanding debt. Users might face this outcome due to insufficient position monitoring, lack of capital to maintain health, or strategic financial decisions. Some users may deliberately accept liquidation as part of their broader financial strategy, particularly when it proves more cost-effective than realizing significant capital gains taxes.

Scenario 2: Proactive Position Management

Users who actively monitor their positions can take preventive action when their collateralization ratio approaches the 130% MCR threshold. They have two primary options for maintaining a healthy position: increasing their ADA collateral or reducing their $OBYUSD debt. Either action can restore the collateralization ratio above the required threshold, allowing users to maintain their position and continue earning staking rewards on their locked ADA. This approach particularly appeals to users who maintain a long-term investment thesis on ADA or value staking returns.

Position Management Flexibility

The protocol's design offers significant flexibility in managing at-risk positions. Users can often avoid the need for external capital by partially withdrawing their existing ADA collateral and converting it to $OBYUSD to reduce their debt exposure. This self-repayment mechanism allows users to right-size their positions while retaining control over their remaining collateral, demonstrating how the protocol's architecture supports sophisticated position management strategies while maintaining system stability through its automated liquidation mechanisms.

Withdrawing

This chart shows how users can interact with their $OBYUSD loan. If their collateralization ratio remains above the required 130% **Minimum Collateralization Ratio (MCR)**, they can withdraw the surplus value of their ADA collateral. This provides flexibility, such as using the withdrawn ADA for other investments while keeping their loan safe. However, if the collateralization ratio drops below 130%, the loan is up for liquidation and the user loses their collateral. Maintaining a healthy ratio ensures both the loan's stability and access to collateral.
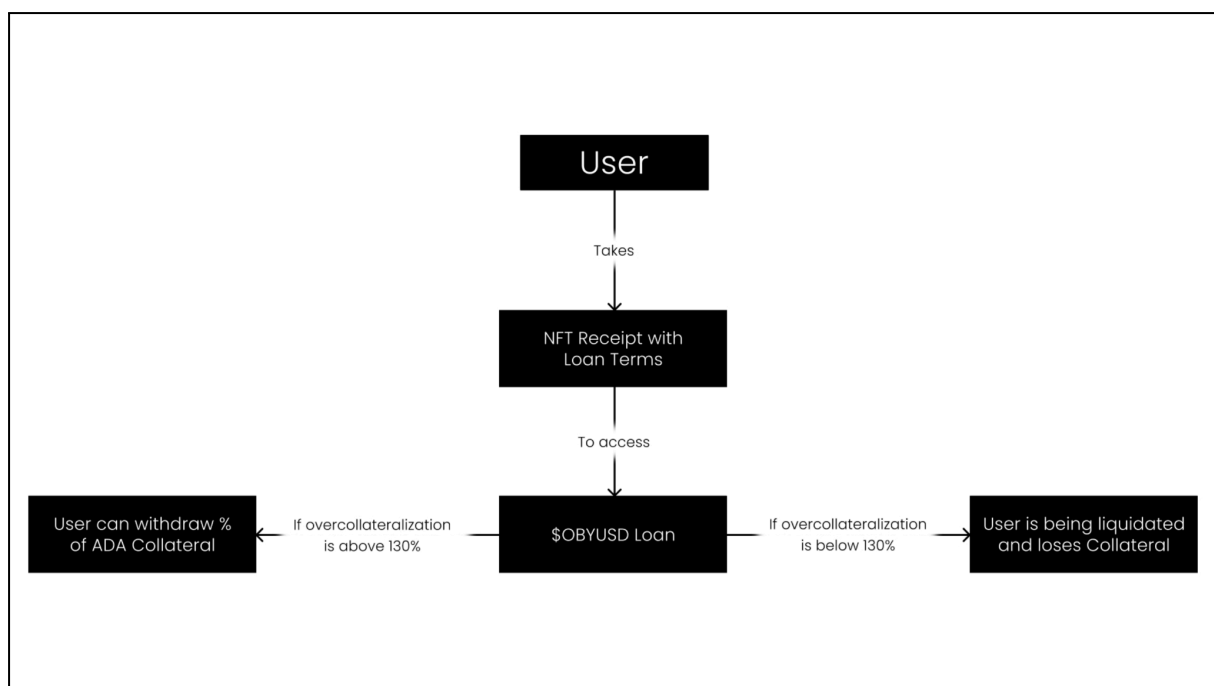
$OBYUSD Redemption

This chart illustrates the process of redeeming $OBYUSD for the equivalent value of ADA locked in the system minus fees. A user sends $OBYUSD through the **Redemption Portal**. Anyone with $OBYUSD can initiate redemptions, and the protocol automatically selects the unhealthiest loan positions (those with the lowest collateralization ratios) for redemption. This ensures positions with the lowest redemption fees are first in line.

The protocol charges a redemption fee of 1-3% (paid in $OBY tokens to the $OBY treasury), scaling from 1% for the least collateralized loans to 3% for the most collateralized loans. When someone redeems against a loan, they pay off the borrower's $OBYUSD debt in exchange for a portion of the borrower's ADA collateral, minus the redemption fee. Based on the size of the redemption, the borrower's position retains any remaining ADA as locked collateral. If the redemption doesn't fully pay off their loan, they maintain the remaining collateral; if the loan is fully paid off, they can collect their surplus ADA. The borrower whose position is being redeemed against keeps their surplus collateral, making redemptions a neutral event for them as their debt is paid while preserving their surplus ADA.
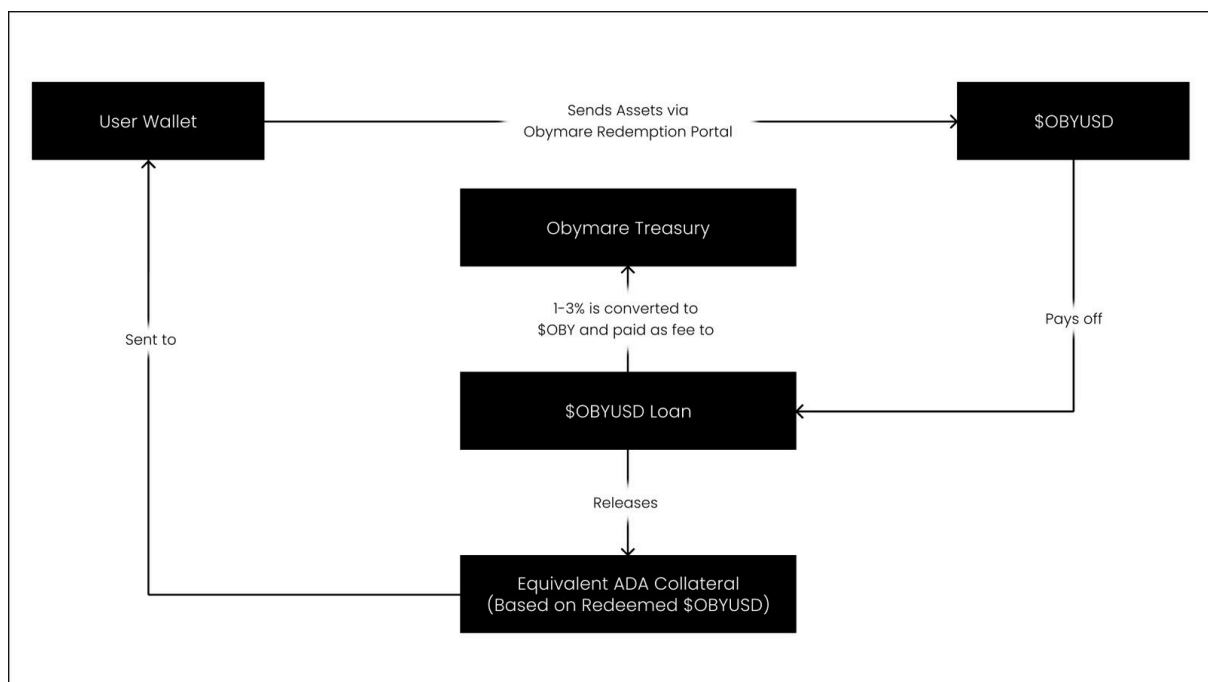
Step-by-Step Explanation of the Redemption Process:

1. **Initiating the Redemption:**
   - When a user initiates a redemption in Obymare, they send their $OBYUSD through the designated Redemption Portal. The protocol automatically identifies and targets the loan position with the lowest collateralization ratio in the system for redemption.

2. **Fee Calculation and Collection:**
   - Upon receiving the $OBYUSD, the protocol calculates the redemption fee, which ranges from 1% to 3% based on the health of the position being redeemed against. This fee, paid in $OBY tokens, goes to the Obymare Treasury to support ongoing protocol operations and stability mechanisms.

3. **Collateral Release Mechanism:**
   - The protocol processes the redemption by releasing ADA collateral equivalent to the full value of $OBYUSD being redeemed. For example, when a user redeems 100 $OBYUSD, they will receive 100 ADA worth of collateral from the targeted position, while paying a separate 1% fee (equivalent to $1) in $OBY tokens.

4. **Position Recalculation:**
   - When the redemption only partially covers an outstanding loan, the protocol recalculates the remaining debt and adjusts the collateral accordingly. The borrower whose position is being redeemed against retains their surplus collateral beyond what was needed to cover the redemption, ensuring that redemptions remain neutral for borrowers while maintaining system stability.

5. **Settlement and Closure:**
   - Finally, the protocol transfers the unlocked ADA to the redeeming user's wallet based on the amount of $OBYUSD being redeemed. For the borrower whose position is being redeemed against, the process has no negative impact - they maintain ownership of any surplus ADA collateral beyond what was required to cover the redeemed debt. In the case of a full redemption that completely repays the loan, the protocol automatically closes the position and releases all remaining surplus collateral to the borrower. This ensures that redemptions serve as a neutral mechanism for borrowers while maintaining the protocol's stability.

The NFT Receipt: Your Digital Key to Obymare Loans

When you open a loan position and mint $OBYUSD in the Obymare protocol, you receive a unique **NFT Receipt** that represents your loan. This NFT is a critical tool for managing and accessing your loan, as it securely stores your loan terms and history, including your locked ADA collateral amount, minted $OBYUSD, and other details.

Core Functions of the NFT Receipt:

1. **Identification of Loan Terms:**

   - The NFT is tied to your specific loan and, by identification through the protocol, contains all relevant data, such as the amount of collateral locked, your debt level etc.

   - It serves as a verifiable record of your loan's history, ensuring transparency and accurate management.

2. **Access to Loan Management:**

   - The NFT is the **key** to interacting with your loan on the Obymare platform. Without it, you cannot add or withdraw collateral, repay $OBYUSD, or make any changes to your loan.

3. **Recoverability and Risks:**

   - If the NFT is lost (e.g., due to wallet compromise or user error), your loan cannot be accessed or managed.

   - Without active management, the loan will eventually be **liquidated,** If the collateralization ratio drops below 130%, which results in the loss of your entire locked ADA collateral.

Tradability of the NFT Receipt

One of the innovative features of the NFT Receipt is its ability to be **traded or transferred**. This enables another party to take over the loan, including the associated collateral and debt. Someone might want to trade or acquire an NFT Receipt for the following reasons:

- **Speculative Investment:**
  A buyer might believe that ADA's value will increase and the collateral will become more valuable over time. By acquiring the NFT, they gain control of the loan and its terms.

- **Convenience for the Seller:**
  A user may want to exit their loan without fully repaying the debt. Selling the NFT Receipt allows them to pass the responsibility for the debt and collateral to someone else.

Adjusting Staking Parameters

The NFT Receipt also allows you to change the wallet and delegated stake pool associated with your loan. Specifically, you can use it to **redirect staking rewards** from the ADA collateral to a different wallet address. This feature provides flexibility for users who wish to consolidate rewards or share them with a third party.

Obymare Fees: A Foundation for Stability and Sustainability

Obymare's fee structure is designed to balance system sustainability, incentivize responsible behavior, and maintain $OBYUSD stability. These fees are transparent, predictable, and dynamically tied to user actions, ensuring both the protocol's growth and alignment with user interests. Below is an overview of the core fees and their roles within the ecosystem:

1. Minting Fee: 1% (Paid in $OBY)

- **When It's Charged:**

    - Every time a user borrows $OBYUSD by minting from their deposited ADA collateral.

- **How It Works:**

    - Users pay a **1% fee on the amount of $OBYUSD minted**, paid in $OBY tokens and sent to the $OBY Treasury. For example, minting $1,000 $OBYUSD incurs a fee of $10 worth of $OBY tokens etc.

- **Purpose and Impact:**

    - $OBY primarily serves as a deflationary fee token that bolsters the protocol's protection against bad debt, especially when positions fall below the Critical Collateral Ratio (CCR). By driving consistent demand through its utility, $OBY reinforces the system's stability and resilience during volatile market conditions.

2. Redemption Fee: 1-3% (Paid in $OBY)

- **When It's Charged:**

  - When users redeem $OBYUSD through the redemption portal, they receive an equivalent amount of ADA based on the oracle price at the time of redemption.

- **How It Works:**

  - The Obymare protocol employs a dynamic redemption fee structure that scales based on the collateralization ratio (CR) of the targeted loan position. At the minimum collateralization threshold of 130%, the protocol charges a base fee of 1%. This lower fee strategically encourages users to redeem against these positions that carry higher risk, thereby promoting efficient capital allocation throughout the system.

    The redemption fee increases linearly as the collateralization ratio rises, reaching a maximum of 3% for positions with a CR of 1000%. Through this graduated structure, the protocol discourages redemptions against heavily overcollateralized positions by making them more costly to target. All positions with a collateralization ratio of 1000% or greater incur the maximum 3% fee. Users must pay all redemption fees using $OBY tokens, which are then transferred to the protocol's $OBY treasury. This mechanism helps maintain the protocol's long-term stability and sustainability.

- **Purpose and Impact:**

  - Maintains system stability by discouraging excessive over-collateralization and ensuring that riskier positions are redeemed first. Users pay a fee for the right to arbitrage and benefit from a secondary market depeg in the $OBYUSD market. This supports market efficiency while driving ongoing demand for $OBY.

Continuous Fee Scaling for Redemptions

Obymare's redemption fees are carefully designed with a dynamic scaling mechanism that adjusts based on loan health. Positions below 150% CR are charged a flat 1% fee, creating a "risk zone" for riskier loans. For positions between 150% CR and 1,000% CR, the fee scales linearly up to 3%, with each incremental increase in CR adding proportionally to the fee. Any position above 1,000%+ CR still incurs a flat 3% fee, discouraging excessive overcollateralization and maintaining competitive peg range.

The following chart Illustrates the Redemption Cost per Collateralization Ratio
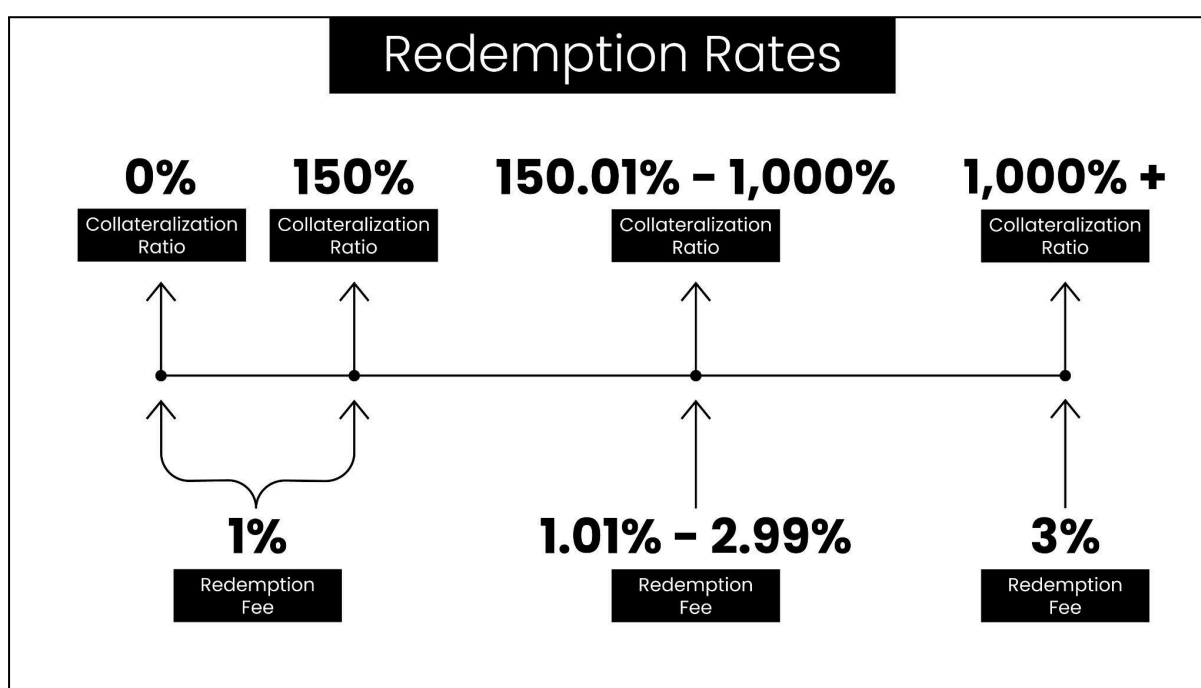
This system creates predictable incentives for users:

- Loans closer to the MCR are more cost-efficient to redeem, encouraging proactive position management.

- Overcollateralized positions incur higher fees, discouraging inefficient collateral usage while ensuring fairness.

- This fee structure naturally ensures systematic health by incentivizing higher collateral ratios throughout the system, as users optimize their positions to balance costs and risks.

Protocol Sustainability and $OBY

All fees—whether from minting, or redemption—are collected in $OBY tokens and sent to the **$OBY Treasury**. This creates a consistent demand for $OBY, driving **deflationary** price pressure as the protocol usage grows with usage. The dynamic alignment between protocol activity and $OBY demand fosters a self-sustaining ecosystem where adoption benefits both the system and token holders.

By balancing user incentives with long-term protocol sustainability, Obymare's fee structure supports stability for $OBYUSD while encouraging responsible participation in the ecosystem.

$OBY Tokenomics
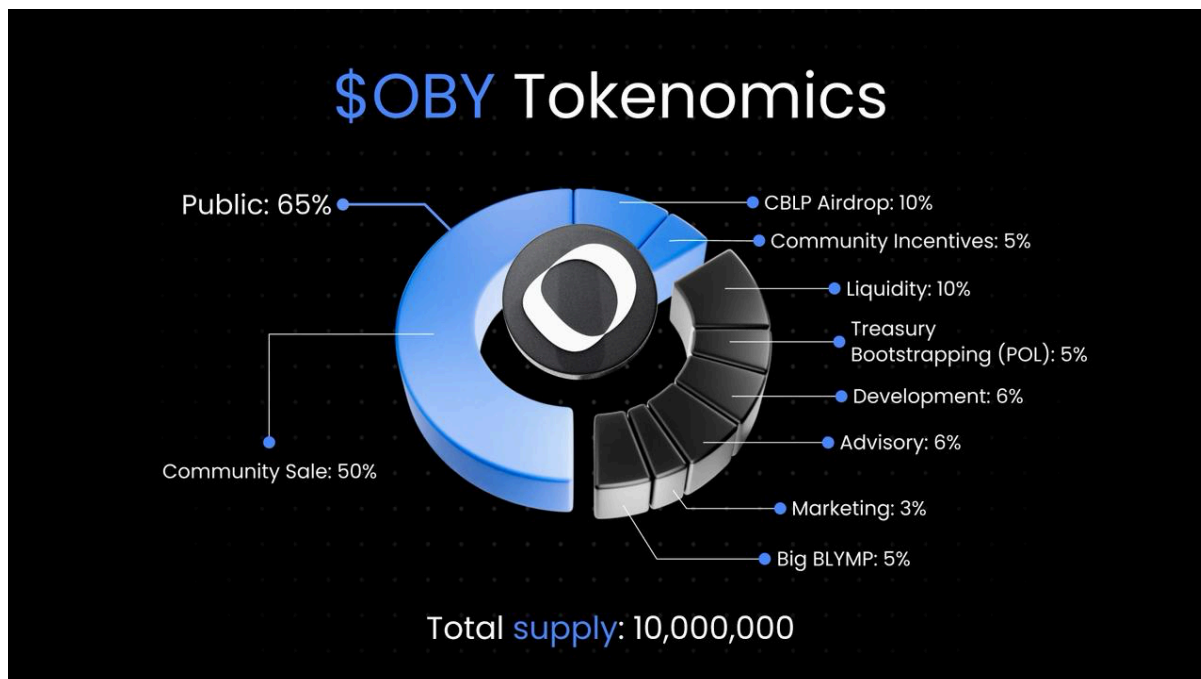
Dual-Token Ecosystem Design

The Obymare protocol operates on a sophisticated dual-token system engineered to ensure operational efficiency, sustainable growth, and aligned incentives across all participants. This architecture consists of $OBY as the utility and fee token, and $OBYUSD as the USD-pegged stablecoin, working in tandem to create a robust and self-sustaining ecosystem.

$OBY Token Distribution at a Glance

- **Total Supply:** 10,000,000 OBY
- **Public Allocation:** 65% (6,500,000 OBY)
  - Community Sale: 50% (5,000,000 OBY)
  - Public: 15% (1,500,000 OBY)
- **CBLP Airdrop:** 10% (1,000,000 OBY)
- **Liquidity:** 10% (1,000,000 OBY)
- **Community Incentives:** 5% (500,000 OBY)
- **Treasury Bootstrapping (POL):** 5% (500,000 OBY)
- **Development:** 6% (600,000 OBY)
- **Advisory:** 6% (600,000 OBY)
- **Big BLYMP:** 5% (500,000 OBY)
- **Marketing:** 3% (300,000 OBY)

$OBY: The Utility Token

Core Utility and Market Dynamics

$OBY serves as the exclusive fee token for all protocol operations, creating a direct utility-driven demand mechanism. Unlike governance tokens, $OBY maintains Obymare's commitment to immutable, governance-free protocol design while establishing clear economic value through its essential role in protocol functionality.

The token has a maximum supply of 10,000,000 $OBY tokens with a hard cap, serving primarily for fee payments during minting and redemption operations. Notably, $OBY has no governance role, maintaining the protocol's immutable design.

Fee Payment Mechanism

Users must acquire $OBY tokens from secondary markets through DEXs before interacting with the Obymare protocol. This creates a natural market-driven pricing mechanism where $OBY value reflects both protocol adoption and user demand for $OBYUSD minting and redemption services.

The protocol implements a straightforward fee structure where minting incurs a 1% fee of the minted $OBYUSD value paid in $OBY, while redemption fees range from 1-3% of the redeemed $OBYUSD value, also paid in $OBY and scaled by collateralization ratio.

Economic Flow and Value Accrual

The economic model follows a straightforward four-phase cycle. Users first acquire $OBY from DEXs using ADA or other assets, then consume these tokens for protocol fees during minting and redemption operations. Fee payments are collected in the $OBY treasury, where the collected tokens are effectively removed from circulation unless used for liquidation subsidies.

This creates a buy-pressure mechanism where increased protocol usage directly drives demand for $OBY tokens, establishing a clear correlation between Obymare's success and $OBY's market value.

Treasury Mechanism and Backstop Function

The $OBY treasury serves as a critical stability mechanism, providing liquidation subsidies during extreme market conditions. When collateralized debt positions fall below the Critical Collateral Ratio of 103%, the treasury compensates liquidators to ensure system stability.

The treasury functions by collecting all protocol fees paid in $OBY, providing liquidation subsidies during market stress, maintaining system stability without external intervention, and creating deflationary pressure by removing $OBY from circulation.

Value Proposition for $OBY Holders

$OBY holders benefit from direct utility value as the token is essential for all protocol interactions with no alternative payment methods available, meaning demand scales directly with protocol adoption. The token employs deflationary mechanics through continuous fee collection that reduces circulating supply, treasury tokens remaining locked unless used for emergency subsidies, and no token minting or inflation mechanisms.

The market position benefits from Obymare's innovative approach to solving the stablecoin trilemma, integration with the broader Big BLYMP ecosystem, and a scalable utility model supporting long-term growth.

$OBYUSD: The Stablecoin

Supply and Stability Design

$OBYUSD features an unlimited supply ceiling, enabling seamless scaling to meet market demand while maintaining its USD peg through sophisticated arbitrage and liquidation mechanisms. Supply flexibility allows for on-demand minting against ADA collateral with no artificial supply constraints, market-driven supply adjustments through redemptions, and scaling capabilities that grow with the Cardano ecosystem.

Integration Benefits

$OBYUSD serves as a stable value layer for Cardano's DeFi ecosystem, providing a reliable medium of exchange for trading and commerce, stable unit of account for financial applications, efficient store of value during market volatility, and bridge asset for cross-chain interactions.

Economic Synergy and Sustainability

Positive Feedback Loops

The dual-token design creates multiple reinforcing cycles that strengthen both tokens. Increased $OBYUSD demand leads to higher $OBY purchasing, which enhances overall protocol value. More $OBY accumulated in the treasury provides better liquidation coverage, strengthening the $OBYUSD peg. Protocol success drives higher $OBY demand, which in turn creates increased adoption incentives, forming a virtuous growth cycle.

Long-term Sustainability Model

For $OBY, utility demand grows organically with protocol adoption, deflationary pressure increases over time through fee collection, and market value remains tied to fundamental protocol usage rather than speculation. For $OBYUSD, stability improves as larger treasury reserves accumulate, network effects strengthen peg mechanisms over time, and adoption benefits from proven reliability in the market.

Market Differentiation

Obymare's tokenomics distinguish it from other stablecoin protocols through pure utility focus rather than speculative governance mechanics, market-driven pricing for fee tokens rather than algorithmic systems, immutable parameters that eliminate governance risk and uncertainty, and integrated ecosystem benefits through Big BLYMP synergies. This tokenomics design creates a sustainable, growth-oriented ecosystem where protocol success directly benefits all participants while maintaining the stability and reliability essential for mainstream DeFi adoption on Cardano.

Conclusion

Obymare stands as a transformative protocol within the Cardano DeFi ecosystem, offering a robust and innovative solution to the challenges of stability and scalability in the crypto space. By introducing $OBYUSD, a stablecoin pegged to the US dollar, Obymare provides users with a reliable medium of exchange that mitigates the volatility inherent in traditional cryptocurrencies.

Users can seamlessly collateralize their ADA holdings to mint $OBYUSD while earning staking rewards on their locked collateral—a feature that uniquely combines liquidity with passive income generation. The protocol's foundation on Cardano's eUTxO architecture enables unparalleled scalability and efficiency, supporting high-throughput transactions without compromising security or decentralization. With a minimum collateralization ratio of 130%, Obymare ensures that the system remains overcollateralized and resilient against market fluctuations.

The protocol's immutable, governance-free design ensures predictable and transparent operations while integrating within the [Big BLYMP](#) ecosystem. This symbiosis establishes Obymare as a key player in Cardano's growing DeFi landscape.

We invite the community to join us in this ambitious journey to empower Cardano users worldwide, accelerate our chain's growth, and unlock new horizons in Cardano's DeFi ecosystem.

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