# LamboV2: An Efficient, Near-Zero Cost Liquidity Solution for Token Launch

**Abstract.** In the rapidly evolving cryptocurrency landscape, liquidity is a critical factor for the success of new token launches. Recognizing the challenges faced by projects in securing sufficient liquidity, we have developed an efficient, near-zero-cost liquidity solution. In this paper, we introduce the concept of virtual liquidity, which establishes a deep liquidity pool on UniswapV3 to meet the liquidity needs of projects. This mechanism allows whales to provide liquidity to retail investors, enabling liquidity providers to earn profits through LP fees, thus creating a win-win situation. We believe that this mechanism can not only enhance liquidity returns for DeFi whales but also effectively address the liquidity challenges faced by retail investors and developers.

## 1 Introduction

In the realm of cryptocurrency, liquidity is paramount, especially for nascent Meme projects. Liquidity refers to the ease with which assets can be bought or sold in the market without affecting their price. For cryptocurrency projects, having sufficient liquidity is crucial for several reasons.

To search for an efficient, near-zero cost liquidity solution for token launch, we propose a straightforward mechanism: the concept of virtual liquidity to meet the liquidity needs of project parties. We will establish a deep liquidity pool on UniswapV3 to satisfy the liquidity exit for users' buying and selling activities. Essentially, this mechanism involves whales providing liquidity to retail investors. Liquidity providers can earn profits through LP fees, creating a win-win situation where whales earn LP fees and retail investors/developers resolve their liquidity issues.

We believe this mechanism can enhance the liquidity returns for DeFi whales while simultaneously addressing the liquidity challenges faced by retail investors and developers.

## 2 Virtual Liquidity

**Definition 1 (Virtual Liquidity).**

*Virtual liquidity is a conditional ERC20 token. For each holder address of virtual liquidity, the transferable balance must satisfy the following formula to ensure that the issued virtual liquidity does not enter the market.*

$$transferable\_balance = balance - debt \tag{1}$$

*where debt is always less than or equal to amount.*

### 2.1 Take Loan

For project parties seeking to obtain virtual liquidity, the virtual liquidity of LamboV2 is essentially a loan. Therefore, project parties that obtain virtual liquidity through taking a loan cannot immediately move their balance until other users start buying. In this way, project parties can obtain the required virtual liquidity without affecting market stability. The process of taking a loan is described in 1.

**Algorithm 1** Take Loan

**Require:** `to, amount`

```
1: _mint(to, amount)
2: _increaseDebt(to, amount)
```

### 2.2 Token Launch

Using virtual liquidity, we propose a permissionless and customizable liquidity allocation method. In this way, the combination of token launch and virtual liquidity allows new projects to quickly establish a liquidity pool without the need for actual funds, reducing the barriers and costs of project initiation.

**Algorithm 2** Token Launch

**Require:** `name, tickname, amount`

```
1: createToken(name, tickname)
2: create UniswapPool
3: takeLoan(uniswapPool, amount)
4: quote Token transfer to uniswap pool
5: uniswapV2 lp mint and burn to address(0x0)
```

At the end of the token launch process, the virtual liquidity is locked in the pool, ensuring it does not enter the market prematurely. This mechanism provides a secure and efficient way to bootstrap liquidity for new projects, allowing them to focus on development and growth without the immediate need for substantial capital.

Below is the pseudocode representation of the ‘addVirtualLiquidity‘ function.

This mechanism allows for efficient management of liquidity while ensuring that the necessary conditions are met for both virtual liquidity and quote tokens.

## 3 Ecosystem

To facilitate easier exchanges within the ecosystem, LamboV2 seamlessly integrates with the UniswapV3 and UniswapV2, becoming an important bridge in the DeFi ecosystem.

**Algorithm 3** addVirtualLiquidity

**Require:** `vToken, quoteToken, amountVirtualDesired`

```
pool ← pairFor(vToken, quoteToken)
(rA, rB) ← getReserves(vToken, quoteToken)
amountQuoteOptimal ← quote(amountVirtualDesired, rA, rB)
take loan(pool, amountVirtualDesired)
transfer amountQuoteOptimal amount quoteToken to uniswapPool
Mint Lp and burn to address(0x0)
```

UniswapV3, as a platform focused on stablecoin exchanges, has the natural advantages of low slippage and high liquidity efficiency, providing users with stable asset exchange services.

Uniswap, on the other hand, is a decentralized exchange that supports the trading of various volatile assets and meme assets, offering high flexibility and a broad user base.

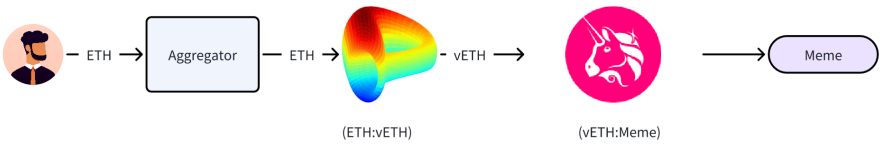


**Fig. 1.** Swap Flowchart

By combining the advantages of UniswapV3 and UniswapV2, LamboV2 offers an innovative liquidity solution. Specifically, LamboV2 leverages the stability of UniswapV3 and the flexibility of UniswapV2 to create a deep liquidity pool that meets the liquidity needs of different types of assets. Thus, LamboV2 not only provides higher liquidity returns for DeFi whales but also effectively addresses the liquidity challenges faced by retail investors and developers.

Moreover, LamboV2's virtual liquidity mechanism allows project teams to quickly establish liquidity pools without affecting market stability. This mechanism not only lowers the capital threshold and costs for project initiation but also provides greater flexibility and convenience for the development and growth of new projects.

Through deep integration with UniswapV3 and UniswapV2, LamboV2 plays an important bridging role in the DeFi, promoting the healthy development of the entire ecosystem.

## 4 Peg And Repeg

Undoubtedly, the 1:1 peg between ETH and vETH is the most crucial aspect of LamboV2. This paper introduces two methods to achieve this: the Native Method and the Rebalance Method.

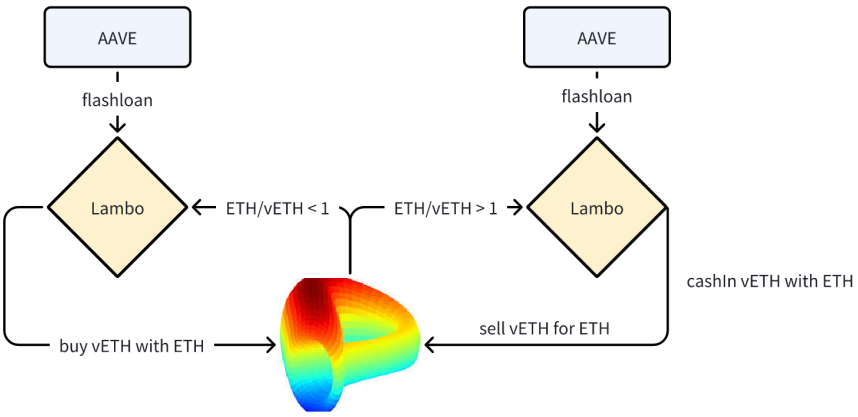


**Fig. 2.** Exchange Rate Rebalance Mechanism

The 1:1 collateralization of the Native Method is determined by the contract mechanism and is similar to wrapETH. The Rebalance Method focuses on the ratio of ETH to vETH in the UniswapV3 pool.

If the ETH/vETH ratio in the UniswapV3 pool is greater than 1, it indicates that vETH is at a premium. In this case, the rebalance contract can utilize a flash loan of ETH, mint vETH, sell vETH in the pool, and ultimately obtain more ETH. The flash loan is then repaid, and the ETH ¡-¿ vETH ratio in the UniswapV3 pool reaches 1:1.

If the ETH/vETH ratio in the UniswapV3 pool is less than 1, it indicates that vETH is at a discount. In this case, the rebalance contract can utilize a flash loan of ETH, buy vETH in the pool, and ultimately obtain more vETH. The vETH is then redeemed for ETH, and the flash loan is repaid, achieving a 1:1 ratio in the UniswapV3 pool.

### 4.1 Conclusion

Virtual Liquidity is a streamlined liquidity allocation method designed to lower the barriers and costs of project initiation. LamboV2 enables new projects to quickly establish a liquidity pool without the need for actual funds. This approach is compatible with Uniswap V2, V3, and V4, making it versatile for various liquidity needs.

By simplifying the process of creating a liquidity pool, we effectively reduce capital requirements, providing greater flexibility and convenience for new projects.