A Stable AMM for Trading Coins of Equal Value

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Abstract: This post introduces a simple whitepaper for a Stable Automated Market Maker (AMM) designed to facilitate the trading of coins that theoretically have the same value, using USDC and USDT as one example and bVPMX and eVMPX as another. The AMM allows users to deposit either coin into the pool and receive Liquidity Provider (LP) tokens in return. The fair value of these LP tokens is determined by the combined size of the respective pools. To incentivize liquidity provision and promote balanced pools, a bonus reward system is implemented, offering incentives for depositing in the smaller pool and withdrawing from the larger pool. Additionally, a 1% trading fee is charged for trades between the coins, with the fee being added to the pool under the control of LP holders as a reward for providing liquidity. The proposed stable AMM aims to create a stable and efficient trading environment for coins of equal value, such as USDC and USDT, bVPMX and eVMPX.

1 Introduction

The purpose of this whitepaper is to propose a stable AMM that enables efficient and balanced trading between coins of equal value, using different examples such as USDC and USDT, as well as bVPMX and eVMPX. By addressing the challenge of maintaining equal liquidity in both pools, we aim to foster stability and provide enhanced trading opportunities for users.
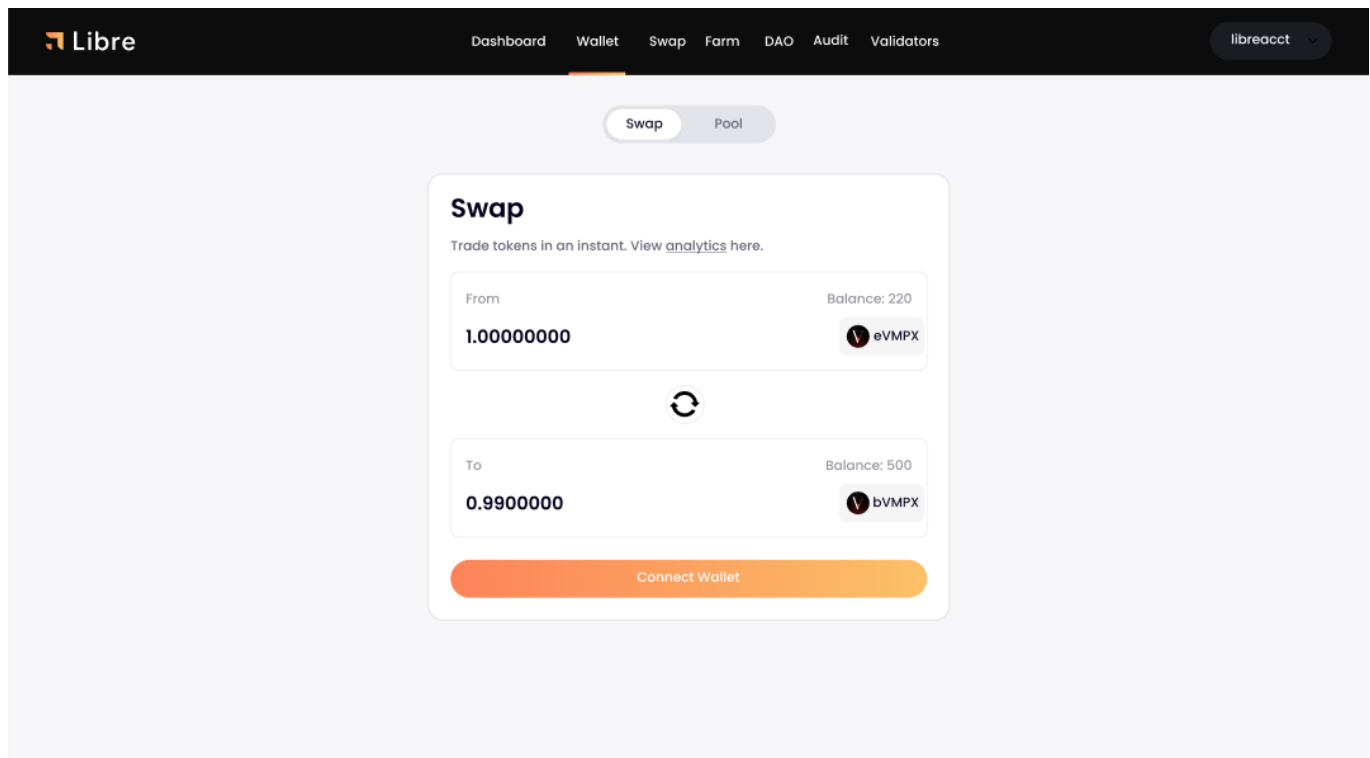
Example of https://defi.libre.org/swap with 1:1 trading of VMPX — serving as a bridge between Ethereum and Bitcoin

2 Background

2.1 Automated Market Makers (AMMs) Automated Market Makers are decentralized protocols that allow users to trade digital assets without relying on traditional order books. AMMs employ smart contracts to determine the prices of assets based on the available liquidity in the respective pools.

2.2 Stablecoins and Wrapped Coins Stablecoins are cryptocurrencies designed to maintain a stable value by pegging their worth to a specific underlying asset, typically a fiat currency. Wrapped coins, on the other hand, are tokens created on one blockchain (e.g., Bitcoin or Ethereum) and then wrapped or represented on another blockchain (e.g: Libre). This allows the wrapped coin to leverage the features and capabilities of the underlying blockchain.

Proposed Stable AMM Design Our stable AMM design incorporates several key features to ensure balanced liquidity and efficient trading between coins of equal value.

2.3 Pool Composition The AMM consists of two pools, each representing a different coin. Users can deposit either coin into the respective pools and receive LP tokens proportional to their contribution.

2.4 Fair Value Calculation The fair value of LP tokens is determined by combining the total size of the respective pools. This approach ensures that LP tokens accurately represent the combined liquidity of both pools.

3 Trading Fees and Pool Incentives

3.1 Trading Fees To incentivize balanced liquidity provision, our stable AMM incorporates a bonus reward system and a 1% trading fee for trades between the coins. This fee is deducted from the trading volume and distributed to LP token holders as a reward for providing liquidity. The trading fee serves as a means to reward liquidity providers for their contributions and ensures the sustainable operation of the stable AMM.

3.2 Pool Incentives To further promote balanced pools, our stable AMM implements a bonus reward system. Liquidity providers who deposit into the smaller pool will receive additional rewards or benefits. Conversely, liquidity providers who withdraw from the larger pool will also receive incentives. These incentives can take the form of additional tokens, reduced fees, or other benefits, encouraging users to maintain balanced liquidity between the two pools.

4. Benefits and Advantages

4.1 Stability and Efficiency By focusing on coins with equal value, our stable AMM aims to create a more stable trading environment compared to traditional AMMs that handle assets with varying values. This stability enhances trading efficiency and reduces price slippage.

4.2 Incentivized Pool Balance The inclusion of the bonus reward system for depositing in the smaller pool and withdrawing from the larger pool encourages users to maintain balance, mitigating the risk of one pool dominating the other. This feature contributes to the overall stability of the AMM.

4.3 Enhanced Liquidity Provision With a fair value calculation for LP tokens based on the combined size of the respective pools, liquidity providers are incentivized to participate actively in the stable AMM. This increased liquidity leads to improved trading experiences for all participants.

5. Example

Let's consider an illustrative example with the following details:

USDC Pool: 100 USDC

USDT Pool: 950 USDT

Total Value: 1050 Coins (equivalent value)

Assuming there are 1000 LP tokens, we can calculate the fair value of each LP token and the earned fees:

Earned Fees: 50 Coins (1% of the trading volume)

Fair Value Calculation: Total Value / Total LP Tokens

Fair Value = 1050 Coins / 1000 LP tokens = 1.05 Coins per LP token

To incentivize depositing USDC and encourage balanced liquidity provision, we can offer an incentive rate slightly higher than the fair value: Incentive for Depositing USDC: $1.045 per LP token

To incentivize withdrawing USDT and further promote balanced pools, we can offer a withdrawal rate slightly higher than the fair value: Incentive for Withdrawing USDT: $1.055 per LP token

These values are illustrative and can be adjusted based on the specific goals and strategies of the stable AMM. The aim is to provide additional incentives to deposit USDC into the smaller pool and withdraw USDT from the larger pool, thus promoting balanced liquidity provision and preventing dominance by one pool over the other.

By incorporating these bonus incentives, the stable AMM encourages users to actively participate in maintaining balanced pools, ensuring stability and

efficient trading between USDC and USDT.

Please note that the specific values mentioned above are for illustrative purposes only and may not reflect actual market conditions or incentives provided by the stable AMM. The values can be adjusted based on the desired objectives and market dynamics.

6 Conclusion

This whitepaper presents a simple whitepaper for a Stable AMM designed to facilitate the trading of coins that theoretically have the same value, using examples such as USDC and USDT, as well as BVPMX and EVMPX. By incorporating fair value calculations, trading fees, and a bonus reward system for balanced pool provision, our stable AMM aims to achieve balanced liquidity and enhanced trading efficiency. This model offers benefits such as stability, incentivized pool balance, and improved liquidity provision, ultimately fostering a vibrant and robust trading ecosystem for coins of equal value.

Glossary:

VMPX: The "vamp-x" token is the first cross-chain asset issued as both a BRC-20 on Bitcoin and as an ERC-20 on Ethereum. https://vmpx.io/

Automated Market Makers (AMMs): Decentralized protocols that enable users to trade digital assets without traditional order books by utilizing smart contracts.

Liquidity Provider (LP) tokens: Tokens issued to users who provide liquidity to the AMM pools, representing their share of the pooled assets.

Fair Value Calculation: The process of determining the value of LP tokens based on the combined size of the respective pools, ensuring accurate representation of pooled liquidity.

Trading Fees: Fees charged for trades between the tokens, deducted from the trading volume and distributed to LP token holders as a reward for providing liquidity.

Bonus Reward System: A mechanism that provides additional rewards or benefits to liquidity providers who deposit in the smaller pool or withdraw from the larger pool, incentivizing balanced liquidity provision.

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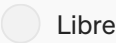
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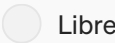Libre gives you the freedom to transact, save, and trade anywhere in the world without...

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