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Uniswap V3

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Uniswap V3 简介

- 2021年5月，Uniswap V3 发布；
- 主要特性：
 - 增加集中流动性；
 - 优化手续费设置；
 - TWAP 优化；
 - 改进开源协议；

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集中流动性

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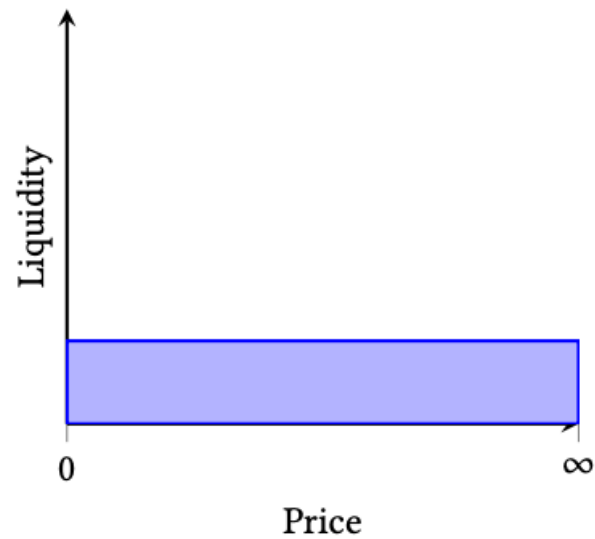
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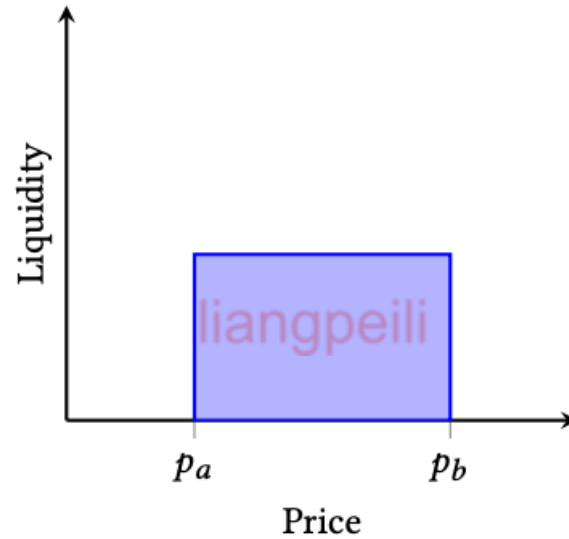
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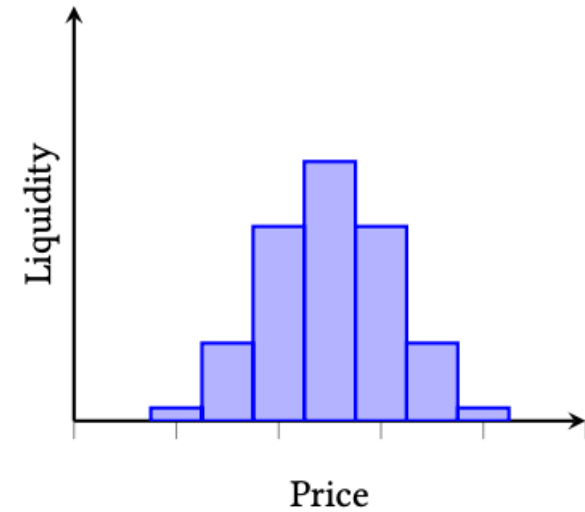
集中流动性



(I) UNISWAP v2



(II) A single position on $[p_a, p_b]$



(III) A collection of custom positions

Figure 3: Example Liquidity Distributions

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集中流动性

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资金利用率的提升

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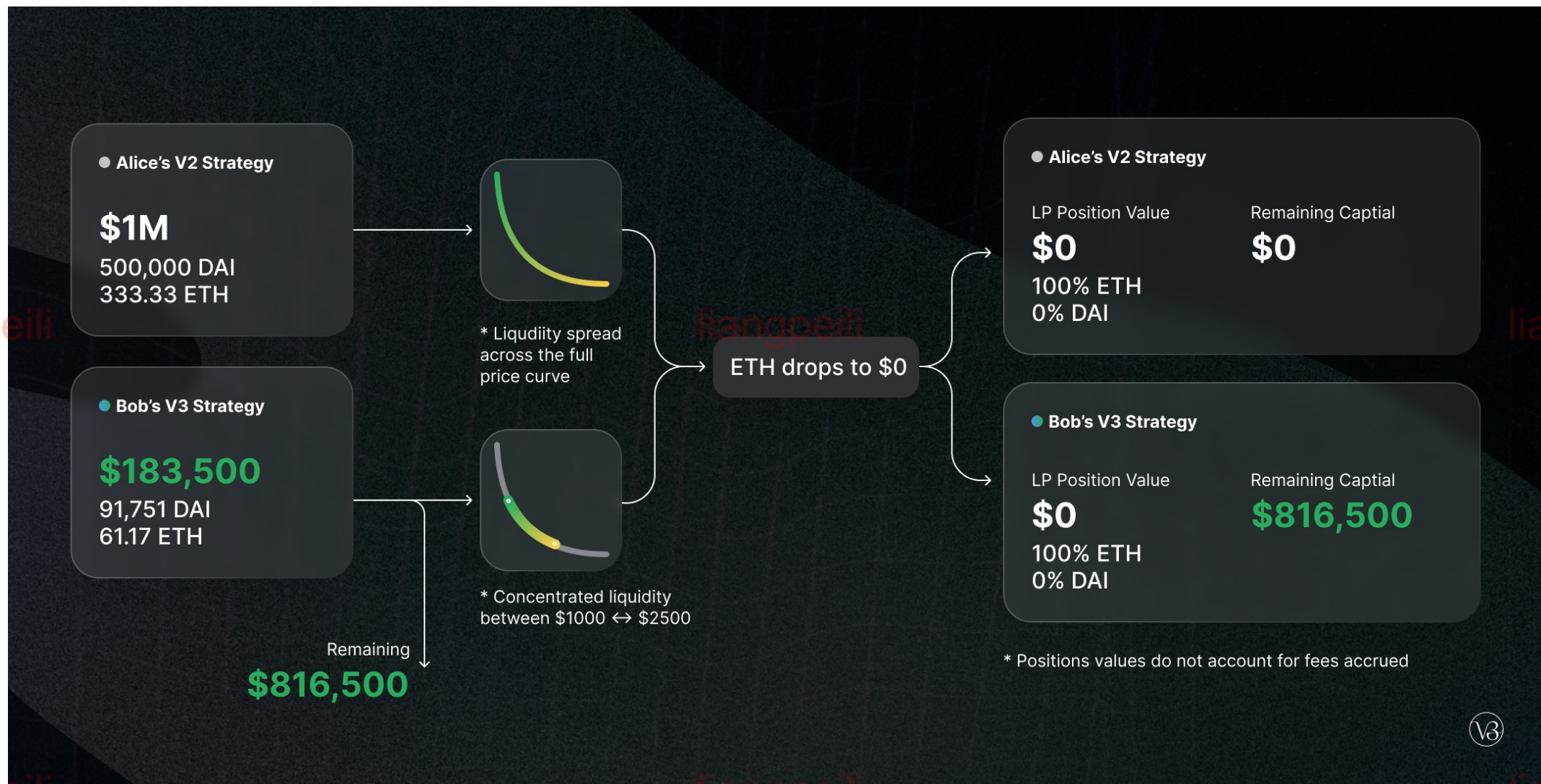
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资金利用率的提升



资金利用率的提升



使用 Range Order 作为限价订单

Range Order @ 1.001 — 1.002 DAI/USDC.

Market Price

\$1.001

100% DAI
0% USDC

Fill Price

\$1.001499

50% DAI
50% USDC

Max Price

\$1.002

0% DAI
100% USDC

Starting Position

\$1M DAI

Ending Position

\$1M+ USDC
+Fees

手续费的收取

- 针对不同的交易对，设置不同的梯度
- 0.01%, 0.05%, 0.30% 和 1.00%
- 管理费可以收取手续费的10%-25%

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Active Liquidity



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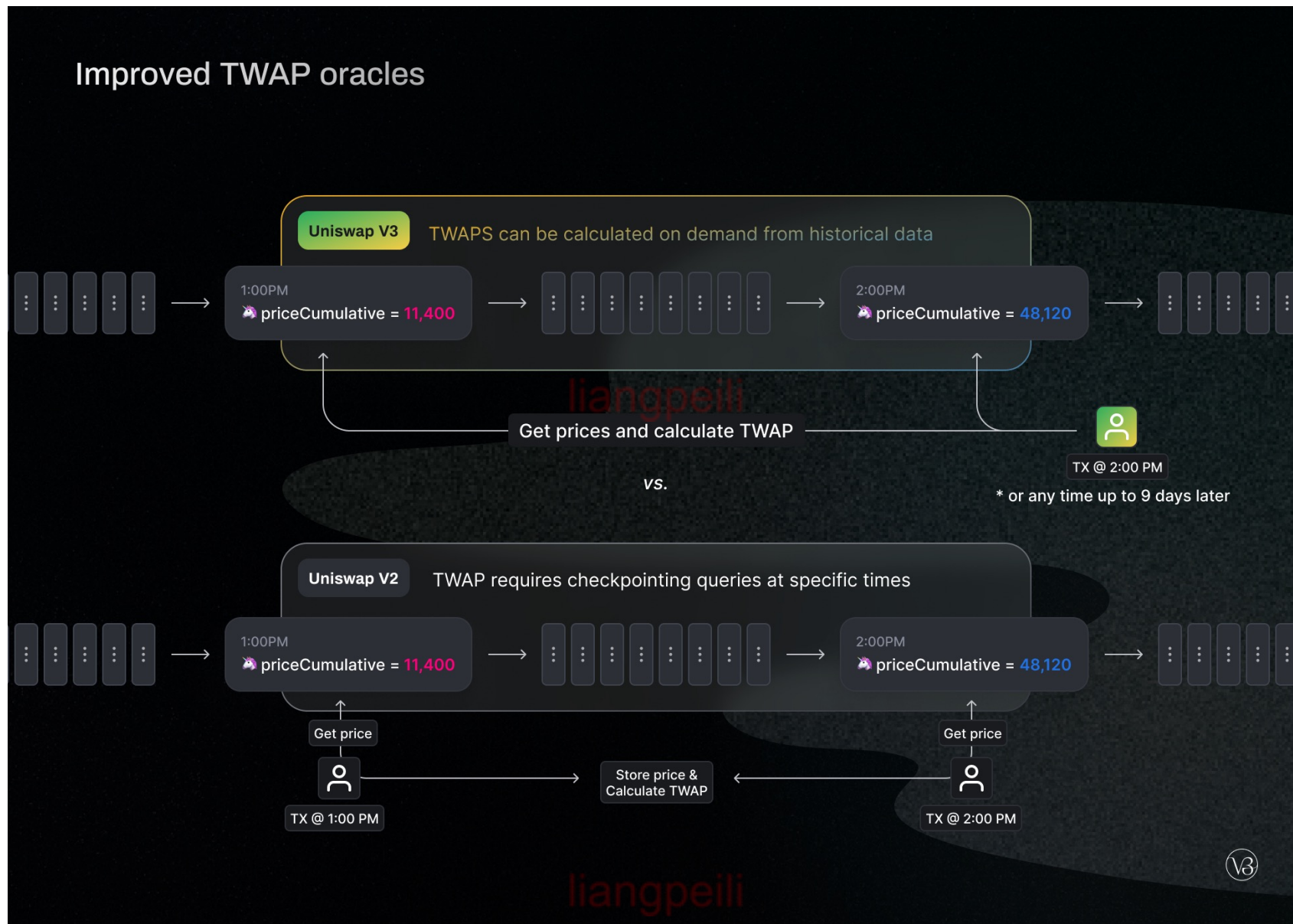
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TWAP Oracle 改进



虚拟流动性

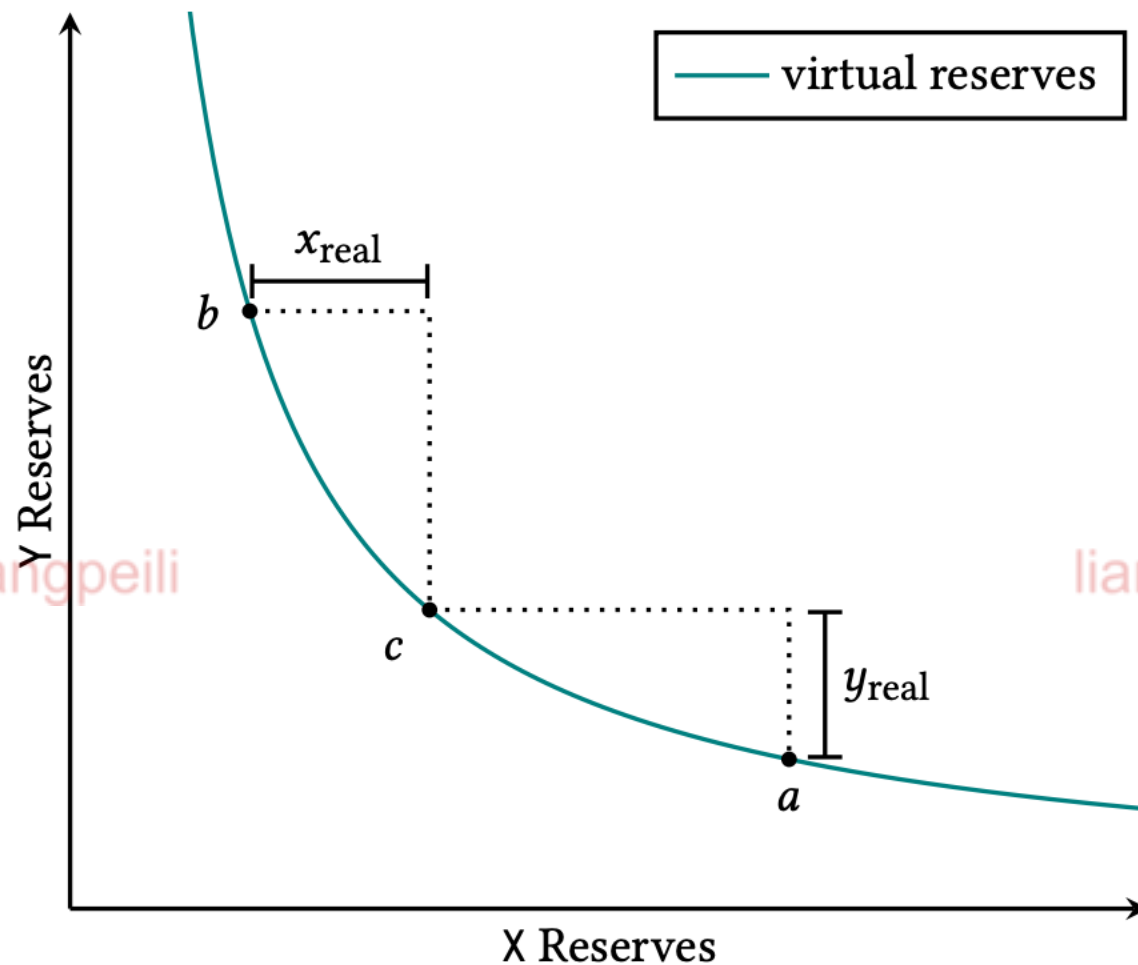
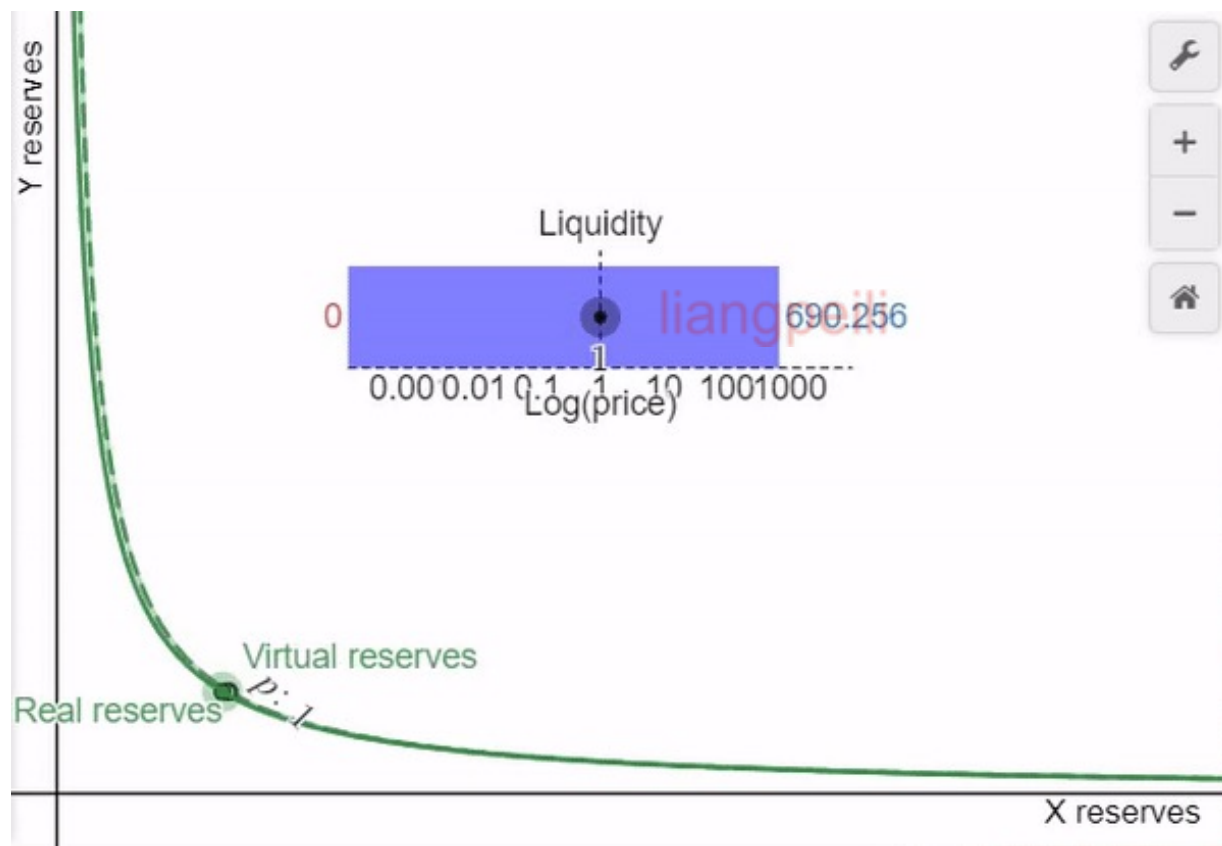


Figure 1: Simulation of Virtual Liquidity

虚拟流动性



参考资料

- [Introducing Uniswap v3](#)
- [Uniswap/v3-core: 🦄 🦄 🦄 Core smart contracts of Uniswap v3 \(github.com\)](#)
- [uniswap-v3-liquidity-math.pdf \(atiseists.github.io\)](#)
- [Uniswap v3 Core](#)
- [Uniswap v3 liquidity formula explained I by Atis E I Medium](#)
- [Uniswap v3 Math I Desmos](#)