



SCALE PROTOCOL

Whitepaper

Scale Protocol, an on-chain
decentralized derivatives trading hedging tool

Introduction

Cryptocurrency has now passed fourteen years since its inception in 2008. Satoshi Nakamoto didn't envision it would grow into a trillion-dollar behemoth more than a decade later (at one point it briefly topped **\$2.5 trillion** in 2021) when he came up with the idea.

Along with the growing size of cryptocurrency assets, so have the financial markets. Over the past 14 years, Bitcoin's value has gone from buying two pizzas to **trading over ten billion dollars a day**. As more and more institutions and capital entities set their sights on this market, there is no doubt that we will witness the cryptocurrency market become an even **more influential investment** underlying in the next five to ten years.

Currently, there are approximately **100 million users** worldwide who currently trade or have held cryptocurrency, and the majority of these people conduct the transactions on centralized exchanges. With the increasing of regulatory requirements and tax scrutiny, in the future, more and more practitioners will choose to trade their assets in **decentralized trading protocols** on chain. Last month (Aug, 2022), active addresses of Uniswap surpassed Ethereum for the first time, which is a major victory for decentralized trading.



100M
USERS

CEX



DEX

Overview

Derivatives trading has become an important part of the financial market since its inception. In the cryptocurrency market, **derivatives trading is more attractive** due to the sharp volatility of the market and the 7*24 trading mechanism. Speculators try to extract excessive profits from them, while mature traders are also accustomed to using derivatives to achieve hedging in order to construct risk-free portfolios and avoid unexpected losses due to extreme market conditions.

For traders, the current crypto derivatives trading market is arguably **not user-friendly enough**. Centralized trading platforms are occasionally unable to provide services due to network issues (especially during high volatility market), small trading market depth and many restrictions make it difficult for traders to fully implement their trading strategies. Furthermore, occasional withdraw restrictions, the onerous KYC requirements and the tightening regulation. All of these make us reflect: whether a stable decentralized trading scenario should be **built on chain**.

However, **the current decentralized derivatives market is still underdeveloped**. In centralized exchanges, the size of derivatives trading and spot trading is about 1: 1, while in decentralized trading market, **the ratio is far from that**. The complicated process (vAMM model), relatively low leverage (the highest leverage generally stays around 25~50 times), slightly high gas fee (more or less common to Ethereum and its side chains) and small market depth (orderbook model) all contribute to the difficulty of using decentralized trading platforms for users.

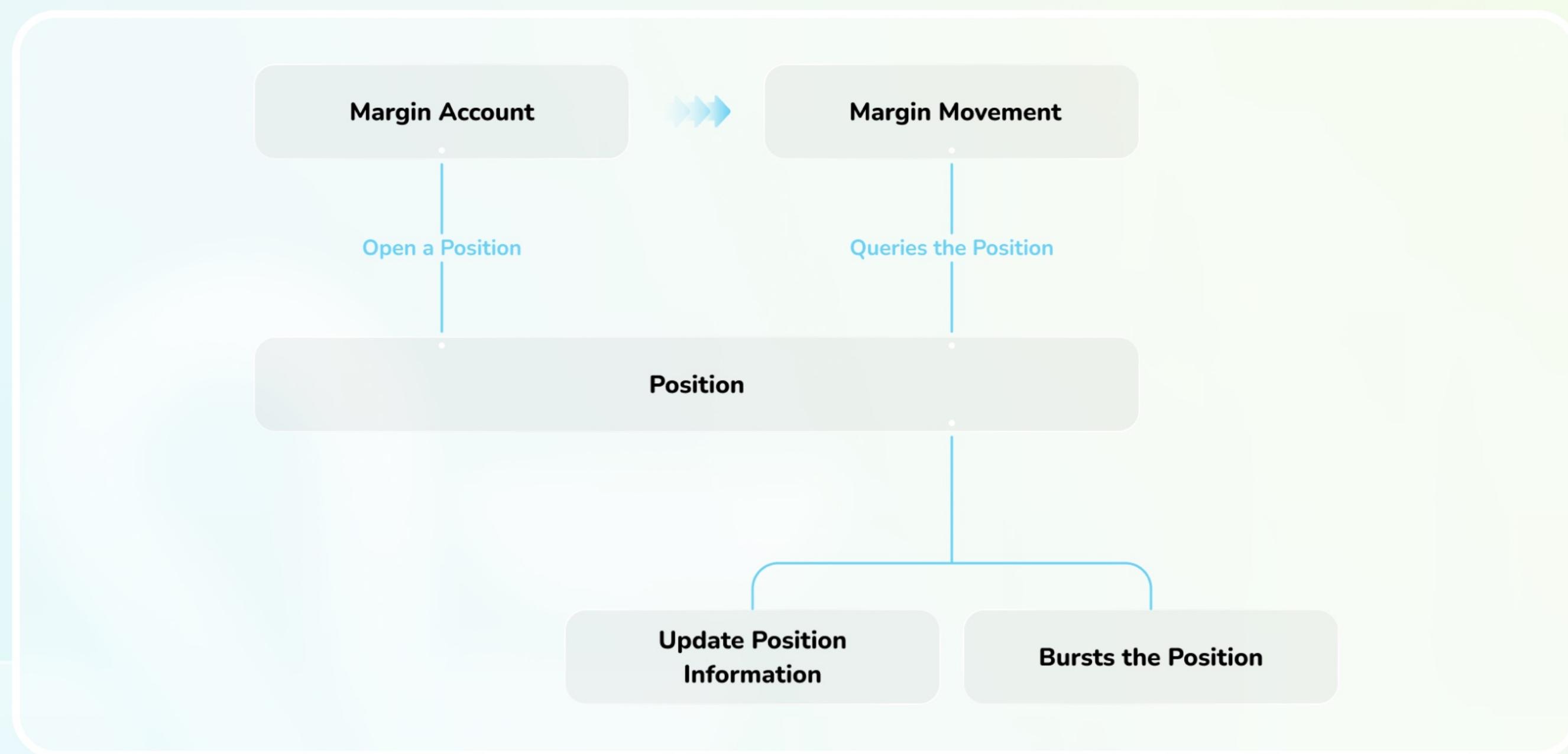
We hope to create a **highly decentralized derivative trading hedging tool** based on **high performance public chain and accurate and fast oracles**. It will continue to iterate afterwards based on community feedback, in order to provide users with a similar experience of a centralized reading platform. **Lowering the user threshold does not degrade the user experience**.

Derivatives Trading

Scale Protocol uses dealer quotes to aggregate users' trades. When a trader uses Scale Protocol, depending on the pair he chooses, he gets two quotes from the Dealer, one for the buy and one for the sell price. To smooth out market volatility, the spread between the two is always changing with market conditions.

When a trader chooses to open a position, the dealer will arrange the transaction for him and record it on chain. With each margin movement, the dealer then queries the position for the trader until the trader closes the position or bursts the position due to poor risk management.

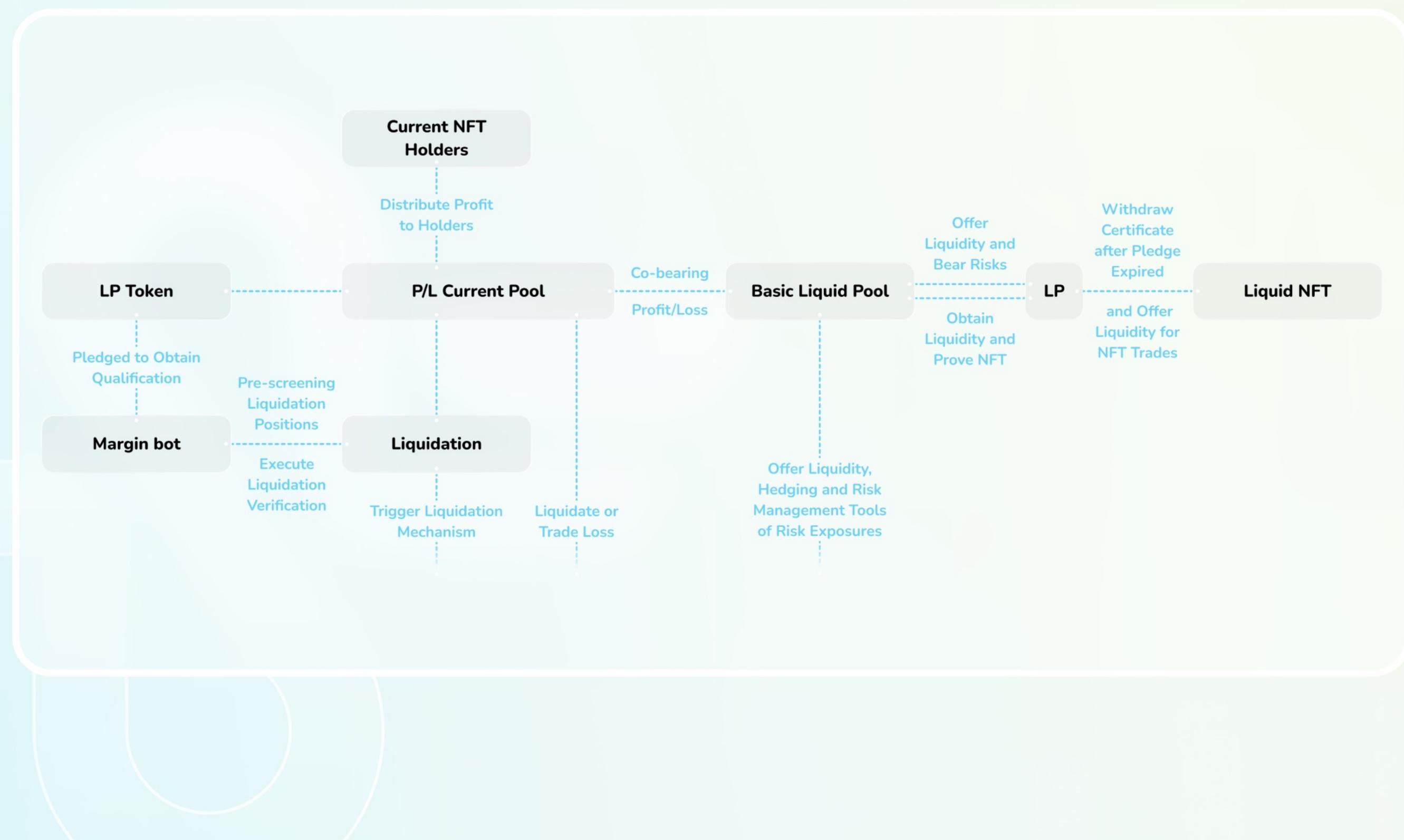
Relying on the high performance of Solana, Scale Protocol provides users with up to 125x leverage, helping them to improve their capital utilization with higher risks. Experienced traders can also choose to use more suitable leverage multiples for risk control.



Peer to Pool & LAMM

The biggest problem that traders face when engaging in derivatives trading is **the depth of their trades**. Platforms with poor trading depth will prevent traders from successfully opening positions at their desired points, which can make the execution of trading strategies far more difficult. Trading depth is a huge chasm for any relatively early trading platform since fewer participants will naturally lead to small trading depth. We did a lot of research to solve this problem, and finally, inspired by Synthetix's model, we designed the **Peer to Pool (or Peer to Contract) mechanism**, through which we could make use of liquidity pools to provide traders with **almost unlimited trading depth**. To ensure that each trader can **successfully hold a position at his or her desired point**.

We named this model LP-Auto Market Maker, or LAMM, where liquidity providers act as market makers by providing liquidity, while smart contracts will automatically perform liquidity operations for them. They also take risks and participate in the profit sharing of market making. Through this strategy, we can get those investors who are willing to take risks join our Protocol governance by providing liquidity, and grow together with Scale Protocol to share the benefits.



Liquid Bonds

Liquidity pool is an important part of the protocol. If lacks liquidity, then it may be difficult for us to serve more traders. But equally, we hope that liquidity providers will be rewarded so that more LPs will have the desire to join.

It is known that current DeFi protocols are willing to increase the liquidity of users through yield farming. But undoubtedly, once the value of the LP tokens starts to fall, miners will not hesitate to withdraw the liquidity and sell off tokens, triggering further price declines. We've already seen many such examples in 2022.

Therefore, we will take a simple approach to expand the liquidity pool by issuing liquidity bonds instead of LP tokens. The liquidity bonds will be in the form of NFTs, and users will receive a percentage of expected return after selecting the duration of the bonds. During the duration of the bonds, the protocol will periodically take profits from the profit-and-loss pool and distribute them to all liquidity providers before the maturity of the bond.

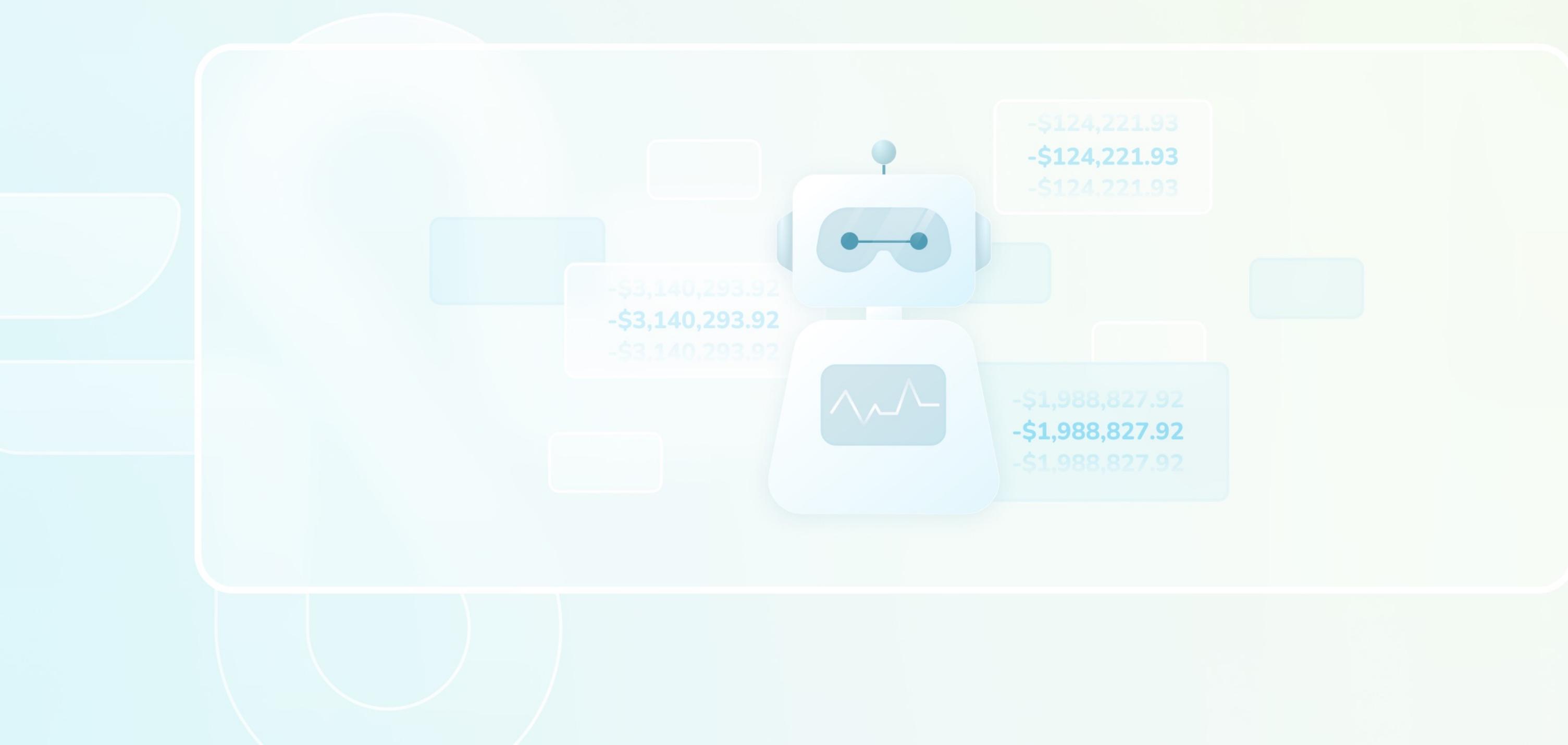
All funds from Scale liquid bonds will go into the basic liquidity pool, which will act as a management for risk exposure. When losses are incurred, they will go into the profit-and-loss liquidity pool. However, for those incurred profits, they will be paid out by the profit-and-loss liquidity pool as a priority.

Liquidation Robot

Liquidation has always been the focus of our attention. Due to the mechanism limitations of smart contracts, we cannot allow contracts to do the liquidation by themselves, so we need to introduce external liquidating mechanisms. Through the efforts of our engineers, Margin Bot was created.

Margin Bot is a **server-deployable liquidation robot** that monitors the security of each position in real time by recording the burst price of each position and retrieving information from the chain. The robot automatically executes the liquidation process when a position hits the burst price, thus helping the protocol to record the user's burst position.

In order to decentralize this work, we will **open the deployment method of Margin Bot and encourage more users to participate in the liquidating work**. At the same time, to avoid malicious liquidation, we will require liquidators to pledge a certain Scale tokens as a credit certificate, and the pledger can **get Scale tokens as a reward for participating in the liquidation work**. However, if malicious liquidation is found, all the pledged tokens of the settlement node will be forfeited as punishment, and the tokens will be compensated to the traders for the loss.



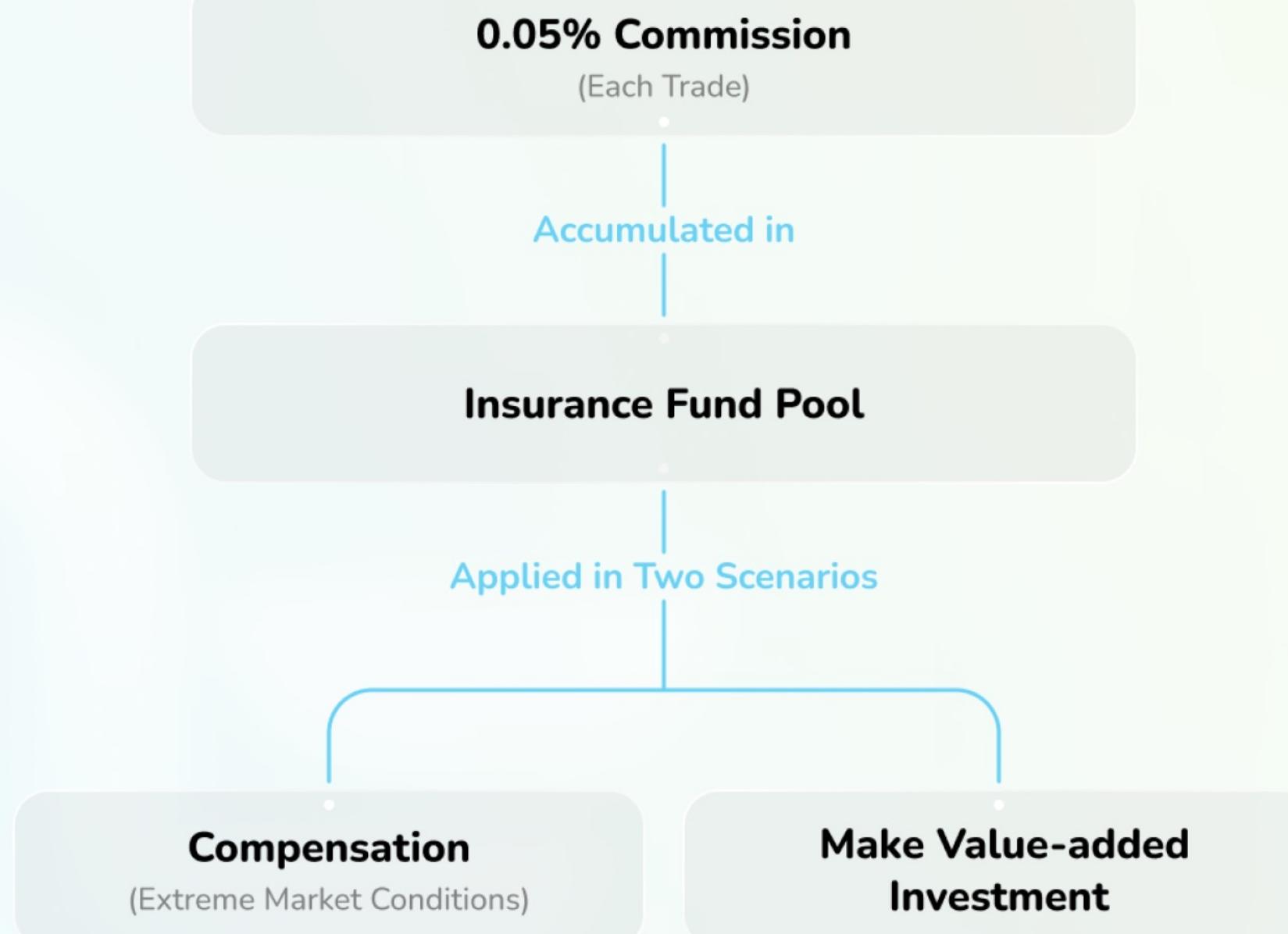
Insurance Fund

Although we have carefully designed Scale's trading model to ensure that, in most cases, the interests of both LPs and the traders are guaranteed. However, history has taught us that there **can still be payout issues when extreme market conditions occur**. For this reason, we will **charge a commission of 0.05% of each trade**, which will be accumulated in a pool of insurance funds to **cover the possibility of extreme payouts**.

The management of the insurance fund pool is the **responsibility of the Community Governance Committee** and in theory, the insurance fund pool should only be applied in two scenarios, namely:

1. **Compensation** in case of extreme market conditions;
2. **Make value-added investment** when better investment opportunities arise.

However, this investment requires an investment proposal initiated by the Community Governance Committee and voted on by the community.



Community Governance

We hope to **establish a good community governance mechanism** to balance the interests of liquidity providers, traders, liquidating nodes and development teams. The Community Governance Committee will initially consist of the Scale team and will continue to involve representatives of our key trading users, liquidity providers and liquidating nodes.

The main directions of community governance include the adjustment and modification of schemes such as the pledge returns of liquidating nodes, the rate of return of LPs and the capital rates of traders.

We hope to report regularly to the community in the future on the developing progress of the protocol, and to listen to a wide range of opinions and improvements.



Token Distribution

We plan to issue **100,000,000.00** Scale Tokens.

The tokens are mainly used to participate in community governance and the operation of liquidating nodes.

The distribution is as follows:

Percent	Percent	Amount
Trading Rewards	35%	35,000,000.00
Early liquidity awards and Airdrop	20%	20,000,000.00
Investors	15%	15,000,000.00
Team and Consultants	20%	20,000,000.00
BD & Marketing	8%	8,000,000.00
Ecological Governance Committees	2%	2,000,000.00