Maison Network

(Re-Staking Yield Swap)

TL;DR

- Maison Network, aka Maison, is a cutting-edge derivative asset protocol designed to assist LRT assets with marginal trading. It employs the Interest Rate Swap model specifically for LRT assets.
- Maison aims to facilitate the integration of RYS (Re-Staking Yield Swap) assets with Symbiotic stETH LRTs and protocol-based stablecoins.
- Maison plans to launch a loyalty program for new stETH LRTs to ensure consistent liquidity.

Background Overview

After the liquid staking era, there has been growth in re-staking assets and Pendle-like yield generation protocols. We also see different staked assets developed based on ETH with different yield generation models, etc. Here, we see an opportunity for alternative asset generations that help hedge risk, get yield, and not be frustrated with the choice of fixed or floating rates.

Our solution is based on well-known and time-tested models.

1. First, let’s take a look at the Interest Rate Swap.

An interest rate swap is a forward contract in which one stream of future interest payments is exchanged for another based on a specified principal amount.

Interest rate swaps usually involve exchanging a fixed interest rate for a floating rate, or vice versa, to reduce or increase exposure to fluctuations in interest rates or to obtain a marginally lower interest rate than would have been possible without the swap.

Interest rate swaps (IRS) notional outstanding increased by 12.5% to $465.9 trillion, accounting for 81.2% of total IRD notional outstanding.

1. Second. It launched an Interest Rate Swap asset: Staking Yield Swaps from BitMEX.

It is a simple, elegant, and working model, but it was launched in lousy market conditions (it was announced less than a month after the FTX crash), with no market for such assets (no re-staking, no Pendle-like protocols)

1. Third, Symbiotic Re-Staking

Re-Staking introduces the next evolution in the Re-Staking Yield Swap markets. Over half of the staked ETH is managed by liquid Re-Staking providers, generating new assets fundamental to the emerging Re-Staking Yield Swaps market.

Integration Proposal

Protocol overview

This derivative lets traders swap the variable yield from staking LSTs or stablecoins on platforms like Symbiotic, Ethena, Etherfi, Swell, Mind, and others for a fixed interest rate and vice versa. Depending on their position, traders can either pay or receive the fixed rate, offering new opportunities for hedging and speculation on staking yields. Contracts expire quarterly and have specific trading conditions and fees.

Generally, Re-Staking Yield Swaps (RYS) or Maison RYS are financial instruments that allow users to exchange the variable yield from staking cryptocurrencies for a fixed interest rate and vice versa. This helps traders and investors manage risks and speculate on staking yields.

1. Re-staking Protocols (Swell, Mind, Etherfi):

Users can swap the variable yields from these re-staking protocols for a fixed yield, offering hedging against yield volatility.

1. Stablecoin Projects (Ethena):

Similar swaps can be created for yields from stablecoin projects. Cross-swaps between ETH yields and stablecoin yields can provide diversified trading options.

Key Features

During the life of a RYS contract, two interest rates are being “swapped” each day:

- The floating rate will be based on the variable yield from the staking. Every day at 12:00 UTC, a rebase happens – where staking rewards are accrued to the balance.
- The fixed rate represents a trader’s best guess of the average daily staking yield from the contract’s inception until maturity. It’s the rate that traders speculate on and will be annualized.

Leverage: Potential to use leverage (e.g., up to 5x or higher) to amplify positions with careful risk management.

In addition, traders can hold a position if they allocate enough margin to satisfy the maintenance margin requirement. Once this is not the case, the trader will be liquidated.

- Quarterly Contracts: Standardized quarterly expiration for swaps.
- Risk Management: Strategies to handle yield fluctuations and ensure liquidity.
- As for the slashing events, we can use the following event sequence:
- Real-Time Monitoring: Continuously monitor validator performance to detect and respond to potential issues before they result in slashing.
- Alerting: We are presenting an alert about a slashing for a trader.
- Emergency position closing. Based on this event, we can execute emergency position closing with instant settlement based on the current market Funding position. The funding position recalculates at a moment’s notice of a slashing alert.
- Real-Time Monitoring: Continuously monitor validator performance to detect and respond to potential issues before they result in slashing.
- Alerting: We are presenting an alert about a slashing for a trader.
- Emergency position closing. Based on this event, we can execute emergency position closing with instant settlement based on the current market Funding position. The funding position recalculates at a moment’s notice of a slashing alert.
- As for the slashing events, we can use the following event sequence:
- Real-Time Monitoring: Continuously monitor validator performance to detect and respond to potential issues before they result in slashing.
- Alerting: We are presenting an alert about a slashing for a trader.
- Emergency position closing. Based on this event, we can execute emergency position closing with instant settlement based on the current market Funding position. The funding position recalculates at a moment’s notice of a slashing alert.
- Real-Time Monitoring: Continuously monitor validator performance to detect and respond to potential issues before they result in slashing.
- Alerting: We are presenting an alert about a slashing for a trader.
- Emergency position closing. Based on this event, we can execute emergency position closing with instant settlement based on the current market Funding position. The funding position recalculates at a moment’s notice of a slashing alert.

One main difference is that traders Pay or Receive the fixed rate on a swap contract rather than Buy or Sell:

- The Payer pays the fixed rate and receives the floating rate. In other words, the trader has entered a long position.
- The Receiver will receive the fixed rate and pay the floating rate. In other words, the trader has entered a short position.

Example

Symbiotic RYS:

- Variable Yield Source: Symbiotic staking returns.
- Swap Mechanism: Smart contracts allow users to receive a fixed yield in exchange for their variable yield.

- Leverage: Up to 5x leverage.
- Risk Management: Hedging strategies and collateral requirements.
- Expiration: Quarterly contracts.

A trader who has staked wstETH on Symbiotic – and also received fixed on a swap contract – will net receive the fixed rate on their staked wstETH (thus converting the uncertain daily variable rate that is derived from staking wstETH on Symbiotic into a known fixed rate).

So, say, a trader paid 3% on 1 ETH notional of wstETH RYS contracts. If the floating rate for a particular day is 3.5%, the net amount received by the trader will be:

1 ETH x (3.5% – 3%) x (1 / 365) = 0.000013699 ETH.

Asset Specification

Maison Re-Staking Yield Swap (RYS) Contracts resemble traditional Interest Rate Swaps but differ significantly from perpetual swaps. Unlike perpetual swaps, RYS Contracts are not directly linked to an underlying index, allowing their trading prices to diverge considerably from the index value. This structure gives users unique opportunities and flexibility in trading and hedging strategies.

Mechanics of RYS Markets

- Multiplier: Defines the worth of one contract.
- Position Marking: Yield contracts are marked using the Last Price, which determines Unrealised PNL and liquidations.
- Initial and Maintenance Margin: These levels dictate allowable leverage and when liquidation occurs.
- Floating Funding: Positions open during Floating Funding (every 24 hours) will pay or receive funding settled against the Average Entry Price.
- Long traders will pay a fixed rate (their average entry price) and receive the Floating Funding Rate.
- Short traders will receive a fixed rate (their average entry price) and will pay the Floating Funding Rate.
- Long traders will pay a fixed rate (their average entry price) and receive the Floating Funding Rate.
- Short traders will receive a fixed rate (their average entry price) and will pay the Floating Funding Rate.
- Settlement: The expiry date varies per instrument, as the specifications show.
- Basis refers to the contract’s premium or discount compared to the underlying Reference Index due to future expected funding payments and settlements.

Floating Funding Index: Observing this index provides insights into current and historical contract funding rates.

Position Size and Price Marking

The Position Value for RYS contracts depends on the number of days remaining on the swap and the Average Entry Price.

Position Value = Number of contracts * Multiplier * Average Entry Price * days until expiry / 365

Mark Value = Number of contracts * Multiplier * Mark Price * days until expiry / 365

Unrealized PnL = Mark Value - Position Value

When closing a position, the Pnl that is realized depends on the number of days remaining on the swap as well as on the Average Entry Price and Exit Price:

PnL = Position Exit Value - Position Entry Value

Floating Funding

- Funding Interval: Floating Funding is applied every 24 hours at 12:00 UTC. You are subject to Floating Funding only if you maintain an open position at this time. Closing your position before this interval means you won’t incur or receive any funding.
- Fees: Maison imposes a fee of 0.001% on Floating Funding transactions.

We use the (Asset) staking yield index (APR) we collect from protocols.

APR = ((Last Reward - Previous Reward) / (Previous Reward)) * (1 / Time Elapsed)

Trading core specification

We have a mainnet Ethereum asset layer, and we are using an on-chain orderbook hosted on an Optimism-based Appchain with Celestia DA

that manages the matching and settlement layer On-chain.

- Order Placement: Users sign and place orders through the Off-Chain Order Manager, which batches the orders and directs orders in one batch to the Order Management Contract.
- Off-Chain Order Manager sends events to lock balances on a collateral smart contract to prevent double-spending and balance withdrawal.
- The order Management Contract accepts batches, validates orders and forwards them to the OrderBook Contract for insertion. Also, the order Management Contract manages pairs of RYS assets.
- OrderBook Management: The OrderBook Contract maintains orders in separate bids and asks trees, allowing for efficient management and retrieval.
- Order Matching: The batch post triggers the Matching Engine Contract. It checks for matchable orders in the bid, asks for trees, executes trades appropriate to the collateral contract (settlement to update the balance), triggers the Off-Chain Order Manager to unlock collateral, and updates the order book.
- Order Querying: Users can query order data for display, analysis, or to inform trading decisions. While detailed order data might require interaction with the blockchain, much of the querying for display purposes can be offloaded to off-chain systems that listen to event logs.

Security

We partner with esteemed security professionals and audit firms like Hallborn, Hacken, and Hypernative. We ensure that all code undergoes external audits before production deployment. For operational integrity, we employ real-time monitoring systems and alert systems, which also aid in diagnosing issues promptly.

Maison role

Our RYS may be ideal for:

- Users who have staked on Lido and Symbiotic and wish to lock in a fixed yield
- Users who are using other methods to stake ETH and wish to use our ETH staking yield swap contracts as an indirect hedge
- Speculators who wish to take positions on the value of ETH staking or validator rewards
- Anyone with holdings – or interest – in ETH or Stablecoin staking protocols

How will Maison help the Lido?

- Maison will top up interest in Symbiotic and all connected AVS solutions.
- Maison makes the ecosystem consistent by providing a unique trading protocol that connects all solutions that will be part of the staking and re-staking solution.
- Lido liquidity may increase as more assets generate yield, resulting in more interest in RYS contracts and vice versa.
- Enhanced flexibility allows users to hedge Lido staking yields and encourage longer-term staking.
- It provides tools for users to manage yield risk and promotes wider adoption of Re-Staking solutions.

We'll provide the Symbiotic protocol with the same benefits but even with a more significant effect.

What we expect from Lido and Symbiotic

- Acceptance of Maison as a member of the Lido Alliance and represent Maison as an official partner of Symbiotic.
- Access to a partnership network to enhance its business development efforts for liquidity provision within the system.

Re-Staking yield swaps offer a robust financial instrument that benefits individual users and protocols like Lido and various Re-Staking solutions by enhancing liquidity, providing hedging opportunities, and enabling sophisticated investment strategies.