



SYPOOL



Sypool: A Synthetic Asset Management Protocol

V1.5

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1. Sypool Project

Sypool is a synthetic asset management protocol.

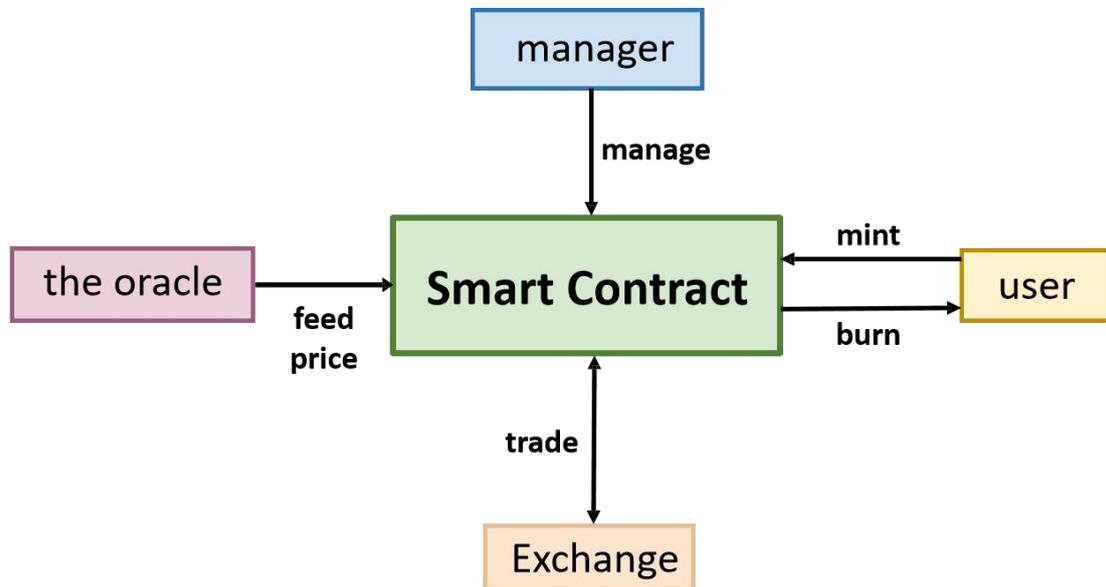
This is another innovation that we have migrated finance from off-chain to on-chain. This idea was inspired by both off-chain fund companies and packaged asset derivatives. On one hand, we tokenize fund shares. On the other hand, a share token actually represents a small part of a multi-token pool, thus providing the scarce liquidity for the cryptocurrency market.

Therefore, you can consider it as a fund share, or you can consider it as a mirrored token pool asset, as well as other new uses that may appear in the future.



2. Methodology

2.1 Smart Contract Framework



The protocol is based on SAP (Synthetic Asset Pool) pools. Pools are launched by pool managers and poured by users. To protect the interest of every participant, the protocol involves four parties: user, manager, exchange and oracle.

Managers are the starter of every pool. They are authorized by the pool's share token (SAP) holders to manage the tokens in the pool, according to certain preset strategies.

Users could take part in the protocol by choosing their favorite pool (pools) and minting SAP tokens. And if the investment decision is changed, SAP tokens could be redeemed by the protocol at any time.

Oracle is responsible for feeding price to the smart contract, providing total market value of the token pool and the value of each currency. Users mint and burn SAP based on the price fed.

Exchange is where all the transactions are executed. Decentralized exchanges are employed in this protocol because they could at least assure that all the tokens will be traded instead of being withdrawn (stolen).



2.2 SAP

2.2.1 Launch SAP Pool

When each SAP is created, the manager will deposit a certain amount of tokens (USDT, ETH, BTC, Sol, or this protocol's governance token SYP) and decide how many SAP tokens are minted and returned to the manager. Therefore, the current value of each SAP token is determined. And new SAP tokens could be minted based on that value.

Meanwhile, a whitelist of tokens allowable for trading is determined by the manager. Any changes about the list have to be voted by the SAP token holders and audited by the foundation.

2.2.2 Mint SAP

$$(100\% + \text{Fee}) \frac{TV_t}{N_{SAP}} \xrightarrow{\text{Mint}} SAP_i + SYP$$

TV_t = Total Value of SAP pool

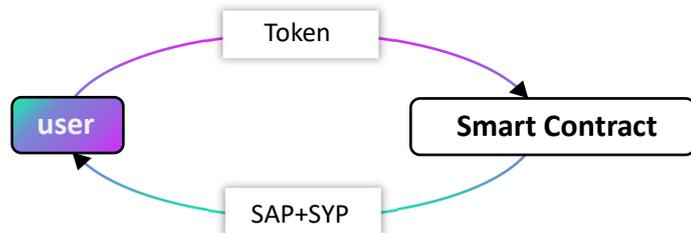
N_{SAP} = current number of SAP_i

SAP_i = tokens of a new SAP pool

SYP = governance tokens, early

purchasers will receive SYP rewards

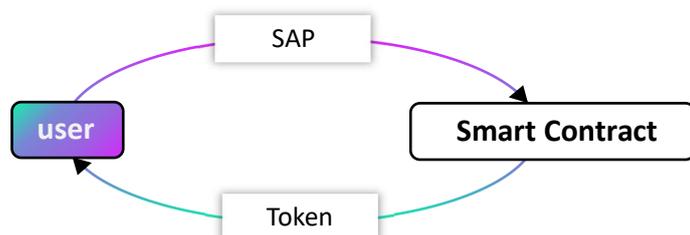
Fee (the fee varies with the type of SAP) is used to repurchase SYP and burn it.



Current total value of one SAP pool in USDT can be got at any time through feeding price by the oracle (such as Chainlink). The amount of (USDT, BTC, ETH, SOL or governance token SYP) needed to mint a new SAP at current time can be got by dividing the total value by the current number of SAP tokens. In addition, a 2% fee is used to repurchase and burn the governance token SYP every week. We will also reward governance token SYP to users who mint SAP in the early stage to repay their early support.

2.2.3 Burn SAP

$$SAP_i \xrightarrow{\text{Burn}} \frac{TV_t}{N_{SAP}}$$





The process of burning SAP tokens is just the opposite of minting. Users can exchange their SAP tokens into chosen tokens (USDT, BTC, ETH, SOL or governance token SYP) at any time. The amount is also determined by the total value of the SAP pool at current time and the total number of SAP tokens, N_{SAP} .

2.2.4 Oracle

Oracle is used to feed price for the protocol as it does for those lending protocols. Besides minting and burning, price-feeding is also useful in the presentation of the live prices of each SAP pool on the website dashboard. At first, they are only priced in USDT. Pricing in ETH and pricing in BTC will be launched later.

2.3 Different Types of SAP

2.3.1 Index-tracking SAP

This kind of SAP is open-end. The manager, in advance, selects or creates an index to follow. Then the distribution of tokens in the pool would be adjusted by transaction in DEX automatically or manually.

By hedging the non-systematic risk through various tokens, users with low-risk preference could earn yield from this growing cryptocurrency market.

2.3.2 Trader-based SAP

Trader-based SAP pools, in contrast with index-tracking pools, is close-end. Besides setting a whitelist, managers also need to set a max value of the pool according to the level and performance of the manager.

All the tokens raised would be confined in the smart contract. The manager has only the access to trade these tokens in the DEX, according to the his/her research of valuation.

At the end of each period, a liquidation process will begin. 30% of the profit would be used to reward the manager and the foundation; the rest 70% belongs to the SAP holders and can be claimed or reinvested in the pool by holders. If any period has no profit or suffers a loss, the manager and the foundation will have no gain. The reward for foundation will be used to repurchase and burn governance token SYP.



Users can only mint and burn SAP during the liquidation period. During the locking period, if SAP holders wish to cash out, SAP tokens could be traded in the secondary market, or used as collateral.

2.3.3 Assets-backed quantitative trading SAP

Few attempt trying to bring quantitative trading to DEFI has succeed because of the trading requirements. Since DEX couldn't fulfill the needs, CEX is the only choice left for now. But the obstacle is how to keep investor's asset safe and information transparent. This protocol guarantees trading requirement by cooperating with CEX and ensures safety by collaterals or by CEX credits.

Mode 1 staking & CEX custodial

To launch this type of pools, manager needs to stake governance token SYP as collateral. These SYP also shares the farming reward with other stakers.

Once minted, this kind of SAP tokens couldn't be burned and redeemed during a certain period, but SAP could be traded or leveraged in the secondary markets.

Tokens raised will be trading quantitatively in a CEX. The total value and every SAP's value are calculated and presented everyday.

Mode 2 CEX's credit Mode

Quant SAPs are launched in the protocol, and investors' tokens are kept in the protocol. Managers need to apply for a CEX's credit and transactions are executed by the credit throughout the day. At a certain time everyday, sypool's protocol will make liquidation with the CEX by gaining the profit or pay the loss.

2.3.4 Structured Yield Fund

Structured Yield SAP tracks the performance of other SAP or index, but the returns for each rank are varied. It enables users to select different risk level from R1 to R3 (and mint different fund share token SAP-R1, SAP-R2, SAP-R3). Let the risk deserve the yield.



Interest	R1 (60%)	R2 (20%)	R3 (20%)
Index loss (-100%,-34%)	-	-	-
Index loss (-34%,-14%)	10%	(-100%,0)	-100%
Index gain (-14%,6%)	10%	0%	(-100%,0)
Index gain (6%,14%)	10%	(0%, 20%)	(0%,20%)
Index gain (14%,+∞)	10%	20%	(20%,+∞)

If the Index loses near 34%, the pool will stop trading and be liquidated.

2.3.5 Perpetual No-loss Lottery SAP

Users can mint Lottery Pool share tokens with their own tokens. And these tokens would be used to farm in vaults like yearn. The weekly yield will be poured into the prize pool. An external oracle would provide a random number to select the winner who will win every token in the prize pool. The more one invests, the bigger chance to win. It's totally free to enter or exit, and no loss.

2.3.6 SAP-backed Stable Coin SAI

The mechanism of SAI is based on over-collateralization and liquidation-auction system.

By staking SAP in the protocol, stable coin is generated and viewed as holder's debt to the protocol. The collateral rate is 300%. When the value of SAP decrease and the collateral rate reaches 250%, a warning message will be sent to the SAI holder.

The holder could add more SAP or return some SAI in that case to decrease the debt. However, if the collateral rate gets 200%, a liquidation process will be triggered and an auction of the collateral will begin. All the debt will be liquidated by selling the least collateral. After the auction, the SAI will be destroyed and the rest SAP will be returned.

2.4 Risk Control

2.4.1 Risk Rating

For each SAP pool running for more than one period, we will give an assessment. The main index is down volatile & sortino ration, and we will also rank each SAP pool and



send a high risk prompt to facilitate user selection.

$$\text{Sortino Ratio} = \frac{R_p - R_f}{DR}$$

R_p: average value, R_f: risk-free interest rate, DR: downward standard deviation

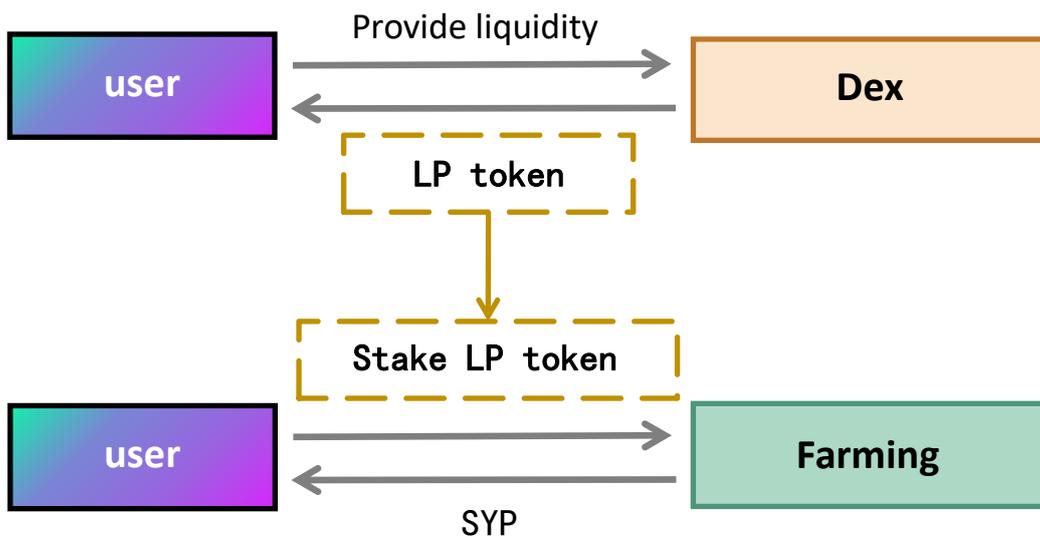
2.4.2 Manager level

Every pool manager is rated from V0 to V5. The level is based on a variety of standards, including past performance, community voting, and risk control ability.

High level managers would have the opportunity to launch more pools and bigger pools, with other privileges and responsibilities.

2.5 Usage of SAP_i

In addition to the simple Buy-and-Hold strategy, we also develop some other uses for SAP.



Secondary market liquidation. Once the first pool is launched and first SAP is minted, a secondary trading market of SAP will be established and trading pairs (such as BTC-SAP; ETH-SAP trading pairs) will be created in Dex. By staking LP tokens and providing secondary market liquidity, LP tokens holders can get both reward from DEX through providing liquidity and SYP through farming.

Collateral. SAP will be used as collateral to mint stable coin SAI or borrow other assets in other lending protocols.



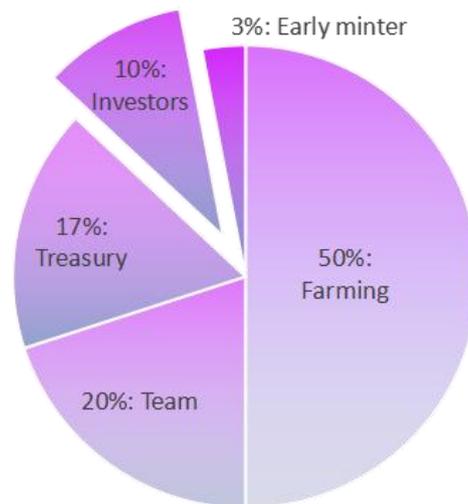
Derivative. In the future, futures, options, and perpetual contracts will be launched for SAP.



3. Governance Token, SYP

3.1 SYP Token Distribution

A total supply of 1,000,000,000 SYP will be minted and distributed according to the following distribution model:



- **50%: Farming.** The SYP staking pool will be launched shortly after TGE, following the LP token staking pool and other-token staking pools. The releasing speed will be accelerated by 10% at first and slow down later on by considering the staked amount to the circulating amount.
- **20%: Team,** after 18 months, unlock 25% every 3 months.
- **17%: Treasury,** including
 - **10%: Future plans.**
 - **5%: Community,** released in 3 years, linear released every month to pay salaries to the board and community representatives.
 - **2%: Consultants,** released in 3 years, linear released every month.
- **10%: Investors,** including
 - **2%: Seed round,** 10% released at TGE, Token Generation Event; after 3 months' interval, the other 90% will be released linearly in 15 months.
 - **2%: Strategic round,** 15% released at TGE, Token Generation Event; after 3 months' interval, the other 85% will be released linearly in 15 months.
 - **5.5%: Private round,** 22.5% released at TGE, Token Generation Event; after 3 months' interval, the other 77.5% will be released linearly in 12 months.
 - **0.5%: IDO,** released initially.



- **3%: Early minter**, deminishingly released in the 10 months through airdrop. It will release 1% in the first 2 months and decrease 0.2% every 2 months till end.

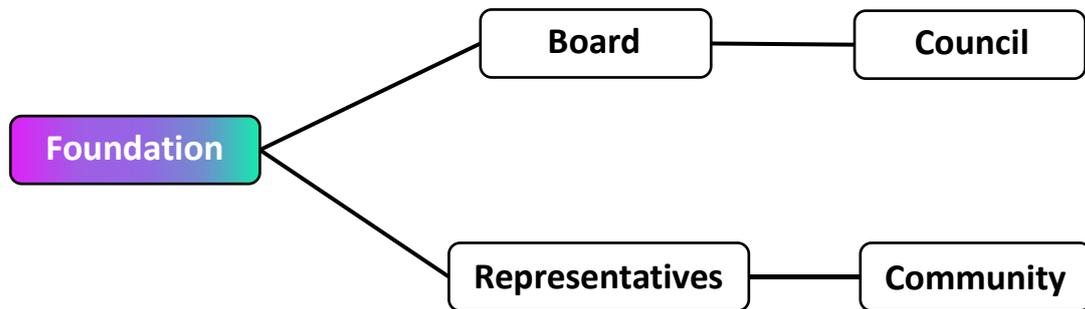
3.2 Usage of SYP

SYP will be used mainly in 5 ways: voting, farming, minting SAP, trading, salaries for the board and community representatives.

- **Voting:** It has 1:1 voting right in governance, and one can vote by oneself or by others.
- **Farming:** Only SYP is accepted in the early stage, then LP tokens of the exchange will be accepted. The output will be unlocked every week.
- **Minting SAP:** Accept SYP to mint SAP.
- **Trading:** Take the fee and management fee as the value endorsement, acting as the value medium in the market circulation.
- **Salaries and rewards:** Salaries of the board and community representatives will be paid by SYP. Also, SYP will be given as reward for constructive proposals of the community.



4. Governance Model



Foundation - the foundation provides financial and technical support to help the sustainable development of the protocol. It does not participate in the daily governance, but has the ultimate decision under special circumstances.

Council - council members are determined by staking a large number of SYP which is ranked in the top 20. The council can vote for the members of the board and has the power to nominate members and remove members. The employment period is half a year, and members need to be reelected after the period. Council members have the right to mint a special closed SAP pool.

Board - the board (6 persons) have salaries and need to review the submitted items. The approved projects are submitted to the community for voting. The board is elected by the council. The employment period is half a year, and members need to be reelected after the period.

Community - community members could stake their SYP tokens to vote and elect representatives, besides earning staking yields. Meanwhile, they could take part in the governance by making proposals and voting for others' proposals.

Representatives - 3 representatives are elected by the community. They have the same right as board members to audit new SAP proposals. And they also have a monthly pay.



5. Roadmap

