

DeSyn Protocol Whitepaper

Version 2



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Section 1: Introduction

1 The crypto market enters a new period of time;

Since we last updated the whitepaper on Aug 2021, the crypto industry is changing quickly. On the one side, they continued to experience a rapid development on all areas: VCs investment, projects (DeFi, NFTs, and GameFi...) and ecosystems (Ethereum, Solana, BSC and else) until Bitcoin price hit the all-time high @67K in Nov 2021. Then Market started to cool down and gradually entered a new period of time: bear market. Due to the market rapid downside adjustment, many companies were in serious troubles (including security, overleveraged position and else) during this period of time. Currently market continues to absorb those after-effects and tries to find a right standing level.

2 Old pain points further accelerated and new pain points emerge;

For average investors and portfolio managers, they continued to experience those old pain points we highlighted before including a) Cognitive Overload; b) High Transactions Cost; c. Lack of Vehicles to Invest Easily; d) KOLs Lacks Channels to Manage Their Own Portfolio Derivatives and Get Followers; e) Projects Lack Of Channels To Promote Tokens.

At the same time, new pain points are coming out. The first one is security issues in centralized solutions. The second one is what to invest during the bear market. For the first issue, it refers to that many centralized crypto banks and asset management firms, without clients' authorization or breaking previous investment agreements, moving clients' money for further purposes no matter it is for investing or for liquidity. It really made so many investors lose confidence in them. The second one is that for many investors, during the bear market, where they could find right investment opportunities to earn right investment returns.

3 DeSyn Protocol continues to evolve itself to help solve the issues;

Over the past 10 months, DeSyn Protocols continues to evolve itself to meet the incoming challenges from the market and new demands from customers on all aspects including products, operations and people.

But while many things are changed, we still hold the same vision unwaveringly which guides us since the day one:

To provide a secure, transparent and affordable access to create and trade innovative financial products for everyone in crypto, thus to actively promote an equal financial inclusion around the world.

Based on numerous feedback and advice from users, investors and portfolio managers, we realize that not only we could serve almost every project in the crypto by being one of the most

critical infrastructures, but also, we are holding important responsibilities to shape what the new asset management ecosystem shall be on Web 3: Is it going to be a secure, transparent, affordable ones for everyone or something else. So we redefine ourselves:

DeSyn Protocol is a DeFi asset management protocol that allows users to create and trade pools-based assets such as Portfolios/ETFs, structured assets, and more via smart contract.

Section 2: DeSyn Protocol Overview

1 Protocol Overview

The DeSyn Protocol defines procedures for creating, issuing, rebalancing, managing, and trading on-chain assets (Tokens, NFTs and else) using a collection of smart contracts based on customized liquidity pools (Portfolios/ETFs).

It includes five important components: (see the picture below)

1) Portfolios/ETFs Management:

Users can create and manage their Portfolios/ETFs based on customized liquidity pools. The functionalities include creating, issuing, redeeming, rebalancing, etc. It has several modules: Synthetic Assets, Portfolios/ETFs, and Derivatives which displays in the picture.

2) Trading:

Through our smart trading, the liquidity of DEXs on the chain can be automatically aggregated, thus providing sufficient liquidity for the portfolio/ETF creators to rebalance the pool. At the same time, the exchange channel between Portfolios/ETFs and other tokens in the secondary market can be established to make the trade of Portfolios/ETFs more flexible and convenient. It has several modules: AMM swap, limit order, etc.

3) Price Oracle:

The price oracle integrates the market data of Chainlink and major DEXs (including but not only limited to Uniswap, Sushiswap, etc.). It provides token price, equity of the Portfolio/ETF, and settlement services for the platform.

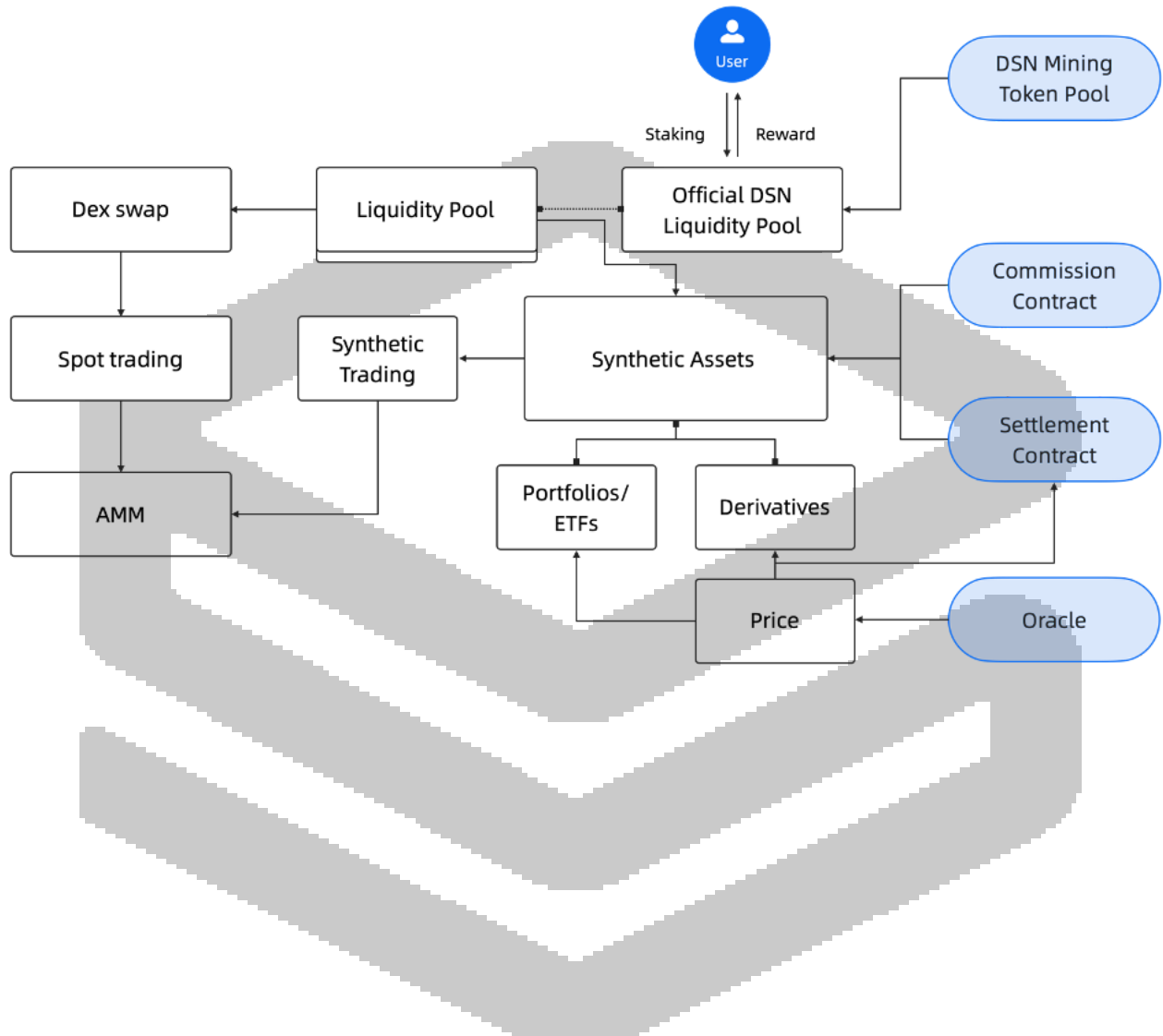
4) Settlement:

Clearing and settlement services, which can support the withdrawal of Portfolios/ETFs and the management of the Commission within the platform. The main modules are Commission Contract and Settlement Contract, which are deployed in the Ethereum network.



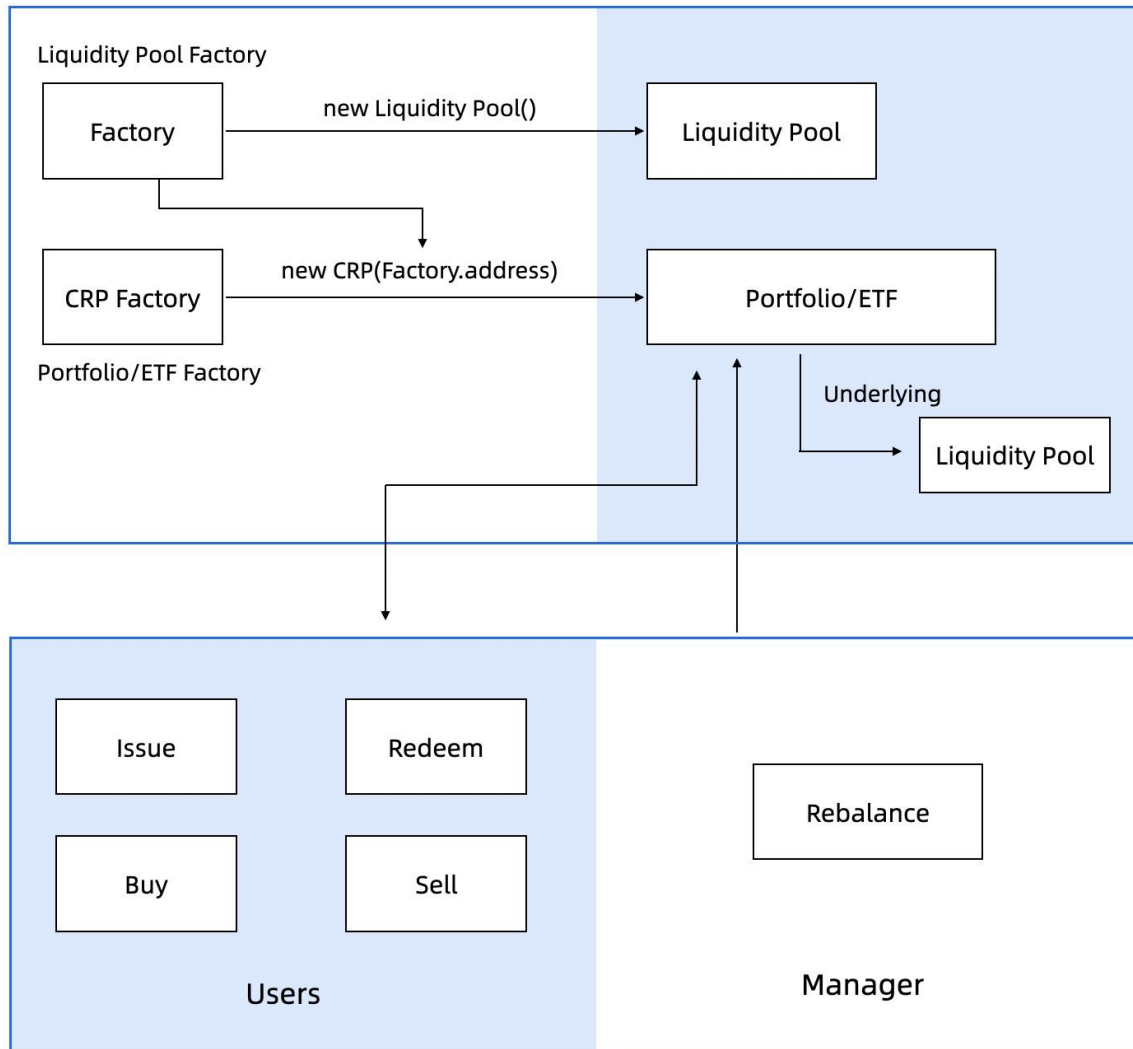
5) DSN:

Users can use our DSN tokens to participate in platform governance, at the same time, they can also be used to pay related transaction costs (such as creation fees, redemption fees, fund management fees, etc.); it mainly includes Official DSN Liquidity Pool, DSN Mining Token Pool module;



2 Smart Contract

1) Contracts architecture



2) Glossary

- **Core Pool:** A Liquidity pool contract object - this is the "base" pool that holds the tokens
- **Balance:** The total token balance of a pool. Does not refer to any user balance.
- **Denorm:** Denormalized weight. Weights on a liquidity pool, though often displayed as percentages, are configured and stored in their denormalized form. For instance, in a two-token pool with denormalized weights of A=38 and B=2, token A's percentage weight would be $38 / (38+2)$, or 95%. Conversely, token B's proportion would be $2 / (38+2)$, or 5%.
- **Controller:** The pool's owner, an address that can call CONTROL capabilities.
- **Smart Pool:** A contract that owns a Core Pool.
- **Portfolio/ETF:** It is a Smart Pool.

3) Contracts Overview

- Factory

Factory contract for creating liquidity pools.

- Core Pool

The fundamental building block of the DeSyn Protocol is the core Pool. The core pool is a smart contract that implements the DeSyn Protocol and holds value in two or more ERC20 tokens.

Each token asset in the pool has an independent weight. For example, you could have a pool with three tokens in the following proportions 50% WETH, 25% MKR, and 25% DAI.

- Smart Pool

One very powerful feature of DeSyn is the concept of Smart Pool. A smart contract-controlled pool can fully emulate a finalized pool while allowing complex logic to readjust balances, weights, and fees.

In a nutshell, DeSyn has deployed Factory contracts for creating pools. Users deploy new pool contracts by calling create methods on these factories. If you deploy a Core Pool directly, you are the controller of that pool. If you deploy a Smart Pool, you need to pass in the Factory address, since two contracts will be deployed. You are the controller of the Smart Pool - and the Smart Pool itself is the controller of the Core Pool.

- Rights Manager

Defines a struct of boolean values, corresponding to each right; the Smart Pool stores this struct in storage.

- Smart Pool Manager

Factors out computationally intensive functions, mainly to reduce the bytecode size of the Smart Pool, to keep it deployable.

3 Specification

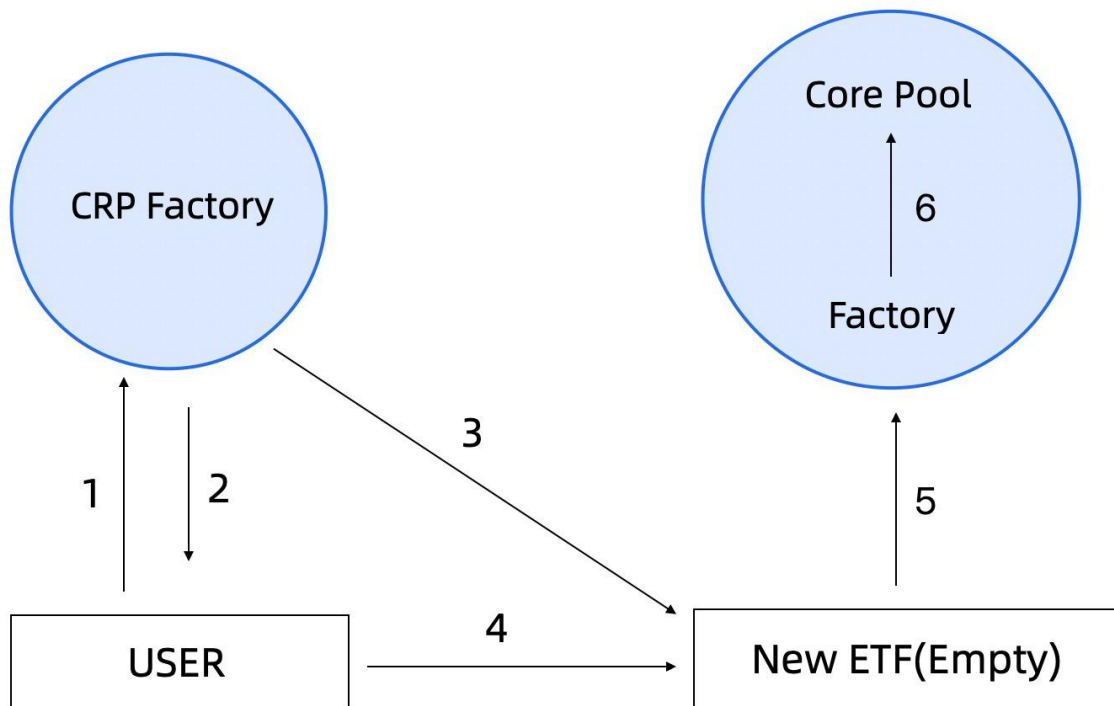
1) Overview

The smart contract contains the business logic for everything in the Pool's lifecycle including creating, issuing, redeeming, rebalancing, etc. Initially, a Pool is designed and created through the Smart contract and its specified Factory. Pools are then funded or issued through the standard Issuance Flow (if the user has all the underlying components). Users who wish to have

their pools updated can choose to do so by issuing a Rebalancing Pool Token. Finally, a pool can be redeemed by burning the owner's Pool token and retrieving the components.

2) Create

- a. User calls newCrp function on CRPFactory contract, providing factory address, pool information, and rights as parameters.
- b. CRPFactory checks the pool parameters to make sure that it conforms to the protocol's criterion, or it will fail to proceed.
- c. If there is no problem with the parameters, the CRPFactory will create an empty Portfolio/ETF contract using the "new ConfigurableRightsPool" method.
- d. User calls createPool on the newly created empty Portfolio/ETF contract, providing initial supply, collect period(for closed-end Portfolio/ETF only), and closure period(for closed-end Portfolio/ETF only) as parameters.
- e. The empty Portfolio/ETF contract will call newLiquidityPool on the Factory contract to create a core pool where the underlying assets lay. up to now, the full process of creating an Portfolio/ETF is done.



3) Core functionalities

- a. User calls the joinPool function on the Portfolio/ETF contract, providing the expected amount you want to issue and the maximum token amounts you want to give as
-

parameters.

- b. User calls the exitPool function on the Portfolio/ETF contract, providing the expected amount you want to redeem and the minimum token amounts you want to receive as parameters.
- c. Manager calls the rebalance function on the Portfolio/ETF contract, providing token0 that you want to reduce weights, token1 that you want to increase weights, delta weights that the specific part you want to sell, and the minimum target token amount you want to receive after a successful rebalance as parameters.

4 Participants

There are several participants in the DeSyn network: Creators, Users, and Traders:

1) Creators

Portfolio/ETF creators who use their expertise, creativity, and intuition to design, create and issue market-attractive Portfolios/ETFs; it is mainly composed of some traders, KOLs, and fund managers.

2) Users

Ordinary users can directly purchase the corresponding Portfolio/ETF from various centralized and decentralized liquidity trading pools for investment; also they can issue their corresponding tokens into the pool to get Portfolio/ETF token; Users hold or exchange the corresponding Portfolio/ETF token for asset management and investment.

3) Traders

Traders and arbitrageurs in the secondary market will actively inject liquidity into CEX and DEX to obtain liquidity rewards. At the same time, they will also capture the arbitrage opportunities between different exchanges and make arbitrage profits; but no matter what their behavior is, both directly or indirectly create better trading liquidity and experience for users.

5 Product v2 features

Since launching v1 products, we continue to receive numerous feedback from the community as well as potential partnerships with a variety of projects in the crypto industry. Based on those precious ones, we come out with the DeSyn Protocol v2.

1) Customers

Not only we could serve investors and portfolio managers, but also we can help various projects including DeFi, NFTs, public chains and else, structure their tokens offering into a simple one: an ETF or Portfolio, which could be easily understood by investors in both Web 2 and Web 3.

Let us illustrate one by one:

a) DeFi, most DeFi projects today, become too complicated so that only few of investors could understand them well, not to mention to invest. It limits the potential application to the masses. What if you structure them as a portfolio?

b) NFTs, a majority of NFTs today, lacks liquidity and are considered to be high-risk investment for a majority of investors. What if you bundle them together as Portfolio or ETF and managed them by professionals?

c) Public Chains, nowadays, need to reach out more investors and projects on their ecosystem. But a majority of investors are risk averse. So how they can attract those people? And how projects can maintain a certain level of price stability after being listed? Portfolio or ETF could be the right solution.

Thus, we believe that we could be an important infrastructure for everyone in Web3 since everything in Web 3, by definition, is an asset.

2) Fund Structure

On v2, the most important feature we come up with is to have a variety of basic fund structures for everyone. Because on one side, we want investors to easily understand them. On the other side, we want portfolio managers comfortably to deploy their investment strategies. So based on what we learned in Web 2, we think a variety of fund structures from Web 2 could be the right solutions. But those need to be adjusted based on Web 3.

The first two we launch are 1) open-ended structure and 2) close-ended structure.

1) Open-ended structure

It is suitable for deploying a passive strategy for tokens with excellent liquidity. For an open-ended structure, investors could issue and redeem portfolio tokens anytime they want while portfolio managers also could buy and sell underlying tokens anytime. For this structure. Portfolio managers can charge management fees as well as issue and redemption fees.

2) Close-ended structure

It is better suitable for deploying an active strategy which requires time windows or ones with relatively liquidity tokens such as NFTs. For close-ended structure, investors could only invest during the fundraising period and receive their money back during the redemption period. Portfolio managers could only manage their investment after the fundraising period is over. After reaching the start of redemption time, they will not be able to conduct any investment. For this structure, portfolio managers could charge management fees, performance fees as well as issue and redemption fees.

There will be more structures in the future to better meet demand from our community.

3) Other Features

There are other important changes or features on V2 including

- a) abandoning both swap and platform stablecoin functions
- b) setting up multi-signature function for fund operation
- c) allowing rebate mechanism for fund operation
- d) integrate with Uniswap for portfolios managers to conduct liquidity management for portfolio tokens
- e) streamline each process to better serve customers

and more...













Here are several snapshots from V2:

a) Dashboard for investors:

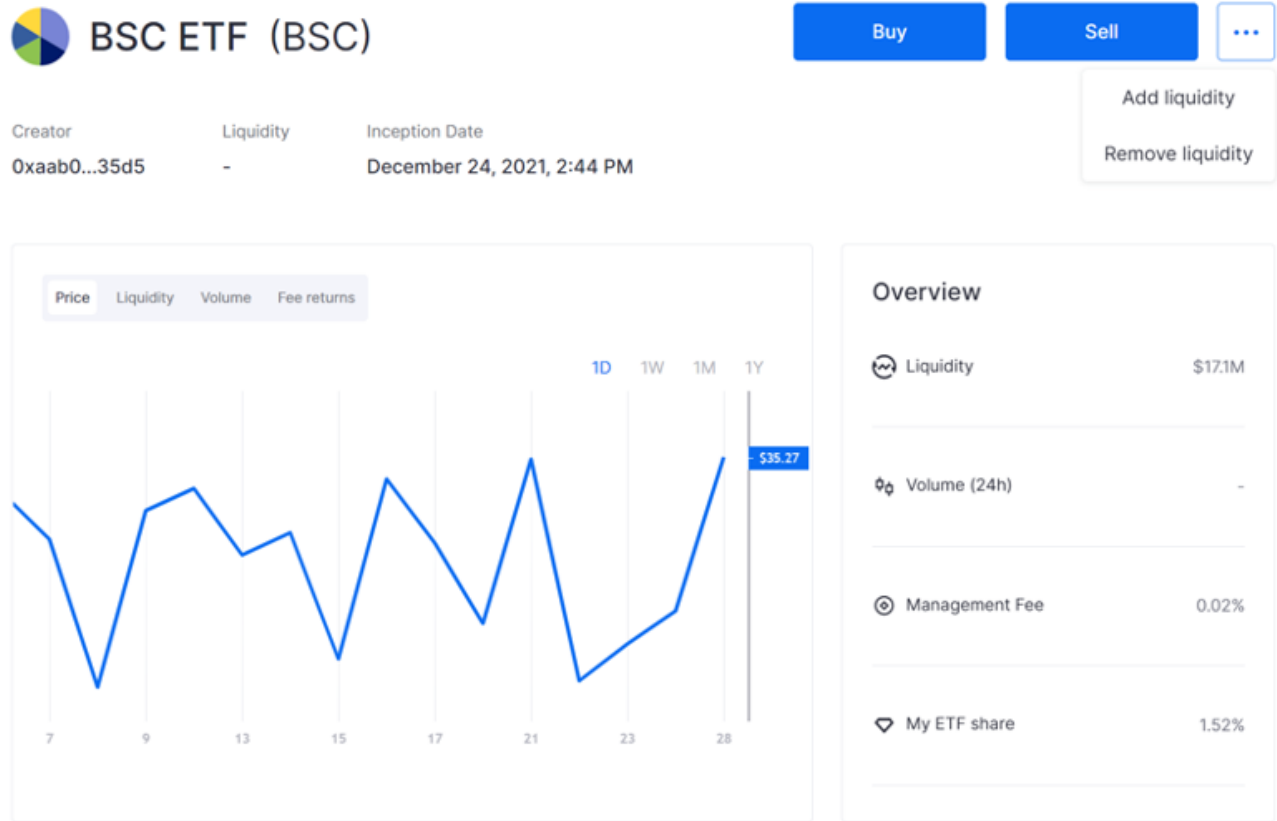


Explore Portfolios/ETFs

Choose an Portfolios/ETF you like and start your investment journey

Portfolios/ETFs		Filter						
Name	Market cap	Liquidity	Management fee	1valueDay	1valueWeek	1valueMonth	Since inception	
 SMANAV021316 Open-end <small>0xffff...7b0</small>	\$13.94	-	0.15%	+3.846%	+0.694%	-	+23.667%	
 50% SAND  50% MANA								
 SMANAV02209 Open-end <small>0xffd...909</small>	\$13.98	-	0.15%	+3.856%	+0.685%	-18.035%	-4.196%	
 50% SAND  50% MANA								
 SMANAV021232 Open-end <small>0xffc...bb4</small>	\$13.91	-	0.15%	+3.833%	+0.705%	-	+23.674%	
 50% SAND  50% MANA								

b) Portfolio Description



c) Create Portfolio for portfolio managers



Create your Portfolios/ETFs

Choose your assets and name your Portfolios/ETFs

☰ Set your Portfolios/ETFs parameters

Step 02/03

Portfolios/ETFs Settings

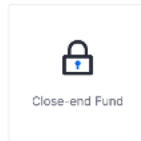
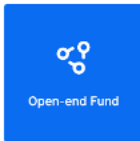
Portfolios/ETFs Name

Portfolios/ETFs Symbol

Portfolios/ETFs Organization

Initial Number Of Shares 

Portfolios/ETFs Type



Manager's Rights/Portfolio Features

Use whitelist for investors

Fee

Management fee

 %

 Charged monthly, cannot be modified

Issue fee

 %

 Once confirmed, it cannot be modified

Redemption fee

 %

 Once confirmed, it cannot be modified

Media

LinkedIn

Twitter

6 Future Consideration

All those above are just the beginning. We also create more useful financial products with our partners for investors particularly for this bear market, such as leveraged ETFs, DeFi lending funds, leveraged staking ETFs, DeFi market-making funds, etc. while we will allow the portfolio managers to deploy strategies in defi by connecting with other crypto projects such as AAVE, Compound and else, to create fixed income and structured products which shall better meet market's demand.

Section 3: DSN Tokens

Over the past months, we received numerous feedbacks about the DSN tokens utility. Here is our latest update:

- 1) We abandon the platform stablecoin functions due to its unsafety;
- 2) We adjust utility functionality as below:

For Investors:

- pay for protocol fees, staking to save fees;
- stake DSN to participate in pre-sale of Portfolios/ETFs;
- stake DSN to share revenue from DeSyn vault.

For Portfolio Managers:

- pay for protocol fees, staking to save fees;
- stake DSN to participate in Portfolios/ETFs launch pad;
- stake DSN to be a member of partnership program for portfolio managers.

- 3) We add DeSyn Vault to provide token holders a place for staking and sharing platform revenue

Section 4: Summary

The same as we state in the previous whitepaper:

We build the DeSyn, a new generation of DeFi asset management protocol, which gives everyone a secure, transparent and affordable access to create and trade various innovative financial products, including Portfolios/ETFs, and more, since we believe that everyone around the world no matter where they come from, what their faiths are, whether they are rich or poor, shall have an equal chance to receive the best financial service possible.

Alongside people who share the same ideal with us, we intend to make our best efforts on this path, and see it become reality until the end.

We still hold the same belief as always.

Section 5: Disclaimer

This paper is for general information purposes only. It does not constitute investment advice or a recommendation or solicitation to buy or sell any investment and should not be used in the evaluation the merits of making any investment decision. It should not be relied upon for accounting, legal or tax advice or investment recommendations. The content of this white paper is just a plan of the project. It by no means be treated as a contract or an element of a contract. No relationship in this white paper can imply to a contractual relationship.

Its purpose is just to show the potential investors, cooperators and customers with the relevant information and project of DeSyn Protocol. Nothing in this white paper shall be deemed to constitute a prospectus of any sort or a solicitation for investment, nor does it in any way pertain to an offering or a solicitation of an offer to buy any securities in any jurisdiction. This white paper may contain some statements, financial information or estimates. All of them are just forward-looking statements or information, and cannot stand for any certain conclusions and cannot be used as a commitment. Therefore, the potential risk and uncertainties underlying in the investments cannot be promised. This white paper is a primary information of DeSyn Protocol. The team will continue its hard work to make the project more widely applicable.

So, the white paper may be updated time by time to reflect the teamwork. The content in this white paper may be translated into other languages in the course of written or verbal communications. It may be lost or misrepresented, so the accurate cannot be promised. DeSyn Protocol is a continuous developing and improving platform. Many implementations will be constantly improved in the process of development. If there is any inconsistency with the white paper in the course of implementation, the specific implementation shall prevail.

Section 6: Contact

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