AXIS

# Harmonized ETH Layer 2 DeFi-Routing & Aggregator

Contents

Overview

The mission of Axis is to enable and empower a harmonized and simplified 'Axis portal' where users can perform swaps utilizing any part of the DeFi ecosystem, whether that is Layer 1, cross-chain, or layer 2 swaps while combining DEX routing and DEX aggregation.

DEX routing is the process of sourcing the most liquid pool available for the user to perform a swap. Sourcing the most saturated liquidity pool is of importance for reducing slippage for users when performing a transaction.

DEX aggregation is the process of utilizing multiple liquidity pools to perform a single transaction. The DEX aggregation functionality will only come into play when the amount of value being swapped is above a certain threshold. The threshold varies from token to token and is dependent on the most liquid liquidity pool for the token pair in question. The less saturated a token pair liquidity pool is, the more liquidity pools will be aggregated for the user's swap.

Axis combines DEX routing & DEX aggregation in a revolutionary cross-chain, layer 2 DEX solution. Offering an intuitive, easy-to-use interface, users will be able to perform swaps utilizing any part of the DeFi ecosystem. DEX aggregation, DEX routing, cross-chain liquidity sourcing, and capital efficiency for layer 2 solutions is the telos for Axis.
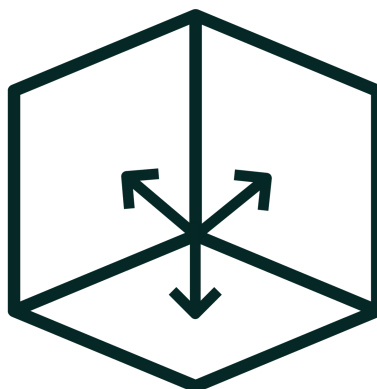
Understanding DeFi & Problems Facing the Market

In simple terms, DeFi is a decentralized financial infrastructure built on a blockchain network.

DeFi's main cryptocurrency DEX trading has been dominated by Ethereum, which is controlled by a network of computers, rather than centralized financial institutions. DeFi is set to take over the financial services industry, primarily because of its global accessibility; no one can be denied service. They operate an open and decentralized marketplace; there are no third parties to oversee and implement withdrawal fees, identify verification, or sign-ups. Moreover, DeFi does not issue credit checks.

The current global crypto market is valued at $2.4 Trillion, while the estimated global crypto derivatives market is expected to rise up to over $100 Trillion.

Total Value Locked (USD) in DeFi

TVL (USD) | ETH | BTC   All | 1 Year | 90 Day | 30 Day

As of May 12th, 2021, the total value locked (USD) in DeFi hit an all-time high of $86.82B. The decentralized DEX aggregator platform 1inch dominates the exchange market with a trailing 7-day volume of over $2 billion, with a few other aggregators closely behind with <$1b 7-day trading volumes.

Ethereum (ETH) and all ERC-20 tokens combined are only ~19% ($463B) of the total cryptocurrency market, yet, ETH makes up 99%+ of the DeFi space. With these projects dominating the market, DeFi is experiencing many limitations.

Ethereum-based DeFi architecture issues and minimal interoperability

a.   Scalability: Currently 12-15 trx/s. Ethereum 2.0 still caps at a few hundred trx/s.
b.   Lack of dedicated DeFi chain: High transaction costs and governance issues.
c.   Missing 82% of the cryptocurrency market: Current ETH-based DeFi architecture is not interoperable with non-ETH protocols.

Missing cross-protocol DeFi DEX aggregation

a.   With ETH becoming more saturated, and gas prices disabling a lot of user interactions on the ETH chain, users have been moving over to new chains where the transaction fees are cheaper. As time goes different chains will become more popular for this reason.
b.   Creating a cross-chain DEX aggregation system is vital to bringing capital efficiency across the entire cryptocurrency ecosystem

Lack of Layer 2 DEX aggregation solutions

a.   On the same point as above, instead of moving funds completely to different chains, users are opting to participate with layer 2 solutions, such as Loopring due to functionalities such as zk rollups that drastically reduce gas fees.

b.   The issue with Layer 2 solutions is the degradation of capital efficiency. When funds are within liquidity pools held on layer 2 protocols, layer 1 users, as well as users on different chains, are unable to interact with the pool.

3rd Generation of DeFi

Gen 1: Deltas & DEXs Year: 2017

Overview: EtherDelta pioneered the beginning of Decentralized exchanges. Could swap any ERC-20 token with another

Key Players:

Challenges: Outdated Orderbook infrastructure, regulatory issues, significant speed lags.

Gen 2: Current Synthetic Issuance & Swaps Year: 2018-2021

Overview: Synthetics created using no middleman and counterparty risk and lending being done by the community.

Key Players:

Challenges: March 12, crash interoperability, no failsafe, limited throughput tx, too ETH reliant

Gen 3: Interoperable, Full Functionality DeFi Year: 2021

Overview: Bringing sophisticated routing to DeFi with Wall Street standards without sacrificing the DeFi ethos. Embedded meta-routing to ensure optimal profitability and access across multiple chains.

Key Players:

Core Components & Products

With a layer 1 framework, cross-chain solutions, and layer 2 interoperability, AXIS is the future of DeFi DEX aggregation.

Core Components of AXIS:

Dedicated DeFi Tech Stack

- Consumer-grade tx speed
- DeFi routing
- Third-Party Interoperability
- Utilizing various layer 1 liquidity pools.

Cross-chain Interoperability

- Building first truly cross-chain, real-time optimized router
- Sorts through numerous chains and market conditions to deliver more optimized profitability and speed

Optimizing Layer 2 Solutions

- Adaptive future routing for Layer 2 best-of-breed services
- Offer leading segment-specific Layer 2 optimization

Layer 2 Solutions Landscape:

ETHEREUM LAYER-2 ECOSYSTEM - MARCH 2021 · by DeversiFi
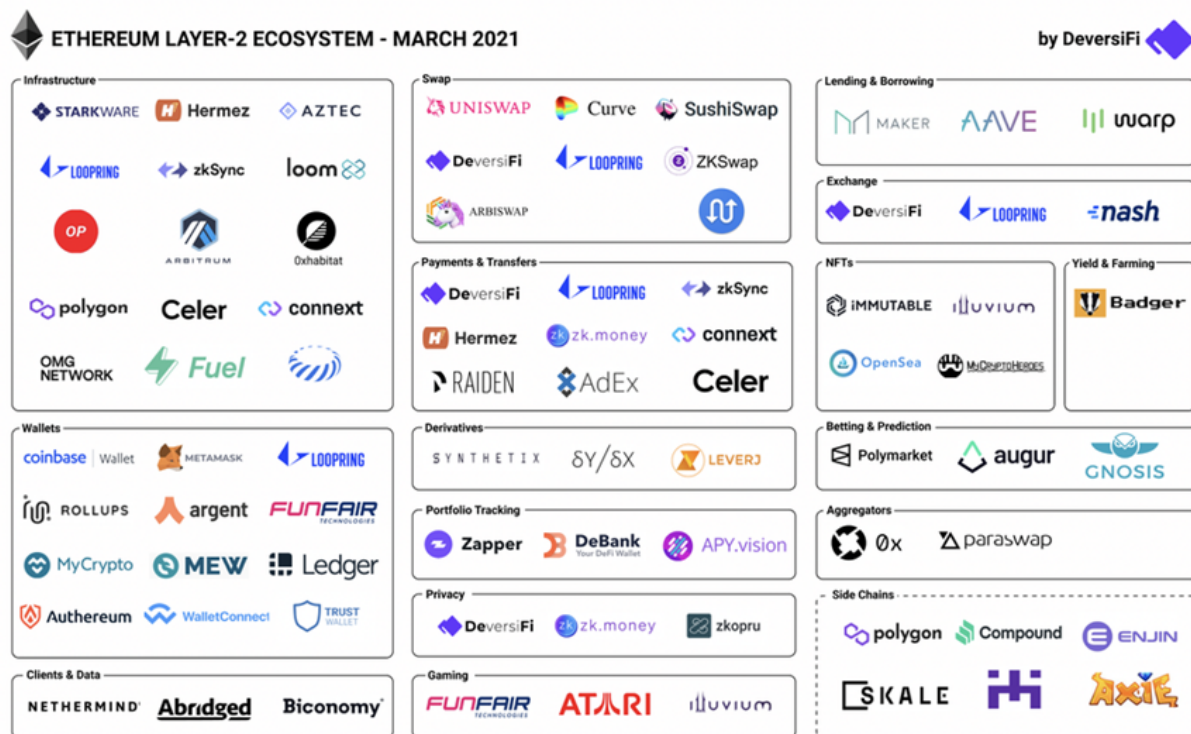
Projects that are already building/integrated with L2 or have made a public announcement stating their chosen L2 solution

Delivering True 3rd Generation DeFi DEX aggregation solutions

The current DEX aggregator solutions that exist are good and they have solved very pressing issues the industry needed. But things have been evolving, the ETH ecosystem is becoming too saturated, people are beginning to use different side chains, and layer 2 solutions. The issue with this is the division of capital.

The division of capital is bad for an exchange market for 2 very important reasons:

1.   The price of an asset may be cheaper on a different chain, or a different layer than it is on layer 1. Which is less efficient for the user, as they may be purchasing an asset at a premium

2.   Access to multiple liquidity pools. This is of concern for those who are swapping large sums of money. If you only use one liquidity pool, you could suffer massive slippage, while also creating arbitrage opportunities in reference to the same liquidity pool held in other places.

The power of the aggregator in the blockchain:

Some top projects enable optimized experiences as an aggregator. A perfect example is 1Inch. They ensure a more favorable trading experience by offering routing options to swappers to offer the best swap rates and provide less slippage by utilizing multiple liquidity pools for large trades. The issue with DEX's currently is their lack of interoperability across ALL parts of the DeFi ecosystem.

Axis DeFi looks to bring back capital efficiency not just on Layer 1, but also cross-chain, and through layer 2. Offering ecosystem-wide DEX aggregation solutions we are looking to become the ultimate cross-chain, layer 2, DEX of DeFi.

The Axis DeFi API routing mechanism is a cutting-edge discovery and routing algorithm, which offers asset exchanges at the best rates on the market. The API can find the most efficient paths for a token swap, be able to split orders between different protocols, and even different market depths within one protocol in the shortest possible time. All requests and examples are made for Ethereum mainnet and will adjust when we implement cross-chain swaps and layer 2 aggregation solutions.

(GET) Approve Calldata

Get a calldata for an approve transaction.
Request
Query Parameters
amount (OPTIONAL) - integer
Amount of tokens to be approved:
 0 — set approval to zero (lock a token)
>0 — approve exact amount of tokens.
infinity (OPTIONAL) - boolean
If set, approve infinite amount of tokens
tokenAddress (REQUIRED) - string
The contract address of a token

(GET) Healthcheck

Check if the service is able to handle requests

(GET) Quote

Request
Query Parameters
fromTokenAddress (REQUIRED) - string
contract address of a token to sell
toTokenAddress (REQUIRED) - string
contract address of a token to buy
amount (REQUIRED) - integer

amount of a token to sell
fee (OPTIONAL) - number
referrer's fee in percentage
protocols (OPTIONAL) - string
liquidity protocols that can be used in a swap
gasPrice (OPTIONAL) - string
gas price
complexityLevel (OPTIONAL) - string
how many connectorTokens can be used
connectorTokens (OPTIONAL) - string
contract addresses of connector tokens
gasLimit (OPTIONAL) - integer
maximum amount of gas for a swap
parts (OPTIONAL) - integer
maximum number of parts each main route part can be split into
mainRouteParts (OPTIONAL) - integer
maximum number of main route parts

(GET) Swap

Request
Query Parameters
fromTokenAddress (REQUIRED) - string
contract address of a token to sell
toTokenAddress (REQUIRED) - string
contract address of a token to buy
amount (REQUIRED) - integer
amount of a token to sell
fromAddress (REQUIRED) - string
address of a seller
slippage (REQUIRED) - number
additional slippage in percentage
fee (OPTIONAL) - number
referrer's fee in percentage

protocols (OPTIONAL) - string
liquidity protocols that can be used in a swap
gasPrice (OPTIONAL) - string
gas price
destReceiver (OPTIONAL) - string
address that will receive a purchased token
complexityLevel (OPTIONAL) - string
how many connectorTokens can be used
connectorTokens (OPTIONAL) - string
contract addresses of connector tokens
gasLimit (OPTIONAL) - integer
maximum amount of gas for a swap
parts (OPTIONAL) - integer
maximum number of parts each main route part can be split into
mainRouteParts (OPTIONAL) - integer maximum number of main route parts

(GET) Protocols

Get array of all supported liquidity protocols

(GET) Protocol images

Get names and images of all supported protocols

(GET) Tokens

Get array of all supported tokens (any erc20 token can be used in a quote and swap)

(GET) Protocols

Get array of all supported liquidity protocols

L1 to L2 Technology

Layer 2 is a collective term for solutions designed to help scale your application by handling transactions off the Ethereum mainnet (layer 1) while taking advantage of the robust decentralized security model of the mainnet. Transaction speed suffers when the network is busy which can make the user experience poor for certain types of dapps. And as the network gets busier, gas prices increase as transaction senders aim to outbid each other. This can make using Ethereum very expensive.

Why is Layer 2 Needed?

- Some use-cases, like blockchain games, make no sense with current transaction times
- It can be unnecessarily expensive to use blockchain applications
- Any updates to scalability should not be at the expense of decentralization or security – layer 2 builds on top of Ethereum.

It is only a matter of time until the main chains get too populated and transaction fees become too high for the average user to participate in any meaningful DeFi investments. Even taking into account ETH 2.0, PoS, and any other Layer 1 scaling solutions. Soon, there will be a larger demand for cross-chain and layer 2 DEX aggregation solutions coming from these specific users.

In terms of technology, there are four main solutions to connect Layer 1 with Layer 2:

Sidechains

Separate, independent blockchains, but EVM-compatible (forks of ETH). Sidechain could be considered a sister chain, in direct contact with the main chain.

Plasma/Child chains

Copies of ETH on another chain. Taking ETH transactions and offloading them onto multiple child chains, that later connect to the main chain.

Optimistic Rolls-ups

Sidechains that bundle transactions, then send them together to the main chain. There are around 1-2 weeks before that happens to ensure there's no fraud.

ZK Roll-ups

Bundling transactions, and sending them together to the main chain, but there is no period between to detect fraud. It uses zero-knowledge proof to verify that the bundling of transactions is legit. ZKP is about proving something without revealing the original information, using cryptography.

Example of sidechain: xDAI (https://www.xdaichain.com/)
Example of plasma: Polygon (https://polygon.technology/)
Example of optimistic roll-up: Optimism (https://optimism.io/)
Example of ZK roll-up: Zsync (https://zksync.io/)

New AXIS Layer 2 Aggregator

There are three main categories that will be aggregated by AXIS:
1. Payment solutions: low-cost transfer of ETH and ERC-20 tokens.
2. Trading: DEXs and derivative products.
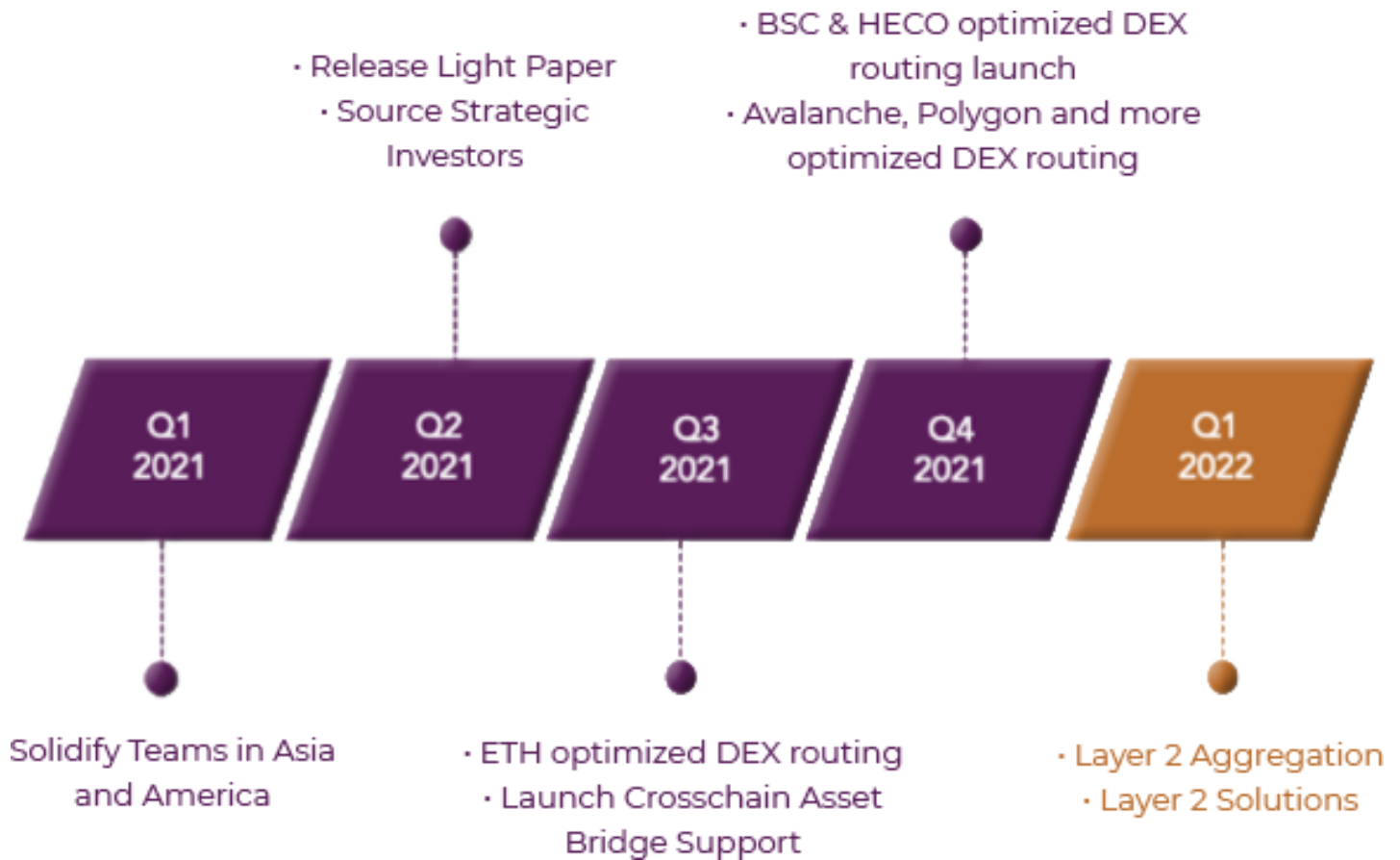3. Borrowing & lending: different interest rates.

Cross-chain & Layer 2 DEX aggregation

We are looking to introduce Cross-chain & Layer 2 DEX aggregation shortly after launch. Our technical docs will be updated and will make updates and announcements in regards to the release date. We have the technical specifications created, and tested, and only have some finishing touches to

do. We are excited to bring Layer 2 DEX aggregation to the DeFi ecosystem. We have a roadmap and want to stick to it, implying that we need to release certain aspects of the protocol at specific times.

Roadmap

· Release Light Paper
· Source Strategic
Investors

· BSC & HECO optimized DEX
routing launch
· Avalanche, Polygon and more
optimized DEX routing

| Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | Q1 2022 |

Solidify Teams in Asia
and America

· ETH optimized DEX routing
· Launch Crosschain Asset
Bridge Support

· Layer 2 Aggregation
· Layer 2 Solutions

AXIS Tokenomics

AXIS Token Launch: 24 Million AXIS Token

Token Distribution

Yield Farming & Collateralization	60%
Initial Exchange Listing, Private Investors, Marketing & Ecosystem Building	10%
Team & Advisors	10%
Foundation	20%
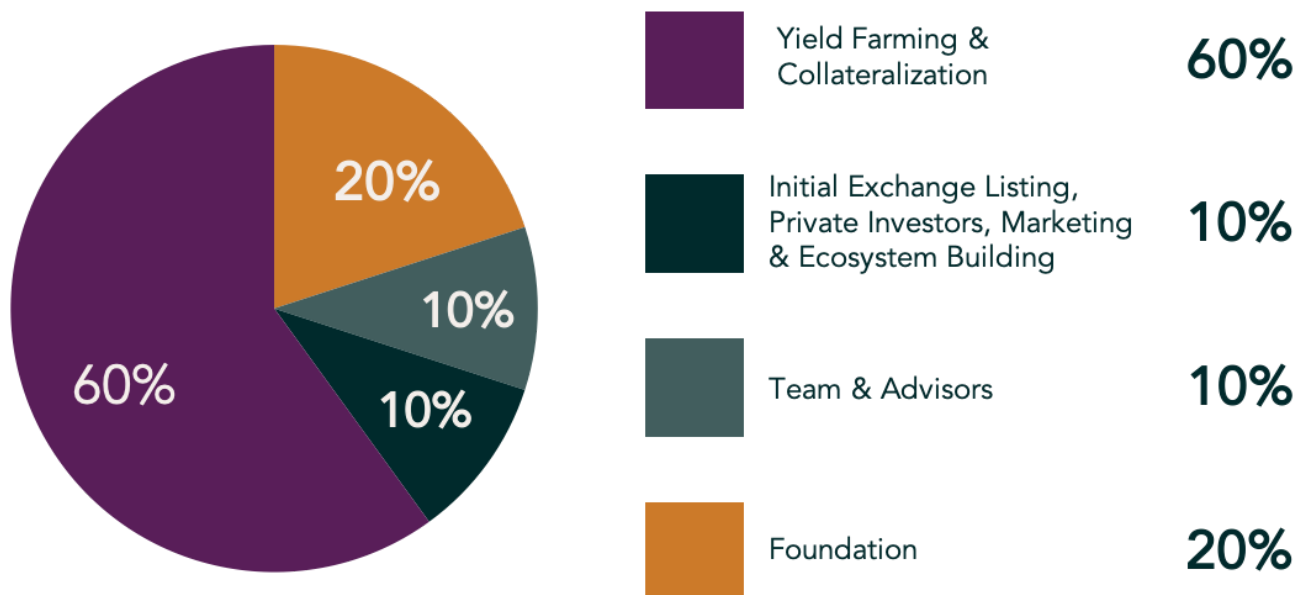
Initial Exchange Listing, Private Investors, Marketing & Ecosystem Building

- Percentage: 10
- Marketing & Ecosystem Building: No lockup
- Private Sale: 6 months linear vesting

Team & Advisors

- Percentage: 10
- Lockup Period: Linear vesting over 24 months

Foundation

- Percentage: 20
- Lockup Period: Linear vesting over 36 months

Yield Farming & Collateralization

- Percentage: 60
- Lockup Period: First-year = 30% of the pool and it starts halving every year

AXIS TOKEN DISTRIBUTION SCHEDULE (FIRST 36 MONTHS)

Initial Exchange Listing, Private Investors, Marketing & Ecosystem Building • Team & Advisors • Foundation • Yield Farming and Collarization*
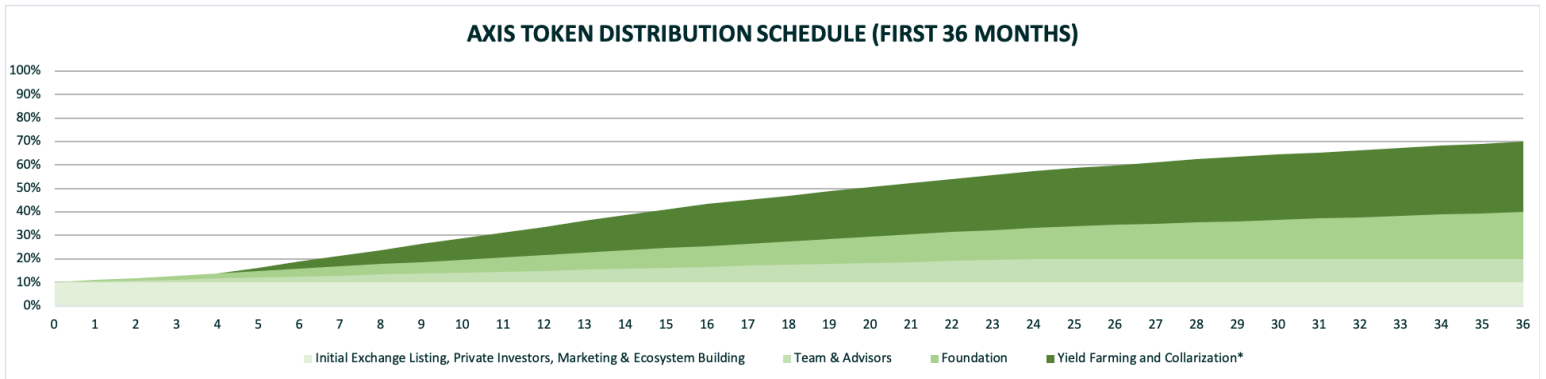
Competitors

There are a few competitors offering layer 1 ETH-based aggregation solutions, but nothing looks to be on the roadmap for cross-chain and layer 2 routing solutions. We are unaware of any DEX aggregator with the same roadmap as Axis DeFi, which is why we believe we have an edge over the current competitors:

1.   1inch

- 1inch is a DEX aggregator that works out the best crypto prices across decentralized exchanges.
- The platform launched its governance token, 1INCH, in December 2020.
- The main way to earn 1INCH tokens is by providing liquidity to 1inch's liquidity platform or staking their token in the DAO.
- 1inch connects several DEXes into one platform to allow its users to find the most efficient swapping routes across all platforms.
- 1inch in winter 2020 also launched Mooniswap, its own automated market maker

2.   0x API

- The 0x API is the easiest way to source liquidity from 0x Mesh as well as on-chain sources such as Kyber, Uniswap, Oasis, Curve, and other decentralized exchange networks.
- The 0x protocol is an open protocol that enables the peer-to-peer exchange of assets on the Ethereum blockchain.
- The 0x protocol was built by 0x Labs, an organization based in San Francisco, California that is focused on creating new markets in the 0x ecosystem.
- Built on the foundation of Ethereum token standards, 0x protocol acts as the key infrastructure layer for the burgeoning number of financial

applications and instruments that are on-boarding the blockchain technology stack and are getting traded in digital forms.

3. Matcha

- Matcha is a decentralized exchange (DEX) aggregator built on Ethereum.
- Matcha finds the best rate for the user across the various networks.
- Matcha, known as the "Robinhood of DEX", is a new, easy-to-use exchange that aggregates liquidity from 0x, Uniswap, Kyber, Curve, the leading RFQ market makers & more to offer DeFi traders the best price on every token swap.
- Matcha is built by 0x Protocol. It utilizes the 0x API and 0x Mesh, to leverage aggregated liquidity and price information from Kyber, Uniswap, Oasis, and other sources.

Our main DEX aggregation competitors, 1inch and Matcha, have a lot of really good qualities about their platforms. For one, their user experience is fantastic! They both provide a very intuitive interface for any user, experienced or not, to be able to perform a swap transaction.

For those who are unaware, 1inch Exchange, and Matcha are both decentralized cryptocurrency exchange (DEX) aggregators used to buy or sell cryptocurrencies across multiple DEXs. Orders are split across multiple DEXs to find the best market price available by using arbitrage bots.

By searching across multiple DEXs, orders are split to minimize slippage. This can save a great deal of money when placing large orders in illiquid markets.

When using a crypto exchange to place large orders, traders are often caught out by slippage. Slippage is the difference between the price a trader expects to pay for an asset and the actual price paid for the asset. If an

exchange or a trading pair has low liquidity, even a modest order could push up the price of a low-cap asset dramatically.

We plan on surpassing the quality of UI/UX that these leading companies have provided while offering new innovations in the DEX aggregation realm. Specifically for cross-chain, and layer-2 aggregation swaps.

Conclusion

Decentralized Finance may prove to be one of the greatest spinoffs blockchain technology to date. The cryptocurrency industry continu rise and DeFi has quickly emerged as the new frontier for finance technology, however, the industry, like many others, has experie growing pains and bottlenecks in a variety of places. On top of this, the aggregator realm has stagnated recently while innovation has been sl down. Axis DeFi is looking to contribute to the DeFi ecosystem by so problems of DEX aggregation for cross-chain and layer 2 solutions.

With the crypto market cap hovering around 2.5 trillion, layer 2 aggregator solutions and cross-chain aggregation will be of abs necessity as the ETH chain becomes too populated, essentially allowing those with a large amount of funds to execute profi transactions and investing strategies.

AXIS will bring the world of DEX aggregation into its next generatio providing, ETH Layer 1, cross-chain, and Layer 2 aggregation solutions promise of DeFi is strong, yet with the feature-rich on-chain promis AXIS, a catalyst for the future of DeFi is upon us. AXIS is the future of aggregation.