PrimeRating

Fundamental Report

Prime Rating Report V2.1

Protocol: 0x protocol
Version:
Date: 07/02/2022
Previous Report: PI

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Season/competition: Season 2

Instructions

Please go to files and make a copy of this template.Fill in all questions with a written explainer, any relevant links, and score per variable. Insert the scores in the scorecard at the end of the report. **Please include your sources** into the text (as a link), so others can follow your trail of thought. Please delete these instructions after filling out the template.

Scorecard

1. Value Proposition	Points
a) Novelty of the solution	12 / 15
b) Market fit/demand	13 / 15
c) Target Market Size	8 / 10
d) Competitiveness within market sector(s)	7 / 10
e) Integrations & Partnerships	13 / 15
Total Points - Value Proposition	**53 / 65**
2. Tokeneconomics	**Points**
a) Is the token sufficiently distributed?	12 / 15
b) What is the extent of the token's capabilities?	8 / 10
c) Is the issuance model able to improve the coordination of the protocol?	4 / 10
d) Is the value capture model able to accrue and distribute value?	0 / 10
e) Is the token sufficiently liquid to enable active use and trade?	5 / 5
f) Are there any extrinsic productivity use cases?	8 / 10
Total Points - Tokenomics	**37 / 60**
3. Team	**Points**

a) Is the team credible and public? (No, Partly, Yes & Anon , Yes & Public)	**13 / 15**
b) Does the team have relevant experience?	**8 / 10**
c) Does the team participate and help shape the public debate?	**4 / 5**
d) Is the team able to effectively attract and coordinate resources?	**6 / 10**
Total Points - Team	**31 / 40**
4. Governance	**Points**
a) Admin Keys	**18 / 20**
b) Extent of Governance capabilities	**7 / 15**
c) Active Governance contributors	**3 / 5**
d) Governance infrastructure	**6 /10**
e) Robustness of Governance process	**7 / 10**
Total Points - Governance	**41 / 60**
5. Regulatory	**Points**
a) Does the protocol have any legal accountability?	**15 / 15**
b) What is the quality of the legal jurisdiction?	**10 / 10**
Total Points - Regulatory	**25 / 25**
Total	**187 / 250**

1. Value Proposition

The Value Proposition section describes the value a protocol delivers to its users. Based on the proportion of the problem the protocol aims to solve and the potential of the protocol to effectively solve the problem - better than other industry solutions - a Value Proposition rating is created.

a) Novelty of the solution (15 points)

This score evaluates the novelty (uniqueness) of the protocol. Has the protocol introduced any new innovations that help solve user's problems more efficiently? Is the project a fork? To what extent did they copy/fork the original?

Answer:

In the world of digital currencies, a protocol is a set of standard rules that can be used by a system (or by various transacting parties) to smoothly communicate with each other. The 0x protocol is essentially a standard messaging format that transacting entities can use to exchange digital assets or tokens.

0x is a liquidity protocol that enables the peer-to-peer exchange of assets on the Ethereum blockchain. The protocol establishes a standard set of rules that traders, applications, and market makers can abide by in order to safely & trustlessly trade with each other.
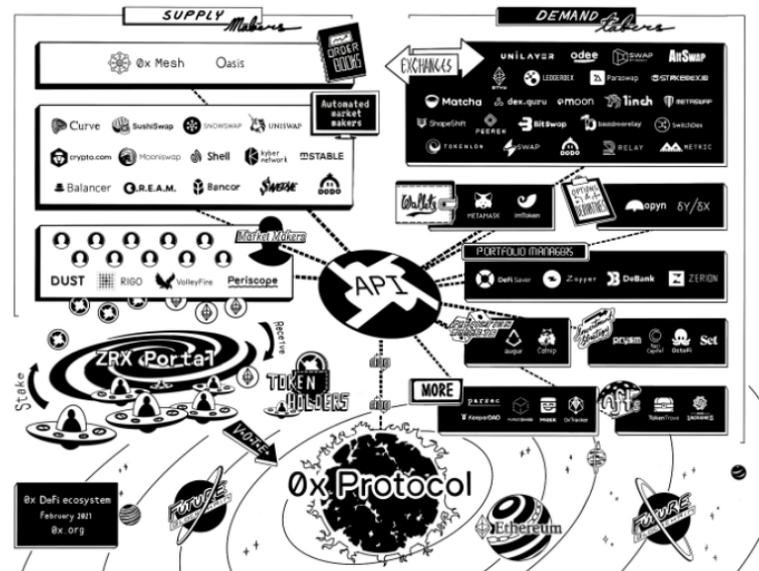
[0x DeFi Eco- System](#)

[0x labs operates 0x API](#), a decentralized exchange liquidity aggregator that taps into Uniswap, Curve, and others in addition to native 0x protocol orders. 0x API powers [matcha.xyz](#), a simple swap application maintained by the 0x Labs team. 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 onboarding the blockchain technology stack and getting traded in digital forms.
Source: [White paper](#)

Score: 12

b) Market fit/demand (15 points)

This score evaluates the degree to which the protocol satisfies a strong market demand. The market fit evaluates if the protocol is able to satisfy the needs of a specific market (can also be measured by user adoption/ #of users). To what extent has the protocol proven to meet the demand of a specific market? Is the timing of the product right for the market? Is the protocol targeting the right market?

Answer:

0x API is a professional grade decentralized exchange aggregation API that allows developers to easily bring swap functionality [with market-leading prices](#) into wallets and DeFi applications, such as [Matcha, DeFi Saver, MetaMask, Zapper, ShapeShift, and many more](#).
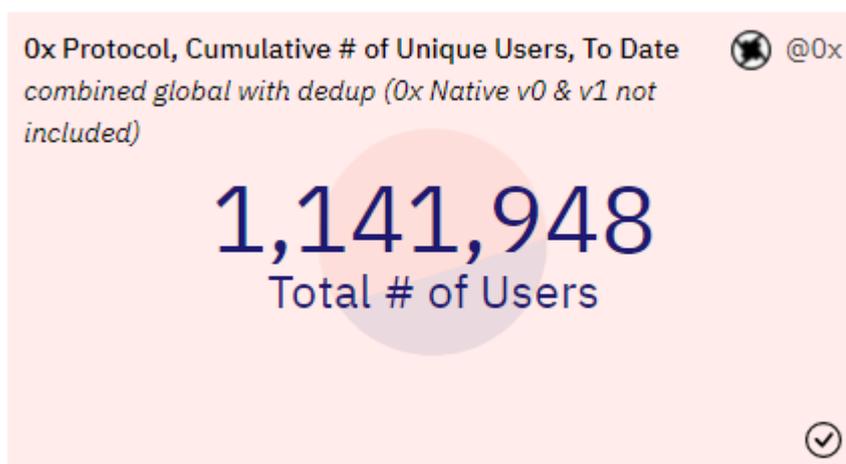
0x remains the most versatile and robust community-owned DEX protocol. 0x protocol offer a professional-grade [decentralized exchange aggregation API](#) that easily allows developers to bring swap functionality into wallets and DeFi applications, as well as automatically share liquidity across the network. Similar to how [Expedia](#) and [Kayak](#) find the cheapest rates in travel, the API aggregates 0x native liquidity from other popular DeFi liquidity sources to deliver [market-leading prices](#) to all integrators and their users.

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In 2020, There is an influx of new API integrations tackling a diverse set of use cases, which resulted in the total volume traded on 0x Protocol reaching over $8B. And in January 2021 alone, $5.7B in traded volume, while currently there is over $125B in trading volume as seen below. Due to the versatility and the robustness of the 0x protocol community, the total user adoption is currently over a Million users. With the number of user adoption and with its marker leading prices 0x protocol has shown signs of a market fit in a promising market.


0x Protocol, Volume To Date
combined global with dedup (0x Native v0 & v1 not included)

$125,855,129,732

Volume To Date

@0x

[0x Protocol Trading Volume](#)

0x Protocol, Cumulative # of Unique Users, To Date
combined global with dedup (0x Native v0 & v1 not included)

1,141,948
Total # of Users

@0x

[Total number of users](#)

The protocol has proven itself to meet market demand by expanding to other EVM chains in order to fulfil market demand as seen below.
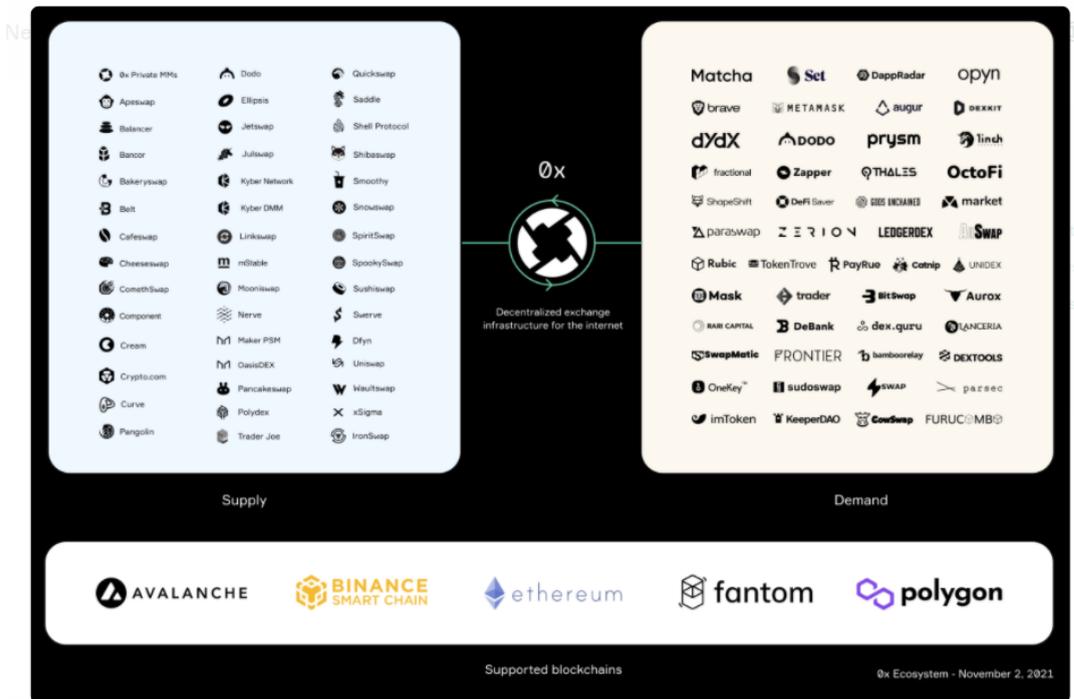
[0x protocol Expansion to other EMV chain (Market Demand)](#)

Score:13

c) Target market size? (10 points)

The target market size evaluates the current and future size of the problem the protocol is aiming to solve. The category of the Open Finance solution can be used as a reference to the target market (for example: Lending). Because Open Finance is by definition global, the global market for a specific problem equals the target market size.

Answer:

The world of decentralized exchanges (DEXes) kicked off in earnest in 2020: starting at $666 million in January 2020, monthly trading volume exploded to $68 billion by January 2021, about a 100x increase. DeFi sector has seen exponential continuous growth, currently the number of DeFi users has increased to over [4.4M](#). Below shows the illustration of the number of users in deFi. According to Defi Liama, the TVL in Defi is $203.24B with Curve having a dominance of 9.6%.
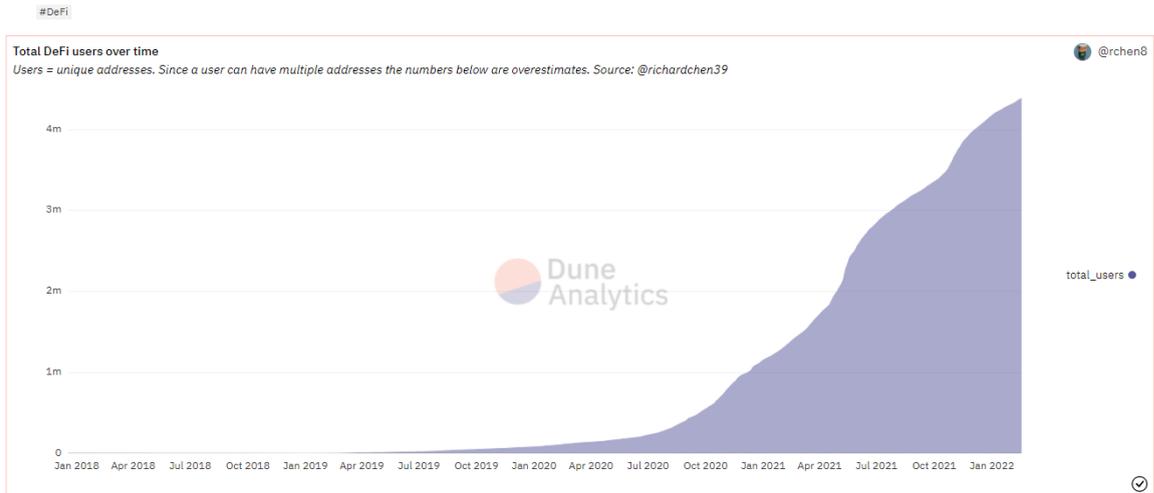
Total number of DeFi Users Dune Analytics

Total value Locked TVL according to DeFi Liama

Protocol name	Protocol type	Price discovery
0x	Exchange	Off-chain order books
(Air)Swap	P2P / OTC	P2P negotiation
Bancor	CFMM	Smart contract
Balancer	CFMM	Smart contract
Curve	CFMM	Smart contract
Kyber Network	Reserve aggregator	Proposal by maker
UniSwap	CFMM	Smart contract

NOTE: CFMM, constant function market maker.

Most Popular Decentralized Exchange Protocols

Score: 8

d) Competitiveness within market sector(s) (10 points)

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This score evaluates the competitiveness of the protocol within the market sector(s) it operates in. This score offers a relative comparison of the protocol and other protocols operating in the same market sector(s). To evaluate this, metrics to directly compare with the competition can be used (e.g. TVL, trading volume, number of users).

Answer:

0x and its API users are on the top 5 on the row of count of unique addresses that are traded and that can be seen on the table below. The trading list leaves 0x a very competitive protocol in the crypto market.

# of Unique Traders, Ranked by 7d Total 📋   ✖ @0x
*Count of unique addresses that traded: inclduing **maker taker** and **tx_sender** , trailing last 7 days.*

Rank	Project	Category	Number of Traders
1	Uniswap	DEX	171,705
2	0x API	Aggregator	41,372
3	Sushiswap	DEX	30,744
4	1inch	Aggregator	28,083
5	0x Native	DEX	4,060
6	Matcha	Aggregator	3,591
7	Gnosis Protocol	Aggregator	3,014
8	Paraswap	Aggregator	1,893
9	Balancer	DEX	1,666
10	1inch Limit Order Protocol	DEX	1,527
11	Curve	DEX	1,317
12	airswap	DEX	1,189
13	Bancor Network	DEX	1,055

Number of Unique Traders, Ranked by 7d Total

As an aggregation protocol, the direct competitor of 0x is 1inch. Although 0x was released after 1inch, its attempts to catch up with 1inch were really impressive.

By looking at these statistics above, it can be clearly seen that in June 2020, 1inch accounts for most of the market share and trading volume. But over time, 0x started to get its part and the number kept growing more evidently.

Although 1inch is a solid and top-notch DEX aggregator, 0x is on its way to catch up. This concludes not just the potential of 0x, but also the correct path that 0x is taking. In the long run, 0x can totally be a worthy opponent of 1inch.

Score: 7

e) Integrations & Partnerships (15 points)

Due to crypto's open-source nature, the code of most protocols can easily be forked. This score represents a piece of "unforkable value". Some indicators to look at are the number of applications built on top of the protocol (vertical integration), other entities integrating the protocol's services (horizontal integration) or the number of relevant partnerships (be careful of logo collections/ partnerships without much purpose).

Answer:
It is important to remember that 0x is NOT a DEX in itself, but rather a protocol in which developers use to build decentralized exchange on top of. Eight of 0x partners are listed below alongside five relayers to the protocol.

List Of Partnerships & Integrations:
- **Aragon**: June 2017- Aragon announced its partnership with 0x to allow Aragon,The integration of 0x now allows Aragon Organisations to be able to swap their ETH with any other ERC-20 token using the 0x Protocol. Trading on 0x is transparent as 0x is completely decentralised and this allows every member of the Organisation to be able to see the movement of coins in the Company Registry.

Aragon partners with 0x
6 June 2017

- **LedgerDEX**: February 2019- LedgerDEX announced that they had added the 0x Instant product into its web application. Thus making the process seamless

LedgerDex Adds Quick Token Buying Feature Powered by 0x Instant

- **Crypto.com**: May 2019- Crypto.com, a payment and cryptocurrency platform, announced that they would be listing 0x's ZRX token (along with HOT and ATOM) to its platform,This also allowed Crypto.com users to store ZRX in their wallet app and make payments through their Card App through their MCO Visa Card at any merchant or retailer worldwide.

23 MAY 2019 / CRYPTO
Crypto.com Lists 0x's ZRX, Holo's HOT and Cosmos' ATOM Tokens

- **StarkWare:** 0x partnered up with StarkWare, an Israeli software-as-a-service company, to develop and test a zero-knowledge proof (ZKP) solution called StarkDEX.This partnership was designed to enhance the scalability of DEX's and bring a high number of transactions per second to decentralized exchanges and StarkDEX was expected to be able to handle up to 500 transactions per second.

0x Teams With StarkWare to Bring Speed to Decentralized Exchanges

May 27, 2019 at 16:00 UTC · Updated May 28, 2019 at 13:22 UTC

- **Bluzelle**: February 2018- Bluzelle announced that they had integrated 0x into their platform and that partnership will see Bluzelle building on top of the 0x protocol to offer relayers a standard and consistent database service.

Bluzelle First Wave Of Collaborations

- **Changelly:** September 2017- Changelly announced that they had integrated 0x into their service. This integration now allows users to easily swap between 0x, BTC, ETH, and a whole range of 70 other coins. It also allows users to easily buy 0x with VISA/Mastercard support.
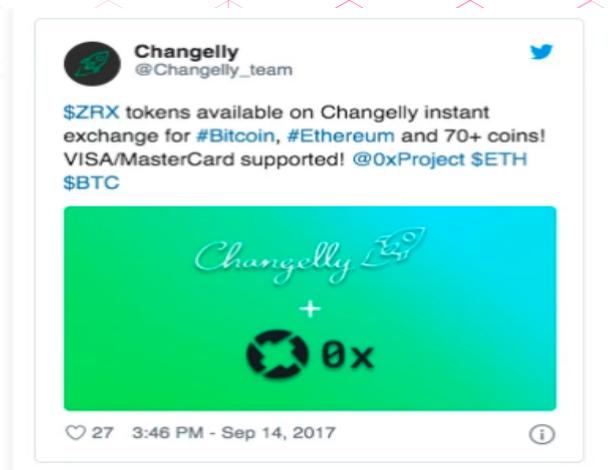
- **Hummingbot**: April 2019- Hummingbot announced their collaboration with 0x after the 0x team provided them with a development grant. Hummingbot is expected to support the 0x ecosystem and is expected to lower the barrier to providing liquidity on the 0x network.
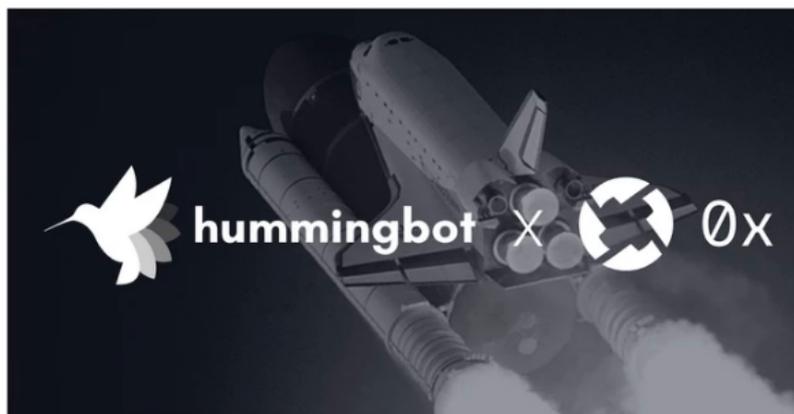
- **Chronobank**: June 2017- ChronoBank, the decentralised recruitment solution, announced that they will integrate the 0x exchange protocol into its exchange engine. ChronoBank provides a decentralised solution for hiring individuals and managing specific work contracts

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Score:13

2. Tokeneconomics

The Tokeneonomics section assesses the function of a protocol's token. This includes the token distribution, functionalities of the token, the ability of the token to incentivize positive behaviour in the protocol, and the ability of the token to capture a portion of the value created.

a) Is the token sufficiently distributed? (15 points)

The token distribution can be an indicator of a healthy protocol. When the protocol tokens are widely distributed among different stakeholder groups and contributors, this genuinely improves the coordinating capability of the token and strengthens the resiliency of the protocol. Was the initial distribution balanced between relevant stakeholders? Are the tokens distributed over sufficient participants (10, 25, 100 largest addresses)?

Answer:

The token (ZRX) is well distributed with around 191,141 distinct wallets holding the token and 55% of the token owned by the top 20 wallets and 74.54% owned by the top 100 wallets. (Source CoinMarketCap) Circulating supply of a total cap of 1 billion (85%). The top 100 holders collectively own 74.54% (745,370,706.56 Tokens) of ZRX.
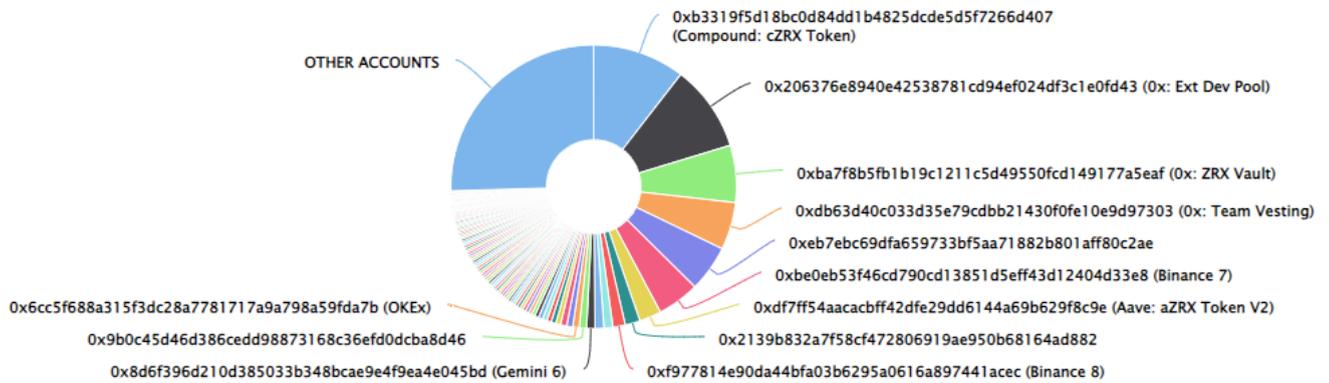
Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 191,141

(A total of 745,370,706.56 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

Etherscan Mainnet Distribution

Due to the distribution of the ZRX token to a wide range of individual (token holders) which improves the coordinating capability of the token and strengthens the resiliency of the protocol, a Score of 12 will be awarded.

Score: 12

# b) What is the extent of the token's capabilities? (10 points)

Is the token useful within the protocol? Does the token allow the holders to participate in governance or influence the protocol in any way? Does it serve any other purposes?

Answer:

As described on their underline, "0x is an open, permissionless protocol allowing for ERC20 tokens to be traded on the Ethereum blockchain." On a high-level, the 0x protocol allows developers to create a decentralized exchange of ERC20 tokens. The ZRX token is the native token of the 0x protocol. The token serves two main purposes:

- All transaction fees on 0x decentralized exchanges are paid in ZRX
- ZRX token holders use their token holdings to vote on future governance decisions of the 0x protocol

Over 600 unique addresses voted on ZEIP, Snapshot and treasury proposals, with over 180M ZRX in voting power being put to work. Notably, a growing percentage of governance actions are community-led. As shown by the graph below, voting power increased substantially over the past year, largely due to the voting power exercised by the 0x DAO delegate group.
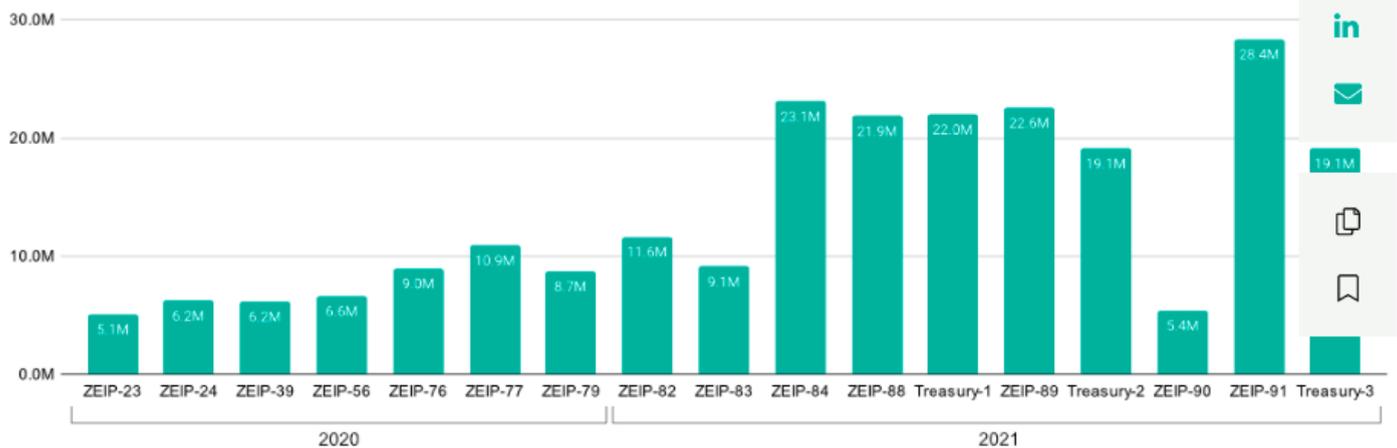
Other purpose of the governance token ZRX are listed below:
- ZRX is used to incentivize users to host and maintain order books for 0x markets. In exchange for this essential service, 0x users gain exposure to fees paid when traders buy and sell assets on the platform, and they may earn additional rewards denominated in ZRX.
- The ZRX cryptocurrency derives value from the role it plays in operating markets on the 0x protocol, rewarding relayers for hosting order books and facilitating trades.
- ZRX is also used as a way to allow users to govern the software and set its rules.
- users can stake ZRX to gain the ability to vote on network upgrades and policies, with each vote being proportional to the amount of tokens they stake.
- Users can also delegate their tokens to other validators, allocating votes to them while still earning a portion of the block reward.

Score: 8

c) Is the issuance/distribution model able to improve the coordination of the protocol? (10 points)

To what extent does the issuance of the token support the advancement and function of the protocol? Are the tokens justifiably being issued? Does the issuance model incentivize the right behaviour? Are all relevant stakeholders benefiting from the issuance model?

Answer:

0x is an ethereum-based decentralized exchange (DEX) meant for trading assets and cryptocurrencies using smart contracts on the 0x platform. The 0x platform was founded in 2016 by Will Warren and Amir Bandeali with the intention of providing a standard protocol on the ethereum blockchain that facilitates the exchange of any ethereum token.

0x completed its initial coin offering (ICO) on July 16, 2017 and raised $24 million in ether - the cryptocurrency of the ethereum network - from a group of 12,000 backers. The majority of the support for this project came fromInvestors such as venture capitalist firms, including Polychain Capital, Blockchain Capital and Pantera Capital, along with Chinese investment firms Jen Advisors and FBG Capital.

According to the 0x white paper, the fixed supply of ZRX tokens are issued to partnering dapps and future end users. In order for the relayers to get paid in ZRX tokens, they must host and maintain and order book off-chain in exchange

for transaction fees. These fees are moved from the maker and/or taker of the smart contracts to the relayer upon settlement of a trade.

ZRX Token Allocation
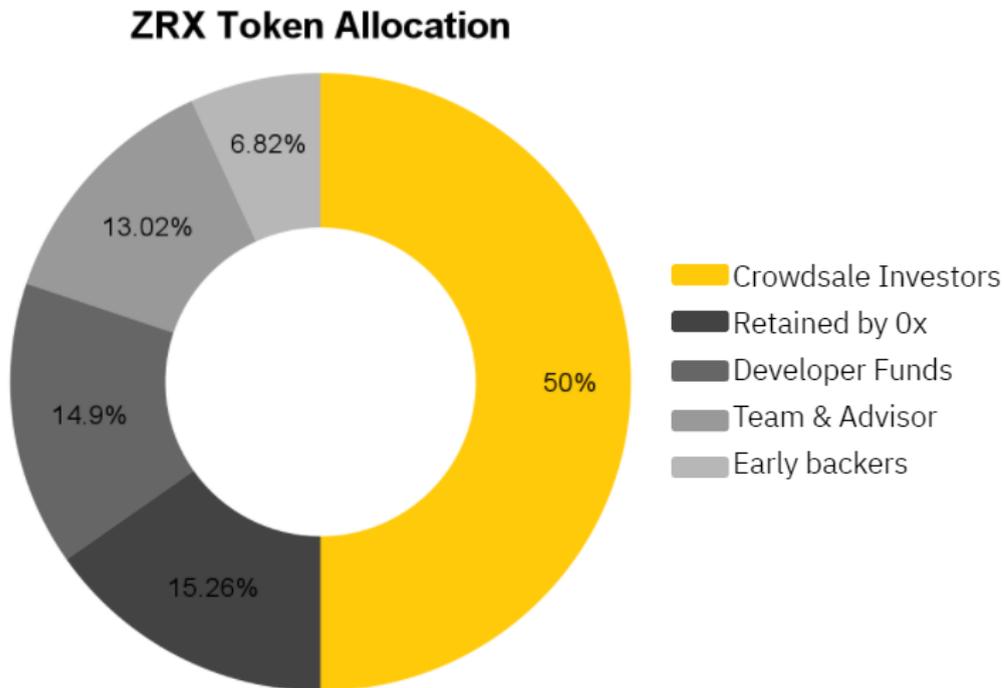
Total of 85% of ZRX token is in circulation, with the allocation of 50% to the investors and 25% to others. Token holders participate in governance with an average amount of approx 4 million ZRX Voted Per Proposal. This means the token model has limited incentives in place for outsiders, apart from the core team, to improve the protocol.

Score: 4

d) Is the value capture model able to accrue and distribute value? (10 points)

A value accrual and distribution mechanism can help improve the utility of a token and its ability to be used as an effective coordination mechanism. Does the protocol have mechanisms to distribute some of the value created to the token holders?

Answer:

The fees mechanism for the protocol has not produced much value for the token holders, a number of factors have converged over the past months that have significantly impacted protocol fee revenue:

- Sharp increase in Q1 and Q2 due to high gas prices and increased volume of open orderbook (limit order) trades
- Sharp decrease in Q3 due to lower gas prices (in particular, the explosion of Flashbots and other MEV schemes) and increased competition for open orderbook liquidity
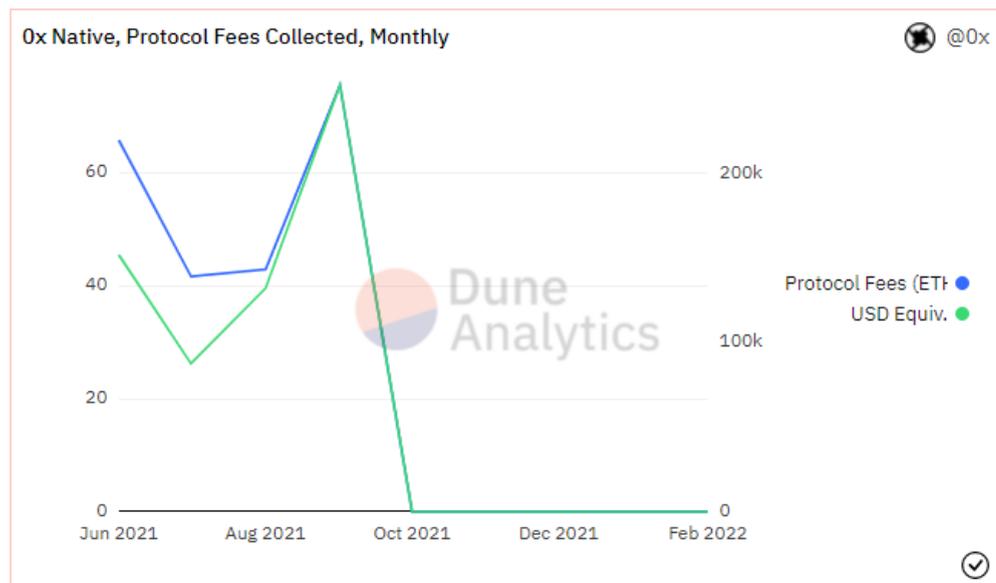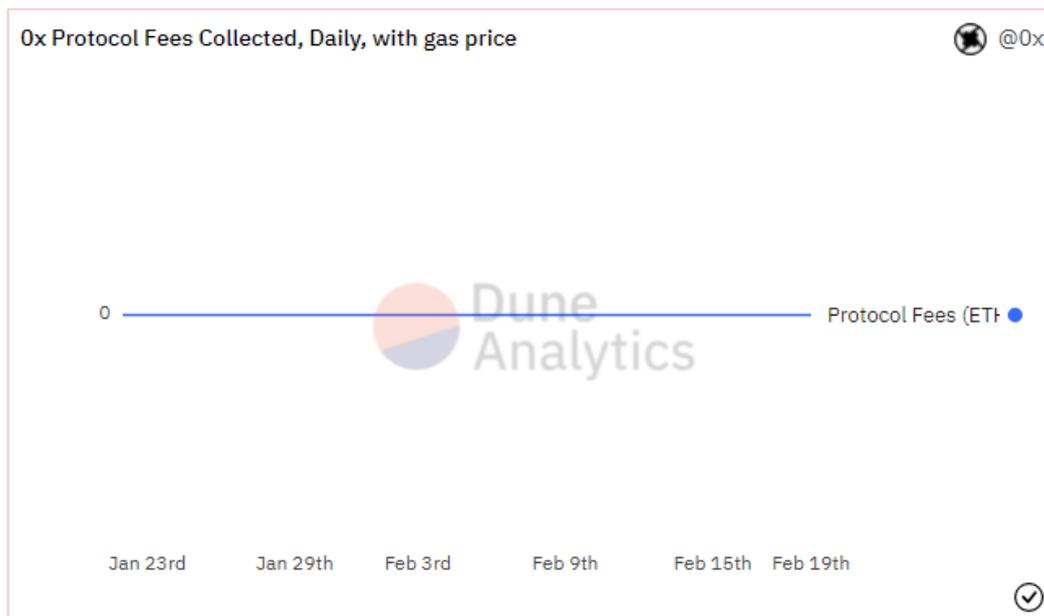
Protocol Fees Collected, Monthly

Decline in the Protocol fees

The protocol fees took a sharp decline due to the proposal to decrease the proposal fees ZEI9 - 79 and ZEIP - 91. Currently the protocol fees is at ZERO (0).

0x Native, Protocol Fees Collected

[0x Protocol Fees collected, Daily with gas price](#)

Score: 0

e) Is the token sufficiently liquid to enable active use and trade? (5 points)

Is the token widely available and is there sufficient liquidity available to facilitate all protocol functionalities?

Answer:

[ZRX token](#) is traded on top ranking centralised exchange and decentralized exchanges It has a circulating supply of almost 850 Million [ZRX coins](#) and a total supply of 1 Billion. 0x has a 24-hour trading volume of $41,694,505 and these can be seen on the attached illustration. Therefore ZRX token is sufficiently liquid.

#	Exchange	Pair	Price	Spread	+2% Depth	-2% Depth	24h Volume	Volume %	Last Traded	Trust Score
*	eToroX Sponsored	ZRX/USD	*$0.641395	0.13%	$47,892	$24,214	$2,933	0.01%	**1 hour ago	🟠
*	Crypto.com Exchange Sponsored	ZRX/USDT	$0.613313	0.08%	$148,092	$172,339	$172,278	0.42%	Recently	🟢
1	Digifinex	ZRX/USDT	$0.613649	0.18%	$1,185,408	$773,011	$856,419	2.10%	Recently	🟢
2	Decoin	ZRX/BTC	$0.612819	0.2%	$851,691	$633,524	$1,369,318	3.35%	Recently	🟢
3	Coinbase Exchange	ZRX/USD	$0.613312	0.04%	$246,167	$690,429	$2,140,331	5.24%	Recently	🟢
4	Binance	ZRX/USDT	$0.614511	0.05%	$290,716	$318,146	$3,580,432	8.77%	Recently	🟢
5	Bitfinex	ZRX/USD	$0.613372	0.15%	$207,677	$227,671	$302,311	0.74%	Recently	🟢

Source: [coingecko](#)

Source: _coingecko_

Score:5

f) Are there any extrinsic productivity use cases for the token? (10 points)

Besides the protocol's value distribution model as described in 2. d), can the token be used productively on other protocols (e.g. as collateral, for lending, LPing, yield farming, etc.)?

Answer:

0x is decentralized exchange infrastructure, built on the Ethereum network. It's designed to facilitate the trade of Ethereum-based assets and tokens, via the use of smart contracts.
The protocol aims to address the speed and liquidity issues associated with other decentralized exchanges, primarily by taking orderbook activity off-chain (fast and cheap). On-chain activity (slow and expensive, but more secure) is only used for the settlement of trades.

ZRX Token Is Used For:
● Governance of the protocol
ZRX holders get to have a say in the development and evolution of the platform, via voting rights. These are given in proportion to the amount of ZRX which is held by a voter.
Rather than a centralized party controlling the direction of the protocol, it is the actual users and stakeholders who get to decide.
● Paying fees to "Relayers"
Since 0x is just a base-layer infrastructure on its own, platforms and user-interfaces built on 0x are necessary to make it easier for the average person to use. Such platforms (or at least the ones which contribute to orderbook liquidity) are called Relayers. Relayers are able to charge fees in ZRX for the service they provide.

ZRN token also provides lending and borrowing on other DeFi platforms such as [YouHodler](), [Aave](), [Compound Finance](). More details to be found [here]():

Score:8

3. Team

The Team section describes the quality of the team behind the protocol. The current version of Prime Rating favours teams that are publicly identifiable. In the case of an anon team, the track record of the specific anons involved can be taken into account

a) Is the team credible and public? (15 points)

Are the identities of the core contributors and team publicly identified? In the case of anon team members, is there any way to track their background/record?

Answer:
0x was founded in 2016 by [Will Warren]() and [Amir Bandeali](). The two co-founders continue to serve the platform, with Will Warren as 0x's CEO, whereas Amir Bandeali is CTO.
The platform launched following a successful initial coin offering ([ICO]()) in 2017, during which it raised a total of $24 million — with support from prominent investment firms including Polychain Capital, Pantera Capital and FBG Capital.
Prior to the sold-out ICO, Warren worked in several research roles and briefly held the role of technical advisor to [Basic Attention Token (BAT)](). Bandeali, on the other hand, graduated from the University of Illinois with a BSc in Finance and held several trading positions before co-founding 0x.

Now the team is composed of more than 30 individuals, including engineers, researchers and designers who work to update the platform and keep it running smoothly.

The core members or public identity of the [team]() are:

- [Will Warren](), Co-Founder & Co-CEO - Before founding 0x Labs, Will was studying in an engineering PhD program
- [Amir Bandeali](), Co-Founder & Co-CEO - Before founding 0x Labs, Amir was a trader with DRW Trading
- [Rui Zhang](), Senior Legal Counsel - Before joining 0x Labs, Rui founded her own blockchain startup in the energy space and was a Senior Legal Counsel at CITIC, a global multinational financial conglomerate
- Various [other teams and stakeholders]() across 0x Labs

0x Team

Will Warren
Co-founder & CEO

Amir Bandeali
Co-founder & CTO

Alex Xu
Chief of Staff

Ben Burns
Designer

Jacob Evans
Senior Engineer

Remco Bloemen
Technical Fellow

Xianny Ng
Engineer

Brent Oshiro
Community Engagement
Lead

Score: 13

b) Does the team have relevant experience? (10 points)

Are there any documents or trails available to showcase the track record of the team? Do the team members have relevant backgrounds and skill sets?

Answer:

The team mentioned on preceding point highlights highly skilled team and they were of the first builders in the DeFi space and this is possible from their recruiting method .0x Labs and its associated entities (0x) are dedicated to fostering diversity, inclusion, and belonging in its teams and workforce, and are proud to be equal opportunity employers. 0x does not make employment or hiring decisions on the basis of race, color, creed, religion, sex, sexual orientation, gender, gender expression or identity, age, disability, veteran status, marital status, pregnancy, citizenship, national origin, or any other basis that is protected by applicable local, state, or federal laws. 0x will also consider qualified applicants with arrest and conviction records in a way that is consistent with San Francisco's Fair Chance Ordinance and similar local laws.

Information about the team experiences in not publicly available, due to the technicality of the 0x protocol, Hiring policy and the growth of the protocol it is clear that the team are highly skilled

Score: 8

c) Does the team participate and help shape the public debate? (5 points)

To what extent do the protocol contributors participate in the public debate around open finance? Are the team members giving presentations, sharing their thoughts and opinions, and do they help raise the collective intelligence of the industry?

Answer:

Yes the team participate and help shapes public debate and that can be confirmed from the debate held on 4th of april 2021 on ,Decentralized Finance: On Blockchain- and Smart Contract-Based Financial Markets where the 0x protocol was identified as the most popular exchange decentralised protocols.

The team has been on the forefront of decentralization, order book matching, and the growth of the entire DeFi space through their open source code and API's.

0x is a protocol that provides the infrastructure for DEXs to build on. By choosing 0x, DEX developers has took advantage of the following features: secure smart contracts, unique developer tools, and access to a variety of liquidity pools.
Currently, 0x has appeared on Ethereum, Binance Smart Chain and Polygon, with no intention of stopping the process. Multiple DEXs have joined the 0x's shared liquidity pool, including Uniswap, Balancer, Mooniswap, Curve, Bancor etc. With this it is evidence that 0x protocol has influence the Defi Industry.

Score: 4

d) Is the team able to effectively attract and coordinate resources? (10 points)

How effective is the team at attracting and coordinating resources for the benefit of the protocol? Has the team raised sufficient funding or are there mechanisms in place to attract resources when needed?

Answer: 0x and Celo Partner to Allocate $4.5M in Joint Funding to Bring Billions of New Users Onto 0x-Powered Applications besides these there are mechanisms inplace to attract resources when needed.
image below depicts figures of total funding amount , numbers of investors , number of employers and contracts.

Total Funding Amount
$39M

Contacts
14

Employee Profiles
4

Investors
26

0x is funded by 26 investors. IOSG Ventures and Blockchain.com Ventures are the most recent investors.

Score: 6

4. Governance

The Governance section evaluates how the protocol is governed and who the governors are. The different governance functionalities and processes are evaluated to determine to what extent the Protocol will be able to self-govern in a way that ensures the development of the protocols while respecting the needs of all current and future stakeholders.

a) Admin Keys (20 points)

Admin Keys allow some critical functionalities of a protocol to be controlled by an admin. This allows the developers to react to potential bugs, but also creates a risk as the developers could potentially misuse the admin keys to exploit the protocol. Does the protocol have admin keys and how are they managed?

Answer:

The admin keys are operated by Dao capable hands and sufficient time are available to reach the admin key. 0x protocol allows the zero governor to perform the following functions within the protocol: managing ownership, managing authorization,administering systems and timelock

The ZeroExGovernor can also manage authorizations all permissioned contracts in the Exchange and Staking systems. While the ZeroExGovernor itself is currently the only authorized address in these contracts, this feature can be used to allow new contracts to perform admin functions under different conditions in the future (such as with an on-chain token vote).

The image below shows the managing authorisations.

```
/// @dev Authorizes an address.
/// @param target Address to authorize.
function addAuthorizedAddress(address target)
    external;

/// @dev Removes authorizion of an address.
/// @param target Address to remove authorization from.
function removeAuthorizedAddress(address target)
    external;

/// @dev Removes authorizion of an address.
/// @param target Address to remove authorization from.
/// @param index Index of target in authorities array.
function removeAuthorizedAddressAtIndex(
    address target,
    uint256 index
)
    external;
```

Score: 18

b) Extent of Governance capabilities (15 points)

Distributed governance allows the token holders to participate in the governance of open finance protocols. How much influence does the governance mechanism have? Are the votes affecting on-chain changes or do they function solely as signals to the team?

Answer:

The highly technical nature of the 0x protocol means that very few outside developers strongly participate in its programing thus far. The voting is only on what to do with the DAO treasury and the team has had three on-chain votes as of December 2021.

All upgrades to the 0x protocol are managed by ZRX holders, as a vote needs to be passed for each soft fork version. The DAO decides on protocol upgrades and administers independent funds (to sustain the protocol development and or other initiatives). 0x Labs is just another ZRX holder participating in the governance. Governance has some influence on operations.

Since its launch, the project has been progressively decentralizing control of the 0x Protocol from the founding team – its initial stewards – to an ecosystem of incentive-aligned contributors and participants – its community.

0x Governance Roadmap

	2017-2019	2020	2021	2022-2025
Release decision making	0x Core team ZEIP	0x Core team curated ZEIP process	Elected ZEIP commitee Community-led vote cadence	Community-led release pipeline
Voting	Off-chain	Onchain for selected parameters	Onchain for core contracts	Trustless voting-based deployment process
Release structure	Monolithic	Modular	Function level	
Development teams	0x Core team	0x Core team + 0x enthusiasts	0x Core team + 0x enthusiasts + community-funded teams	Community-funded or self-funded team (includes businesses)
Development funds (audits, grants)	0x Core team	0x Core team	0x Core team Community Treasury	Community Treasury Self-funded teams
	an *informed* community	an *engaged* community	a *responsible* community	an *accountable* community

Source: 0x Governance Roadmap

The establishment of a community-owned treasury, and the allocation of voting power to a 0x DAO delegate group, the community gained substantial agency in setting the course for the protocol's future. Detail of the Governance capabilities and road map can be found here

**Score: 7**

c) Active Governance contributors (5 points)

Governance is a process that can be rather resource-intensive if executed well. To ensure good governance is practised by the protocol, it's important to have a sufficient number of governors allocate resources to the governance process of the protocol. How many individuals participate in the debate around the protocol? How active are voters?

Answer:

In 2021, over 600 unique addresses voted on 10 ZEIP and treasury proposals, with over 180M ZRX in voting power being put to work. Notably, a growing percentage of governance actions are community-led. As shown by the graph below, voting power increased substantially over past year, largely due to the voting power exercised by the 0x DAO delegate group.

Voting power (ZRX) by proposal
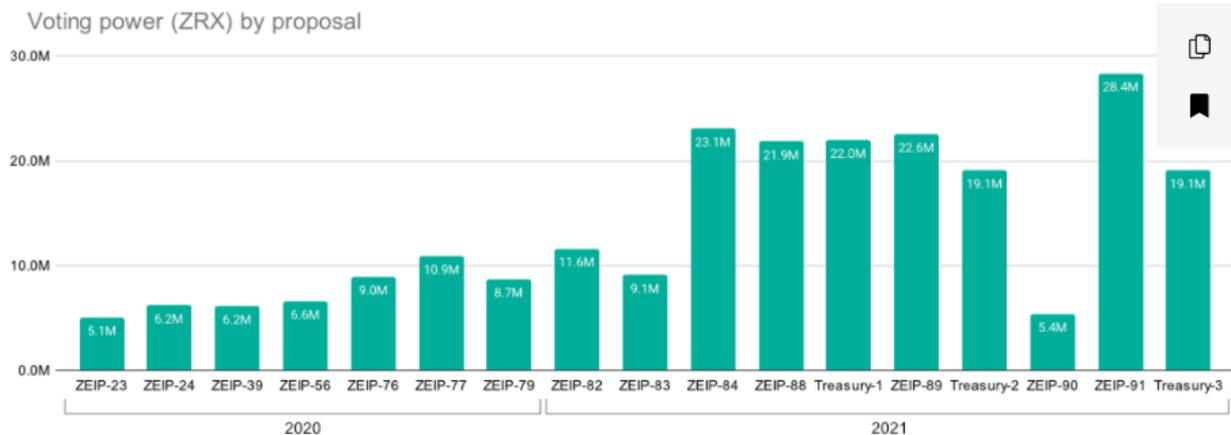
ZRX token holders can become more involved in 0x governance by joining the conversations in the 0x forum or visiting the ZRX portal to participate in community governance. There are currently three types of votes that token holders may participate in on the portal:

Type	Purpose	Requires Gas	Requires Staking/Delegation
Snapshot	Non-binding poll to measure sentiment on a particular topic or proposal	no	no
ZEIP	Binding vote related to upgrading the core 0x Protocol	no	yes
Treasury	Binding vote related to the usage of the community treasury	yes	yes

The protocol has active governance contributors. In April, with the formal launch of the 0x DAO, the establishment of a community-owned treasury, and the allocation of voting power to a 0x DAO delegate group, the community gained substantial agency in setting the course for the protocol's future. As on the 29th of december 2021 the 0x Dao Treasury breakdown expressed gratitude to Polygon and Celo for their generous contributions.
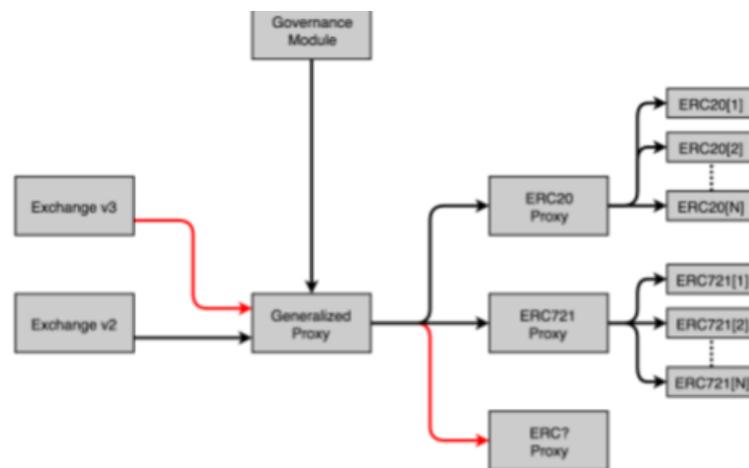
Score: 3

d) Governance technology/infrastructure (10 points)

The Governance infrastructure relates to the technology, software, and models used by the protocol's governance. Does the protocol have a reliable and usable voting mechanism? Are there channels for governance debate? Is there sufficient documentation available?

Answer:

The protocol has a governance infrastructure that relates to technology, software and models used by the protocols governance. 0x is an open source protocol (code on Github) built using Ethereum smart contracts aimed at DApp developers who wish to build exchange applications for trading ERC20 compliant tokens In future, the 0x token (ZEX) holders will be able to upgrade the protocol via a decentralized governance mechanism

Governance is used to remap the connections between different Ethereum smart contracts in the pipeline and that is illustrated on the diagram below

Active participation in the 0x community is done through the governance forum, Github, Snapshot rather than the Discord channel. Things are well documented but the DAO uses simple tools for their liquid democracy voting model.

Score: 6

e) Robustness of Governance process (10 points)

This score requires documentation specifically on the governance process that sets the basic framework in terms of agreements, norms, and language for governing the protocol and to create social consensus. Does the protocol have a formal governance process? How robust is the governance process and does it promote good governance?

Answer:

The 0x protocol has a governance process and it can be assessed here.

Currently at the time of writing the governance of the community is through ZEIP's which is a formal governance process in the community. Documentation on the 0x protocol itself is robust and very technical. Governance is extremely important as the overall protocol is only upgraded through governance votes. As the system is modular, changes are able to be made as a soft fork without liquidity providers moving funds to the new version.

Score: 7

5. Regulatory

The Regulatory section describes the extent and quality of the regulatory environment that affects the Protocol. To be able to guarantee functionality, security, and legality the protocol should comply with regulatory requirements, or limit itself to facilitating services to users who are willing to operate outside of the traditional regulatory environment.

a) Does the protocol have any legal accountability? (15 points)

Does the protocol have any form of legal accountability? Can users and partners hold the protocol accountable in case of a breach of the agreement?

Answer:

The protocol is a non profit organisation incorporated in the USA under the official name ZeroEx, Intl. The team has been operating in the US since 2016 without regulatory issues. Since they started operation in the year 2016 there have not been a case involving regulatory problems. Thus it can be said that it has a legal accountability

The protocols legal guide can be found here along side the protocols governance legal library. The united state federal securities guide is in on the protocols support
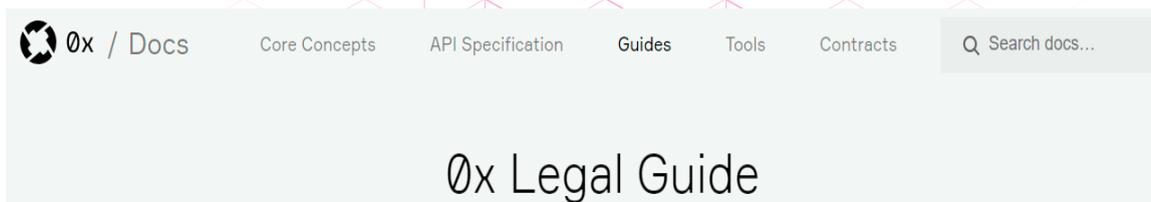
Score: 15

b) What is the quality of the legal jurisdiction? (10 points)

If the protocol has a legal entity, what is the quality of the jurisdiction the entity is established in? Will the jurisdiction be able to facilitate the legal framework for the protocol to expand while remaining accountable.

Answer:

0x is a non profit based in San Francisco, CA USA. The legal jurisdiction is strong.it has a federal regulatory guide . the liik to the legal document can be found here

Score: 10

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