Rocket DAO

Expert Platform

The Token Economy Evaluation Methodology

Methodologists:
Alexander Grablevski, Inga Gicheva

Evaluation section:

Token economy

We describe token economy (tokenomics) as the set of rules (institutes) for internal interaction between project's participants based on specific unit of value - token.

Tokenomics is a very important side of the project. Well-defined rules allow project to thrive while wrong set of tokenomics may destruct the project in the long term via lack of token velocity, lack of motivation of participants etc. The aim of the methodology is to evaluate project's token economy through designed criteria:

Blockchain usage rationality
It's a common knowledge that using blockchain technology is really fashionable nowadays. The aim of the given section is to evaluate rationality of using blockchain as an underlying technology.

Incentivazation
One of the most important things for token economy is having prerequisites for token velocity. Token-usage incentives, token liquidity and velocity of tokens are very similar terms and are evaluated in incentivization part.

Token economy modeling
Token economy should be tested before launching.
Economical modelling is able to detect tokenomic's bottlenecks and avoid it. For instance It's possible to use classical monetary theory for forecasting the behaviour of token economy.

Scalability
The project should be able to grow. Otherwise the flow of newcomers ends and the project's evolution stops. Scalability is the ratio of tokenomic's ability to grow.

External influencers
The token economy should be resistant for external shocks and faults of connecting-with-outside-world points (e.g. oracles). Otherwise external fluctuations may damage project's ecosystem.

Info criterias assessment
There are some terms whose optionality or consistency are different for every project. Here we call them info-criteria. It's almost impossible to measure info-criterias separately within a particular project so the way out is to assess all info criteria in a whole according to expert's opinion about it. Info criteria include:

- Decentralization ratio,
- Types of tokens,
- Underlying blockchain and token standard,
- Initial token distribution.

1 Blockchain usage rationality -2 -1 0 1 2

Answer YES/NO to the questions and sum the points according to the answers. After finishing the block follow the instructions.

A. Does the project remove intermediaries or brokers?
- Yes (1)
- No (0)

B. Is project working with digital assets (VS physical assets)?
- Yes (1)
- No (0)

C. Can project create a permanent, authoritative record of the digital asset in question?
- Yes (1)
- No (0)

If the sum is 3, keep answering the questions.

Otherwise the overall rating of the project is (**-2**). It means that the project should not use blockchain.

D. Does the project require high performance, rapid transactions?
- Yes(0)
- No(1)

E. Does project intend to store huge amounts of non-transactional data onchain?
- Yes(0)
- No(1)

If the sum is 5, keep answering the questions.

Otherwise, the overall rating of the project equal to (**-1**). It means that Blockchain can't do this effectively yet.

F. Does project rely on a trusted party? (e.g, for compliance or liability reasons)
- Yes(0)
- No(1)

G. Is project managing contractual relationships or value exchange?
- Yes(1)
- No(0)

H. Does project require shared write access?
- Yes(1)
- No(0)

I. Do contributors know and trust each other?
- Yes(1)
- No(0)

If the sum is 9, keep answering the questions.

Otherwise the overall rating of the project equal to (**0**).

J. Does project need to be able to control functionality?
- Yes(0)
- No(1)

K. Should transactions be public ?
- Yes(1)
- No(0)

If the sum is 11, then the overall rating of the project equals to **(2)**.
Blockchain is suitable underlying technology in the particular case. Probably, public ledger is the best option.

Otherwise, private ledger/permissioned ledger is the best option. If the project is built on private blockchain, the score is **(2)**. If the project is built on the top of public blockchain the overall rating is **(1)**.

2 Incentivazation 0 1 2

Model of incentivization could be evaluated via the matrix of interactions of participants.

To build such matrix next steps should be done:

1. Split all participants of tokenomics into groups (e.g. projects, investors, methodologists, experts...). Speculators should be ignored.
2. Fill empty cells with pure incentives for interaction of groups on intersections. Groups in rows pass tokens on to groups in columns. (Fill each cell with incentives for the group to pass on the tokens)

Every cell should contain at least one statement for each criteria:

- Incentives for the group to pass tokens on to another group;
- Incentives for another group to accept tokens from the given group.

Intersection on the same groups means velocity inside the given group and may contain only one statement.
All speculative incentives should be ignored.
If there is only one of two statements consider the cell as non-filled.

See the matrix below for detailed explanation.

		THEY accept tokens (e.g. buying)		
		GROUP 1	**GROUP 2**	**...**
THEY pass tokens (e.g. selling)	**GROUP 1**	Incentives for token circulation within GROUP 1	• Incentives for the GROUP 1 to pass tokens on to GROUP 2. • Incentives for the GROUP 2 accept tokens from GROUP 1	...
	GROUP 2	• Incentives for the GROUP 2 to pass tokens on to GROUP 1 • Incentives for the GROUP 1 accept tokens from GROUP 2	Incentives for token circulation within GROUP 2	...
	...	...	...	...

After filling the matrix it's necessary to evaluate the balance of token economy.

One of the most import thing - is to have both filled cells on symmetric around main matrix diagonal line (group 2 -> group 1 and group 1 group 2). If both of it is filled the velocity of tokens is guaranteed.
If only one of two cell is filled, the economy is not stable in the long run.
If none of two cells is filled there is no any token circulation between given groups. (it is not a problem if there are other groups with guaranteed velocity)
Filling cells on the main diagonal of matrix is not crucial.

The overall points are set as:

All necessary cells(not all cells in the matrix), according to the logic of business model, are filled.	2
There are at least ROUND_UP(n/2) pairs of summetric filled cells. n is the number of groups.	1
In all other scenarios.	0

3 Token economy modeling 0 1 2

Token economy should be tested before launching.

The overall points are set as:

Token economy stress tests or mathematical models are built according to economic theory and is not contrary to logics.	2
There are token economy stress tests or mathematical calculations. Their consistency with economic theory or logical conclusions are arguable.	1
Project doesn't have any distinct mathematical models or tests.	0

4 Scalability 0 1

The economy of the project should be able to grow. Scalability is the ratio of economy's ability to grow.

Scalability measures:

1. Newcomers

- Is it easy for newcomers to join the system?
- Is the system adapted for newcomers? Is there are any costs for the system to adopt new participants?
- Does aged participants have privileges over newcomers? Is it a tough issue for newcomers?

2. Internal growth drivers

- Is there are any incentives for new participants to appear?
- Is there are any incentives for aged participant not to leave?

3. Scalability

- Is the internal project economy able to adjust the flow of newcomers? Are there any internal mechanisms for self-adjusting? (if necessary)
- Flow of newcomers does not significantly affect the price of the token, is it?
- Stress tests for flows of new participants are described in doc, isn't it?

4. Scalability limits

- Isn't there are any limitations for scalability?
- Aren't there any restrictions connecting scalability?

The overall points are set as:

Token economy is considered as stable to external influencers (and it's faults)	1
Token economy has internal barriers of the growth	0

These rules are not recommended for any private blockchain or private systems.

5 External influencers 0 1

The token economy should be resistant for external shocks.

1. Does any external shocks could affect the stability inside the system? Are there any mechanisms for automatic minimizing outcomes after external shocks?
2. Does the system rely on external parametres? (e.g. oracles)
   If yes, is it trustworthy source?
   (trustworthy = external data flow is stable; It's extremely hard to compromise the data; the data is totally objective)

The overall points are set as:

The token economy is considered as stable to external influencers (and it's faults)	1
Faults of external influencers cause significant fluctuations of the project's economy.	0

6 Decentralization ratio info

Let's highlight different types of token economy administrations:

1. Pure decentralization
   There is no a peer in a whole network or outside it which is able to influence the system more than any other peer.
   Mostly unrealistic case. The most similar case is Bitcoin's network.
2. Decentralized with single regulation point
   There is a peer outside the network which is able to influence the network indirectly, e.g. not affect on transactions but being able to affect network's state.
   Ethereum is a case. Ethereum core team is able to fork the network but is not able to affect any single transaction.
3. Decentralized with multiple key players
   There are multiple peers (e.g. smart-contracts, intermediaries) which are able to influence the whole network or it's part. Every such a peer is a bottleneck of the whole network. Every key player provides it's services.
   Bancor's smart-contracts is a typical option.
4. Falsely decentralized
   There is a single peer inside the network which is able to directly influence the network. Fault of that peer potentially is able to break the whole system. In the terms of economic theory every peer have to pay institutional tax to the central peer.
   Imaging TheDAO with fees transferring to it's creator.
5. Multiple user groups
   There are different groups of participants interacting with each other mostly between but not inside the groups. Marketplace is a typical option for the given case.
   FileCoin, Play2Live are typical projects here.
6. Private blockchain systems
   Limited and controlled decentralization within a private blockchain network.

The formal definitions and boundaries of each type are quite abstract, it's necessary to feel it:)

Specify the type of decentralization in the comment section.

7 Types of tokens info

There are three basic types of tokens:

- **Security token (SEC) / Asset token (FINMA)**
  Security tokens represents assets such as participation in real physical underlyings, companies, or earnings streams, or an entitlement to dividends or interest payments. In terms of their economic function, security tokens are analogous to equities, bonds or derivatives.
- **Utility token (SEC) / Utility token (FINMA)**
  Utility tokens provides access to the goods & services that the project will launch in the future. Also, they can be used as a type of discount or premium access to the goods & services of the project.
- **Cryptocurrencies (SEC)/Payment tokens(FINMA)**
  Usually, the tokens of this category have no further functions or links to other development projects. Speaking broadly, cryptocurrencies purpose is to be items of inherent value that are designed to enable purchases, sales, and other financial transactions.

Specify the type of token in the comment.

8 Underlying blockchain and token standard info

There are multiple blockchain networks to start the project. (E.g. Omni, Ethereum, EOS, NEO, etc). Fork existing blockchain or launch new one is also an option.

The most common blockchain systems have their own standards of the token (E.g. Ethereum: ERC-20, ERC-223, ERC-721, ERC-948, etc.)

Specify the underlying blockchain and token standard in the comment.

9 Initial token distribution info

Procedure of initial token distribution	PreICO/ICO (public/private); AirDrop; Tokens selling via exchanges; etc.
Total tokens issued	The nominal amount of issued tokens.
What percentage of token amount belongs to team or frozen?	Team percentage; Frozen percentage.
How tokens are distributed around community?	Token distribution around different user-groups.
Soft Cap	(fiat estimation)
Hard Cap	(fiat estimation)
Token price during ICO	Initial token price, price changing during the ICO (if possible)
Raised money, total	Fiat estimation, amount of crypto, accepted during ICO currencies.
ICO terms, duration	Start/end date; Other comments;
Other presale details	If there are.

10 Info criterias assessment 0 1 2

It's hard to assess info criterions separately. The aim of the given paragraph is to assess all info criterions in a whole according to expert's opinion about it.

The overall points are set as:

Ideas of the project are logically unified; there are no faults between them.	2
Info criterions consistency is arguable.	1
Info criterions are not consistency; At least one of them (e.g. token type) contradicts basic project idea; Expert is not agree with the logic of the project.	0

Final form

1.	**Blockchain usage rationality**	score:
Comment:		
2.	**Incentivazation**	score:
Comment:		
3.	**Token economy modeling**	score:
Comment:		
4.	**Scalability**	score:
Comment:		
5.	**External influencers**	score:
Comment:		
6.	**Decentralization ratio**	INFO
Comment:		
7.	**Types of tokens.**	INFO
Comment:		
8.	**Underlying blockchain**	INFO
Comment:		
9.	**Initial token distribution**	INFO
Comment:		
10.	**Info criterias assessment**	score:
Comment:		
	TOTAL	

*Comments for INFO-criterions could be written in separate.
**If the total score is negative change it to zero.