

DEXNET

Tokenomics Audit

If you have any questions about smart-contract audit,
contact us hello@getsmart.site

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Introduction

The purpose of this document is to provide an audit of XNet token economy. The document describes any adjustments that have been made in order to improve the token economy, as well as simulations that were performed in order to test XNet assumptions.

Preliminaries:

- 1) The token allocations of XNet have been provided, and checked. They are presented here, as well, for the sake of completeness, but no flaw was found.
- 2) XNet has provided extremely detailed financial projections. These projections cover an optimistic and a pessimistic scenario. These projections were then taken as the base of the simulated stress tests.

XNet token economy is assigned a rating of AA (high rating). The rest of this document explains the tests conducted, and justifies the final score.

Source methodology:

<https://jbba.scholasticahq.com/article/77551-the-tokenomics-audit-checklist-presentation-and-examples-from-the-audit-of-a-defi-project-terra-luna-and-ethereum-2-0>

Some weaknesses of this framework include:

- Lack of standardization of the tools used to perform the audit. Tokenomists use a wide arsenal of tools, from game theory to simulations, set up in an arbitrary way.
- There are more areas that could be addressed (e.g., decentralisation and scalability), and are not covered in this framework.
- The framework uses a scoring system which might objectionable, given that different auditors or even projects, might consider some other questions to be more important than others.

Token supply and allocation

Tokens amount 3,000,000,000 XNet

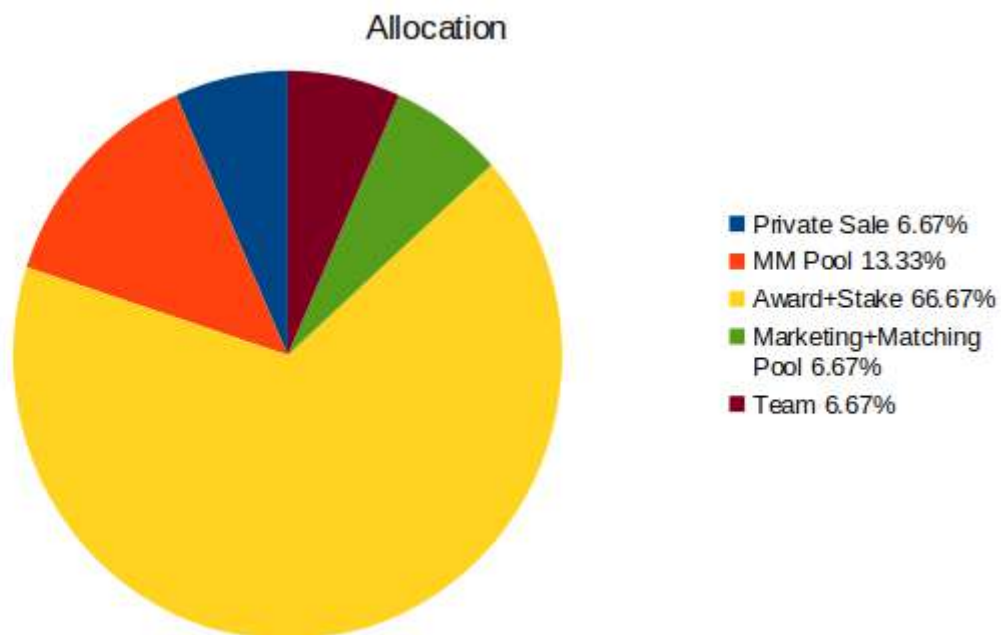


Table1. Token allocation

Token Distribution	Private Sale	MM Pool	Award + Stake	Marketing + Matching Pool	Team	Total
Token Allocation, %	6,67%	13,33%	66,67%	6,67%	6,67%	100,00%
Tokens Allocated, XNet	200,000,000	400,000,000	2,000,000,000	200,000,000	200,000,000	3,000,000,000
Cliff, months	12	-	-	-	12	
UnLock Period, months	12	-	-	12	36	

Reward model for the curation economy

Reward for devices

Reward = DailyBlockRate * Dexrate

Before block 49 all devices get reward from block rewards.

Table 2. DailyBlockRate per 1-48 blocks

Block Number	Tokens in block	1 device/month	1 device/day
1	30 000 000	30 000	1 000,00000000
2	20 000 000	15 000	500,00000000
3	10 000 000	7 000	233,33333333
4	10 000 000	3 500	116,66666667
5	10 000 000	2 000	66,66666667
6	10 000 000	1 500	50,00000000
7	10 000 000	1 000	33,33333333
8	10 000 000	800	26,66666667
9	10 000 000	600	20,00000000
10	10 000 000	400	13,33333333
11	10 000 000	300	10,00000000
12	10 000 000	200	6,66666667
13	10 000 000	150	5,00000000
14	10 000 000	100	3,33333333
15	10 000 000	90	3,00000000
16	10 000 000	70	2,33333333

17	10 000 000	50	1,66666667
18	10 000 000	40	1,33333333
19	10 000 000	30	1,00000000
20	10 000 000	20	0,66666667
21	10 000 000	15	0,50000000
22	10 000 000	15	0,50000000
23	10 000 000	15	0,50000000
24	20 000 000	10	0,33333333
25	20 000 000	9	0,30000000
26	20 000 000	8	0,26666667
27	20 000 000	7	0,23333333
28	20 000 000	6	0,20000000
29	20 000 000	5	0,16666667
30	20 000 000	4	0,13333333
31	20 000 000	3	0,10000000
32	20 000 000	2	0,06666667
33	20 000 000	2	0,06666667
34	20 000 000	2	0,06666667
35	20 000 000	2	0,06666667
36	20 000 000	2	0,06666667
37	20 000 000	1	0,03333333
38	20 000 000	1	0,03333333
39	20 000 000	1	0,03333333
40	20 000 000	1	0,03333333
41	20 000 000	1	0,03333333
42	20 000 000	1	0,03333333
43	20 000 000	1	0,03333333
44	20 000 000	1	0,03333333
45	20 000 000	1	0,03333333
46	20 000 000	1	0,03333333
47	20 000 000	1	0,03333333
48	20 000 000	1,00	0,03333333

There is an exponential distribution schedule. After block 48 all devices get token by distribution from $(240,000,000 + \text{ReservePool}) / 360$ days.

If month rewards do not meet month limit and ReservePool gets funds left. When rewards meet limits than other rewards rescheduled to next block.

Trade rewards are accumulated from trades on DEX.

Staking for device owners

Allocated 500,000,000 XNet tokens for staking

When the Staking Pool runs out of tokens. Rewards are credited immediately to the account without additional freezing.

Table 4. Staking1 yearly rewards

Time	APY %
3 months	12%
6 months	24%
1 year	36%
2 years	48%
3 years	60%

Staking for other users

Allocated 500 000 000 XNet tokens for staking.

Staking is a program for participants who are ready to block tokens for a selected period and receive a reward. Staking is available for everyone.

Table 5. Staking2

Time	APY %
3 months	10%
6 months	20%
1 year	30%
2 years	40%
3 years	50%

Appendix: Token simulations

Assumptions

1) All transactions outlined in the financial will be in the XNet token, with a fiat equivalent in terms of value.

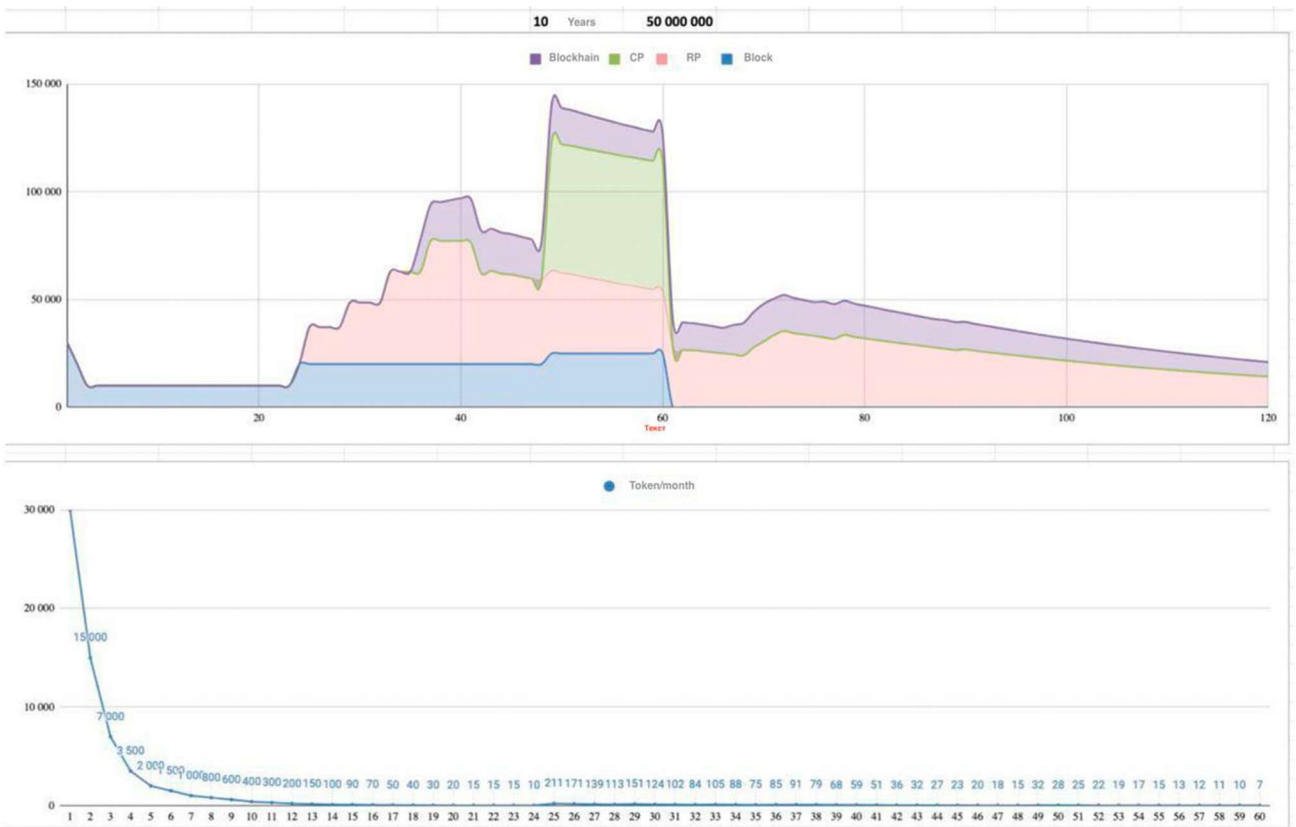
2) The rewards roll-over 120 months. The reward simulation was just plugged into this simulation.

The aim of the simulation was to test the assumptions underlying the financial projections and examine the key results. Modeling details are presented in the appendix.

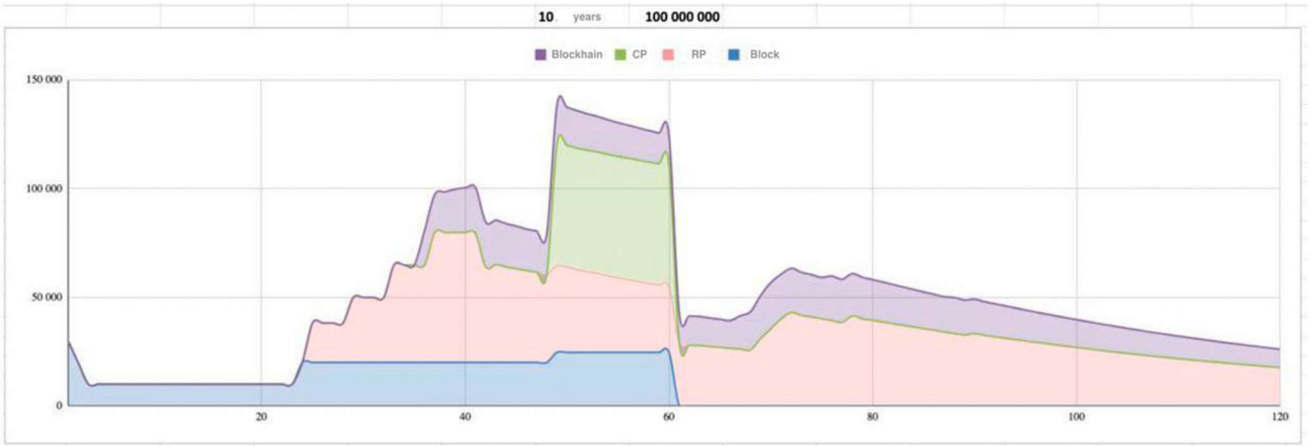
The graphs below show the results of typical runs. As for the optimistic forecasts, the modeling showed that there is an increase in prices. According to the pessimistic forecasts, there seems to be price stability without any growth.

Either way, the token does not appear to be crashing or experiencing pump and dump dynamics. This is not to say that this type of scenario cannot materialize, but the design of the token itself does not encourage this type of dynamic outside of market externalities.

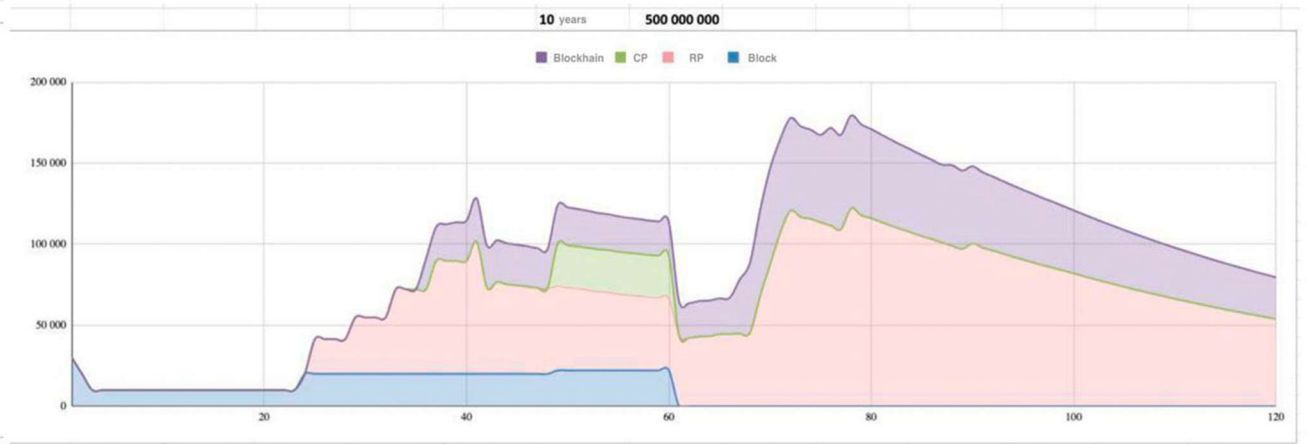
Optimistic forecast for 10 years and 50 millions devices



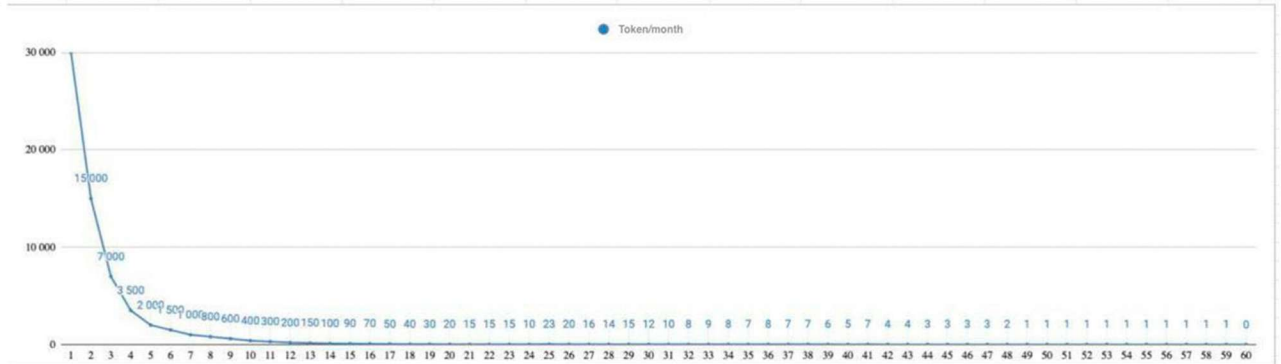
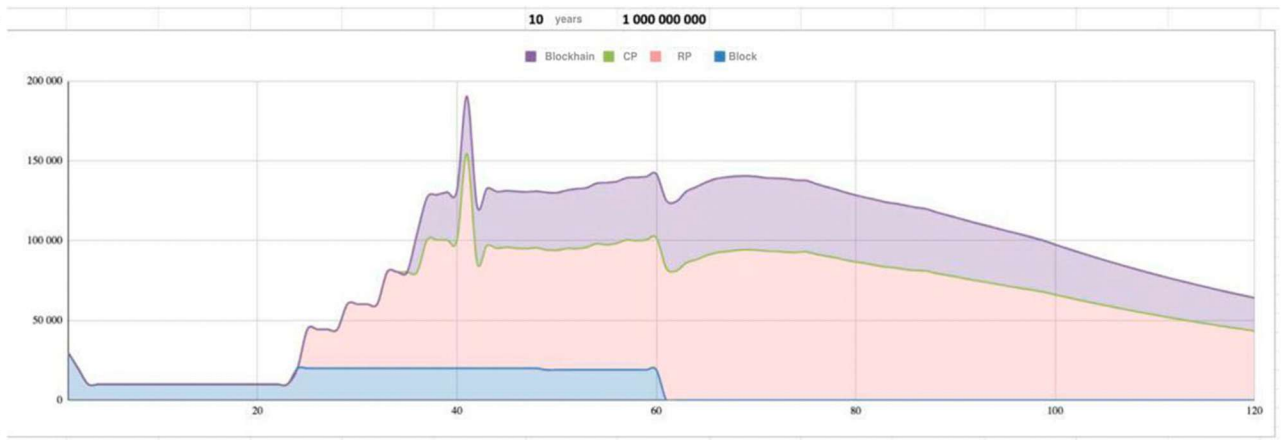
Optimistic forecast for 10 years and 100 millions devices



Optimistic forecast for 10 years and 500 millions devices



Optimistic forecast for 10 years and 1 billions devices



KPIs and Financial Projections

As a marketplace, our Key Performance Indicators relate to

1. Active users – both sellers at primary auctions (“Listers”) and traders in the secondary market (“Traders”);
2. Volumes of devices sold, ie the tokens value distributed by tokens rewards;
3. Volumes of tokens traded on DEX, ie the \$ value of both tokens listed for primary sale and fractions traded in the secondary market.

Appendix 2: Tokenomics ranking framework

Business-Token Interaction

1. Do tokens improve the current business model?
Yes: +1, No: 0
2. Is the token nice to have, or an essential part of the business model?
Essential: +1, Nice-to-have: 0
3. Can the project gain value (not the token) in fiat terms?
Yes: +1, No: -1

Structural Analysis

1. Cash-flows:
 1. Does the token economy have an influx of value (e.g., in fiat) coming in?
Yes: 0, No: -1
 2. Does money stay in the token economy, or is there pressure to immediately sell?
Stay: +1, Sell pressure: -1
 4. Are there ponzi-like elements?
Yes: 0, **No: +1**
2. Mechanisms and all economic agents involved
 1. Do interactions generate additional value expressed in fiat?
Yes: +1, No: 0
 2. Does the project require a critical mass in order to be able to provide value? E.g., social networks are a good example of this.
Yes: 0, No: +0.5
 3. Are the incentives speculative? For example, rewards with no underlying value?
Yes: -1, **No: 0**
3. Demand Drivers
 1. Do all the demand drivers depend on controllable factors or uncontrollable factors? An example of a controllable factor is product quality. An example of an uncontrollable factor can simply be the market conditions.
Controllable: +1, **Uncontrollable: 0**
 2. Are there levers the economy can use to influence demand?
Yes: +1, No: 0
 3. Do they depend on entities that generate real economic value or more on internal or speculative factors, e.g., expected token appreciation because of rewards?
Real economic value: +1, **Speculative: -1**
4. Governance:
 1. Can a majority take over?
Yes: -1, **No: +1**
 2. Can governance cause sticky points? E.g., votes need to take place, but no one is voting.
Yes: 0, **No: +1**
5. Empirical proof:
 1. Has there been proof that the mechanisms used in the project can work successfully?
Yes: +2, No: 0

Allocation and Distribution

1. Does the allocation favour pump-and-dumps?
Yes: -1, **No: 0**
2. Does it provide unnecessarily large stakes to certain actors?
Yes: -1, **No: 0**

- Does the distribution avoid creating unnecessary sell pressure? An example of this can be excessive airdrops.
Yes: +1, No: 0

Stability and stress tests

- How exposed to shocks is the token? Answering this requires simulations. Use a scale from -2 to 2 represents a token that can withstand huge shocks (e.g., massive bear market), and a -2 represents a token that can only appreciate when conditions are perfect.
Score: +2
- Does the token appreciate when simulated? If the objective of the token is to provide a peg or some other functionality, then this question can be ignored.
Yes: +1, No: -2
- Does the system have feedback loops, which could accelerate a crash (e.g., the Terra/Luna case)?
Yes: -1, **No: +1**

Points interpretation

The maximum score can be 18.5:

- Business-token interaction (3)
- Structural (10.5)
- Allocation and distribution (1)
- Stability and stress tests (4)

The lowest possible score can be -13:

- Business-token interaction (-1)
- Structural (-5)
- Allocation and distribution (-2)
- Stability and stress tests (-5)

Based on the ratings and most susceptible categories, the auditor should recommend adjustments and tangible solutions to increase the current system's resilience to economic exploitation and harmful feedback loops.

Table 6. Ratings and scores interpretations

Letter rating	Score	Percentage
AAA	16-18.5	86%+
AA	14-16	75%-86%
A	12-14	65%-75%
BBB	10-12	54%-65%
BB	8-10	43%-54%
B	6-8	32%-43%
CCC	4-6	22%-32%
CC	2-4	11%-22%
C	0-2	0%-11%
DDD	-4-0	-21%-0
DD	-8-4	-42%-0

D	<-8	<42%
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Final score

Score: **15.0** over a maximum of 18.5

Final rating: **AA**