TOKEN AUDIT · 06.26

FINAL RATING — BB

$VIRTUAL

59/100

virtuals.io

Virtuals Protocol is a blockchain project combining artificial intelligence (AI) and blockchain technologies to create, tokenize, and monetize autonomous AI agents. The native VIRTUAL token is used for the creation and deployment of AI agents, payment of services, interaction with the platform, as well as protocol governance.

FDV

$699m

MC

$459m

TVL

$20m

FEES PER MONTH

$367k

AI AGENTS

46k

> This token is likely necessary

> Relationship between the token and the product: depends on the current demand for new AI agent creation.

> Tokenomics stability: lacking a mechanism to create demand among those not involved in creating AI agents. Too niche of a demand market.

Summary of Virtuals tokenomics audit

- From a business perspective, VIRTUALS is actively growing: it demonstrates a high TVL, lots of revenue, and an active agent ecosystem. But as for the token itself, its growth is substantially lagging behind that of the protocol and is dictated in many ways by external incentives and market sentiment.
- On the whole, its tokenomics is built on a deflationary model: the total token supply is fixed and logically distributed. Be that as it may, a large share of the tokens are stashed in the treasury, while the DAO is used in most of the decision-making as to how those tokens ought to be disbursed.
- The token has utility: it's used to maintain liquidity, in staking, and providing access to agent launches. But in reality, the actual motivation to buy and hold the token has more to do with speculation and is grounded in temporary campaigns and gaining points. The token's price dynamics show that without hype and temporary incentives, interest in VIRTUAL dwindles.
- The TVL and protocol earnings are growing independently of the token's price. The first TVL peak coincided with the high point for the token's price, but then VIRTUAL's trading rate absolutely plummeted. This most likely stems from the rise in the protocol's earnings being divorced from the token holder's income.
- Therefore, the protocol's earnings remain inside the system and do not reach the token holders. Meanwhile, disbursement of tokens from the treasury creates pressure on the price in parallel.
- The project's main objective right now is to commit to a distinct role for the token and strengthen its relationship to the business. Either VIRTUAL shall be a utility token attached to key actions within the product's economics or a tool for taking part in the protocol's growth, thereby providing users the opportunity to receive a portion of the project's earnings.

Risk profile: B rating. High-risk . Significant reliance on the token model, incentives, or market cycle. Move to the last section of the audit to examine the risk profile in detail.

1. Introduction

This section entails an independent audit of the Virtuals protocol tokenomics and its native token VIRTUAL. The goal of the audit is to evaluate the stability of the project's economic model,

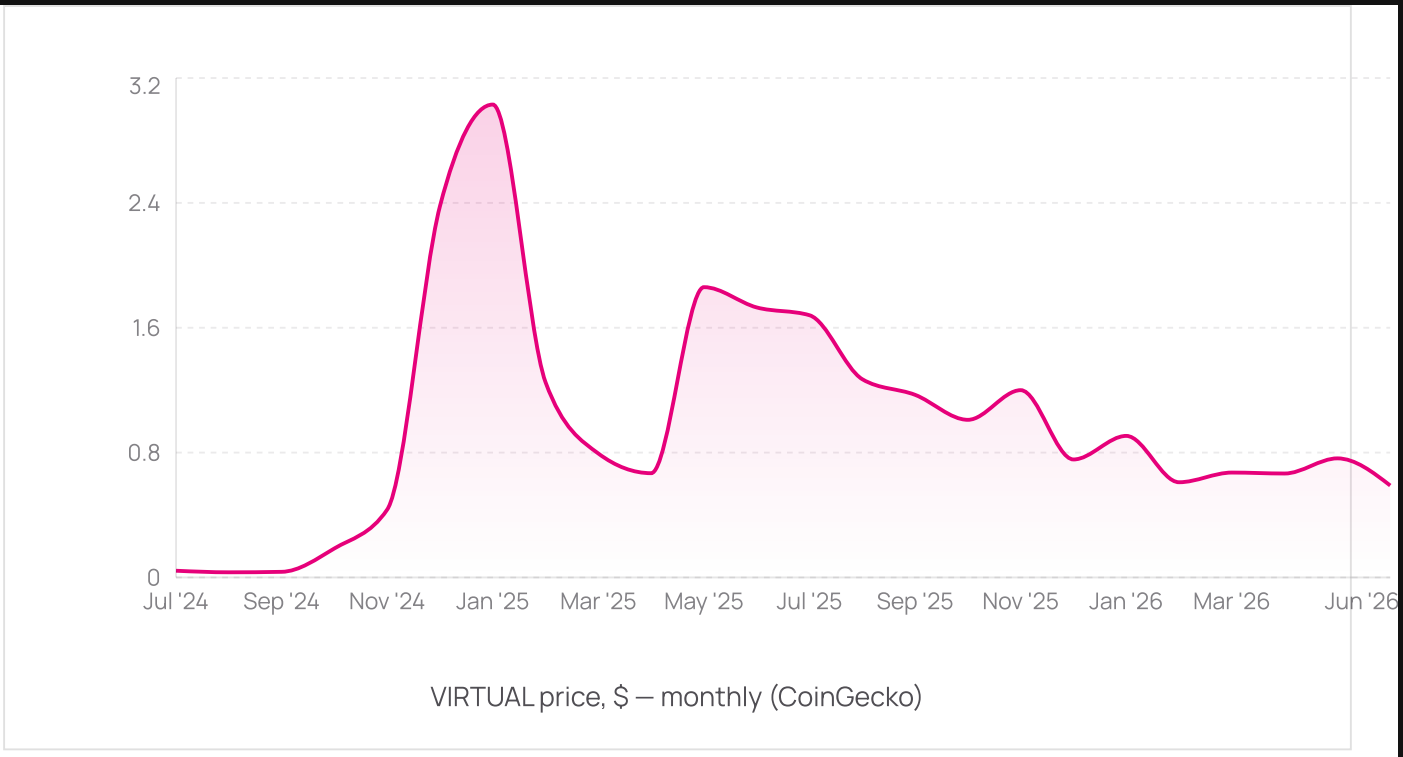
how competent its distribution has been, the ways the token is used, as well as the degree to which the actual supply dynamics and incentives have managed to meet the goals the protocol set out to accomplish, along with the interests of the holders and partners. Analyzed within the bounds of the analysis are the supply structure, the mechanics behind changes within the trading volume, the role of the treasury and the DAO, as well as the relationship between VIRTUAL's cost and AI agents' real economic activity in the ecosystem.

The Virtuals Protocol entails an infrastructural protocol for tokenization and joint ownership of AI agents. The project creates an ecosystem of "productive" agents, each of which possesses its own token and on-chain wallet capable of providing services, interacting with users and other agents, as well as conducting commercial activity in the on-chain environment via specialized protocol mechanisms. VIRTUAL token is used as a basic accounting unit and key liquidity pair for agent tokens, creating a foundation for economic relationships within the ecosystem.

2. Price of the token

- Starting price and moment trading was launched: according to market aggregator data, the first VIRTUAL quotes appeared in December 2023 with an approximate starting price of around $0.01 per token. During the first months, the price rose on the back of hype surrounding AI and the kickoff of the agent launchpad.
- Current price : as of the moment of this audit's compilation (May 2026), VIRTUAL is being traded at around $0.86 per token. The current price reflects that the market reasonably evaluates risks stemming from the circumstance that the protocol's high incomes do not automatically signify income for the token holders in addition to the risk of augmented supply.
- All-Time High (ATH): $5.07 recorded on January 2, 2025. Its highest price point was reached on a wave of FOMO in light of TVL growth, profit off of commissions, as well as hype surrounding AI. Following that point, the price set at significantly lower than the ATH value, despite growth in TVL.
- All-Time Low (ATL): $0.0075 was hit on January 23, 2024, which reflects the extreme volatility of early-stage trading and how highly sensitive the asset is to market conditions.

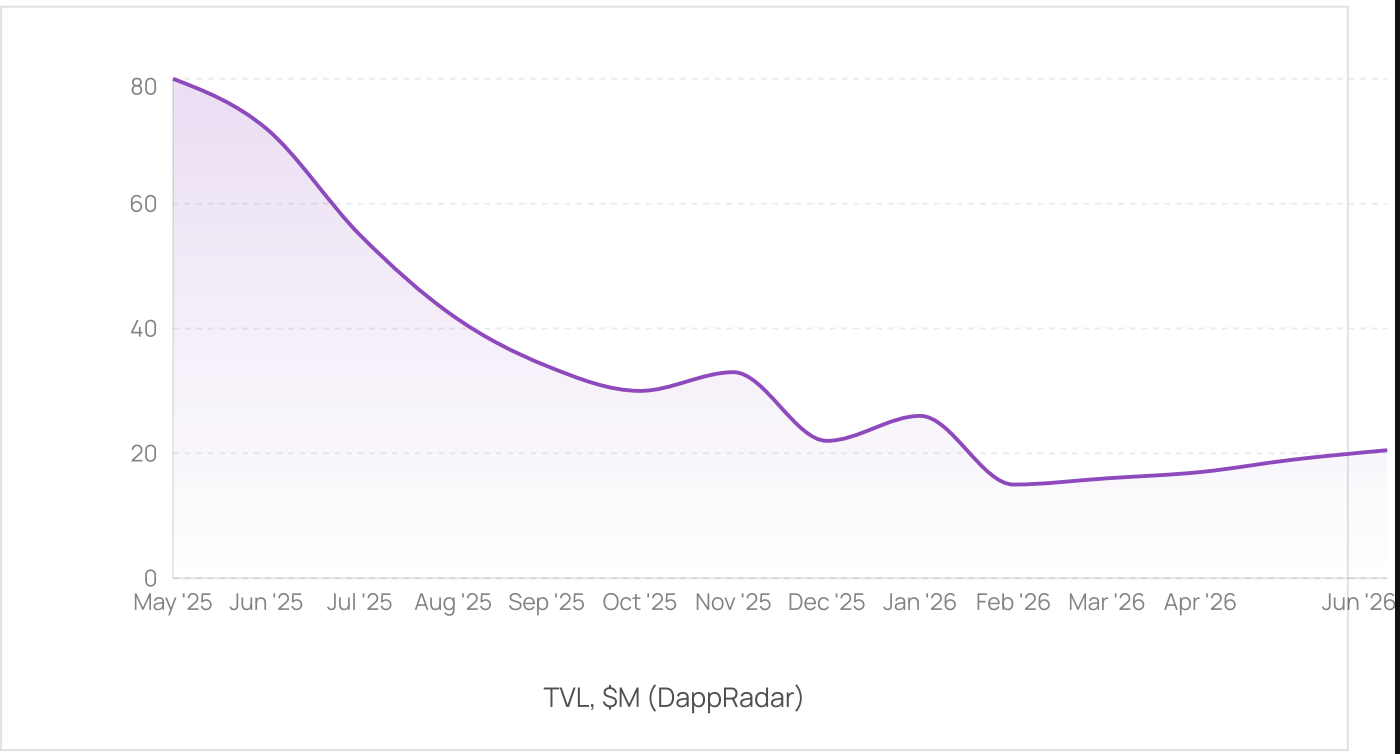
Price chart over the entire period



VIRTUAL price, $ — monthly (CoinGecko)

This chart renders a clear visual demonstration that, though the token does have liquidity, its price is very dependent on speculative demand.

2.1 TVL chart analysis



TVL, $M (DappRadar)

Current TVL value: around $205 million

Analysis of the TVL chart shows that during the first growth phase, the TVL's peak coincided with the token price's ATH. This serves as evidence that the community perceived the growth of the protocol and TVL as the driver of the growth in the token's price.

In the second growth phase of the TVL, the protocol's income grew along with it, but at the same time, the token price remained significantly below its peak value.

" Virtuals' TVL reflects the cost of assets blocked in liquidity pools of agent tokens. At the foundation of the TVL are pairs where VIRTUAL performs on one side and the tokens of specific agents perform on the other side. Also, stablecoins and ETH may exist in particular pools, but the nucleus of the TVL is created specifically by the liquidity of the VIRTUAL agent tokens."

Comparing the VIRTUAL price chart to the protocol's activity, during the first wave of hype, everything almost went hand in hand: the TVL went up, as did revenue, agents got going, and the token's price rose up to set all-time highs. Then the market took an unfavorable turn, the token's price went flat, but the protocol continued to develop: revenues and usage of the agents stayed strong, while TVL settled around average values. Meanwhile, the token's price has remained notably below the previous levels. This indicates that simply high agent activity and TVL themselves no longer bring about a rise in price for the token. While the token is poorly involved in the distribution of incomes and continues to get clouded up on account of rewards and programs, it gets traded at a considerably lower level compared to the condition of the protocol itself. Also, a lot more tokens have gone into circulation in light of rewards, while the protocol's incomes almost do not reach the hands of VIRTUAL holders.

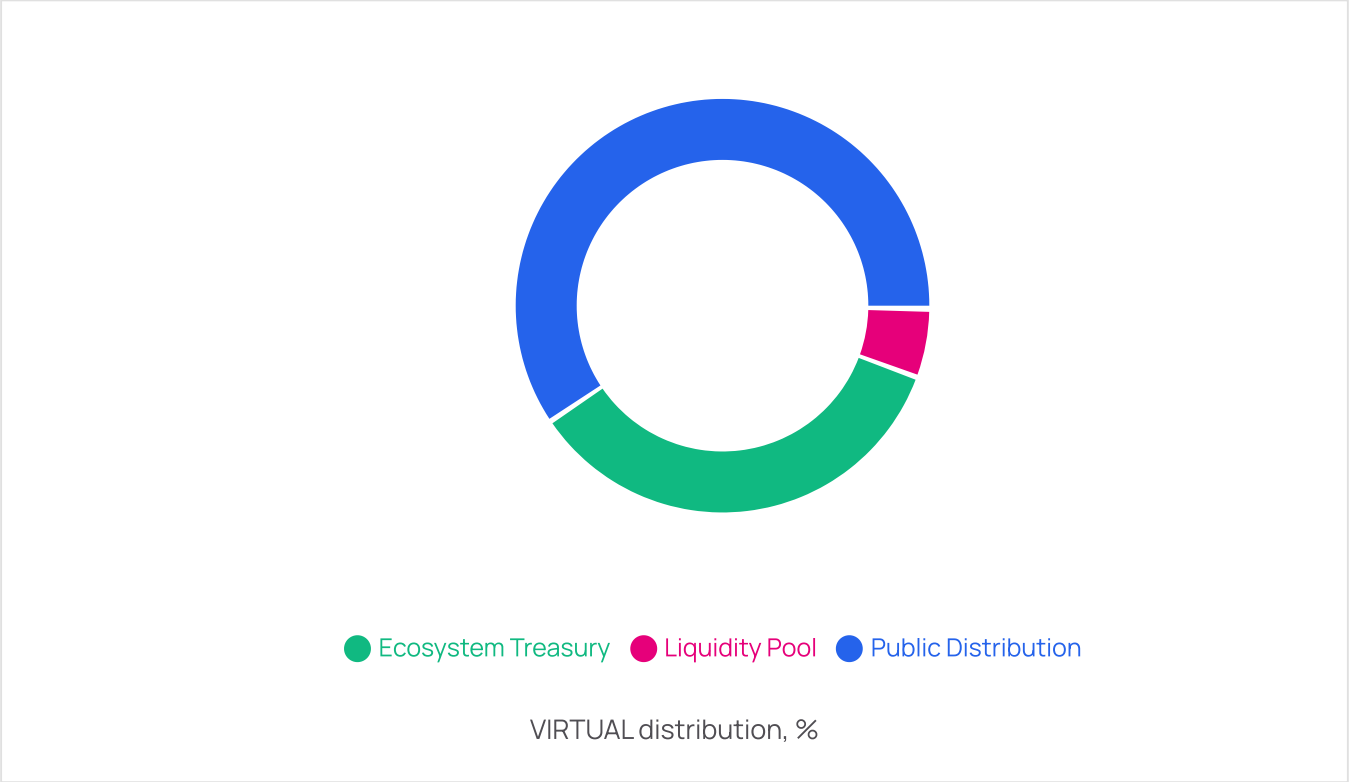
Currently, the TVL and token price are synchronized, which is more attributable to falling interest in the protocol and token as opposed to the token price being tied to demand for the protocol's products.

2.2 Conclusions regarding the token's price

- The token's price remains volatile: The token has gone through a variety of phases since its launch: from steady price growth to correction and subsequent stabilization at values far lower than its peaks.
- High reliance on narrative: The rise in price coincides with spikes of interest in AI agents, newly launched functions, and media events, seeing as market cooling phases lead to profound corrections.
- The risk of a large volume of tokens leaving the treasury: A large volume of tokens remains locked in the treasury, and when they are released into the market, this may exert substantial pressure on the price.

3. Token distribution

3.1 How the tokens are distributed, cliffs, and unlocking



The total supply of VIRTUAL is 1,000,000,000 tokens. Here's the token's distribution structure:

- Public circulation: most of the supply, which is held by users, funds, and on exchanges.
- Treasury (DAO) : a large reserve of tokens, which may be allocated to protocol development, rewards, marketing, or maintaining liquidity.
- Liquidity pools: a portion of the tokens designated for maintaining liquidity and trading.

It's important to note that a high concentration of tokens in the treasury, on one hand, provides the project flexibility but also generates risk. Since any solutions the DAO develops for sales and disbursing grants may put pressure on the price.

3.2 Critical unlocks

VIRTUAL token has no calendar unlocks: all of the tokens are already released from the public circulation pool, vesting is complete, and there are no longer any expected unblocking dates. The potential pressure on the price is not due to smart contract unlocks but to managerial decisions on how to use the treasury.

3.3 Conclusions

Model without future inflation: Most of the tokens have already been released into the market, and no additional emissions are planned. This makes long-term supply a lot easier to gauge and eliminates the risk of hidden inflation.

Substantial share within the community, but high concentration in the treasury: 60% of tokens are in public circulation, which facilitates sufficient circulation and markets for it. At the same time, 35% of tokens are in the treasury, which creates a substantial risk of pressure being exerted on the price if that pool is to be used aggressively.

Overall, the current distribution structure appears decent in terms of the share of the token in free circulation, but it renders the project highly reliant on the weighted policy of the DAO with respect to the treasury.

4. Staking and farming

4.1 Tools analysis

The protocol has three types of tools:

- VIRTUAL (veVirtual) staking The user keeps VIRTUAL locked up for a certain period of time (up to 2 years) and receives veVIRTUAL. They also gain access to a portion of rewards, Virgin Points, and DAO.
- Agent token staking Particular AI agents (like VADER, for instance) have their own staking pools where their tokens are locked up in exchange for Virgen Points. The user can obtain a potentially high income, but there also exists an elevated risk, since income depends on the success of particular tokens and their liquidity.
- Virgen Points Farming Virgen Points act as a superstructure above staking and commercial activity: they are rewarded for staking VIRTUAL or agents, trading in pools with VIRTUAL, and social activity on X social network. Income is created through commissions, but the risk of impermanent loss exists, especially in high-volatility pairs.

Profitability is always proportional to one's share of participation and the number of stakers or pools, not only the declared APR. If the number of participants grows, the real profitability declines.

4.2 Formulas analysis

$$PR_{stake} = \frac{\sum(\text{protocol fees paid in VIRTUAL})}{\text{Total VIRTUAL staked}} \times \frac{\text{Holder's VIRTUAL}}{\text{Total VIRTUAL}}$$

The rewards formula for staking is:

APR depends on the agents' activity. If the agents' activity is high (and thus, they will be getting a high income off commissions), then the APR will be high as well. But if activity is low, profitability will fall, which can lead to stakers existing and additional pressure coming down on sales.

Relationship between staking profitability and agents' activity

Staking VIRTUAL yields veVIRTUAL, which, in turn, provides Virgen points, increases the volumes of airdrops that can be received, and affords rights to take part in governance. And part of the earnings from agents goes to user rewards. In other words, the more transactions and activity there are on agents' part, the more value that points retain. And the more actively the protocol develops, the more agents and transactions for these agents there are, the more the commissions, and the greater the value in staking and rewards in the form of veVIRTUAL.

$$APR_{farm} = \frac{\text{Trading fees} + \text{rewards}}{\text{Locked in pool (TVL)}}$$

Farming APR

Rewards out of the public circulation pool are a temporary support measure. In the long term, farming must be fully supported by protocol commissions generated by agents.

4.3 Money flows analysis

Process	Inflow (purchase / lock)	Outflow (sale / reward payout)
Utility	Payment for AI-agent services	Part of the payment is distributed to agent owners
Staking	Locking VIRTUAL (DAO)	Payout of part of protocol fees
Farming	Locking VIRTUAL for LP	Payout of rewards to LP providers
DAO	Buyback from treasury and protocol fee income	Distribution of tokens from the treasury

4.4 Conclusions

- The project is properly engaged in rewarding stakers at the expense of protocol commissions. This is a good factor for tokenomics.
- The success of stalking and farming is directly dependent on the activity of the agents. In order to support demand for its services, the protocol needs to place an emphasis on attracting new users and AI agent developers.

5. Token utility

5.1 Use cases

- Payment for AI agent services: The token is used as the basic asset for operations within Agent Commerce (payment for agent services, access to products, and functionality).
- Providing liquidity: The token is an asset for pairs with agent tokens as well as in DEX pools.
- Taking part in staking: The users lock up tokens to receive veVIRTUAL, points, and participate in campaigns.

VIRTUAL already has good utility in the protocol, but the demand for the token depends on the number of agents as well as the conditions for the token holders.

5.2 Tools and services

There are two types of tools:

Internal: these include the main Virtuals app (dApp), staking modules, interface pools, launchpad, and internal analytical dashboards.

External : DEX and aggregators as well as DeFi products, partner products, and campaigns.

5.3 Conclusions

- VIRTUAL retains straightforward utility in the protocol and is integrated into the key processes. This is the strongest aspect of the tokenomics.
- The token has regular demand, since it is the means of payment for agent services. There is also periodic temporary growth in demand due to the launch of new agents.
- The protocol employs a buy-and-burn mechanism, which has a positive effect on the token's price. The more commissions the protocol receives, the more tokens are burned and, thus, the token's value rises.

6. Token circulation

6.1 How tokens move

Tokens move in several different directions:

- Market ← → users: This purchasing and selling of the tokens on exchanges, entry/exit into the token.
- Treasury → protocol: This is disbursing grants, supporting liquidity, and marketing .
- Users ← → staking and liquidity pools: This is locking tokens, exiting staking, as well as entering/exiting liquidity pools.
- Protocol programs: This is distributing rewards, points, and taking part in launching projects .

6.2 Risks

The main risks regarding the tokens' circulation are:

- Pressure on the tokens from the treasury if a large volume is released onto the market.
- Most of VIRTUAL's and agent tokens' liquidity is concentrated in a limited number of pools. This may be very sensitive for the token's price when a large volume of tokens is released.
- A significant portion of VIRTUAL's movement is related to campaigns, farming, and short-term incentives. This creates quick token circulation: users receive tokens, sell them off, and leave.
- Demand for the token and the price partially depend on hype around AI. Calming of interest in the sector or the rise of other launchpads may cause the token's demand to take a hit.

7. Critical notes

- Rift between the protocol indicators and the token price: The volumes of the TVL and protocol earnings are growing, but at the same time, it's happening in a fashion divorced from the token price. The value of owning the token is trivial for users.
- Reliance on temporary incentives and campaigns: In reality, a lot depends on temporary user promos rather than on the value of the actual product: advanced rewards, launchpad, and extra points. When all of those incentives run out, or the conditions become less advantageous, interest in the token notably subsides.
- Rift between the protocol's earnings and value to users: It is declared in the whitepaper that the protocol's economics is supposed to return a portion of the value to users, but in its current implementation, there is almost no sign of that going on in direct payments. In actuality, the user mainly receives Virgen Points, the right to take part in air drops, and governance options, rather than a regular share of the protocol's revenue.
- Treasury and DAO risks: There's a large volume of tokens in the treasury, but there are no clearly defined rules for how they ought to be used. If these tokens are actively released onto the market, it will put serious downward pressure on their price. On top of that, there exists the risk of serious situational decisions which may harm the token's long-term stability.
- Complex logic of the economic model for ordinary users: The protocol has the token VIRTUAL, veVIRTUAL, as well as points and agent tokens. Some users will have a hard time grasping what the real income is that they're going to receive, what the risks might be, as well as what the point of buying, holding, or staking the token is.

- High reliance on market sentiment and hype surrounding AI: VIRTUAL's price reacts acutely to hype surrounding agent launches, interest in the AI sphere, and the condition of the market as a whole. If interest dies down or the focus shifts in some other direction, the token's price starts to fall, even while the protocol keeps humming.

Final conclusion

VIRTUAL's tokenomics in its current form helps provide basic financial infrastructure and incentive mechanics, but at the same time, it doesn't create a straightforward relationship between the growth of the protocol and the benefit to token holders. Such a model works while interest in the launch of new projects, agents, and points is preserved. Meanwhile, a significant portion of the protocol's income doesn't affect user rewards, so it does create value for the token's price.

As a result, VIRTUAL currently more closely resembles a high-risk asset dependent on hype and incentives than a transparent financial tool that reflects the incomes of the protocol. The token's further stability will depend on how well the team will be able to reduce the rift between the success of the protocol as a product (TVL, revenue, agent activity) and the VIRTUAL token dynamics. Also on the DAO formalizing a policy on expending the treasury, creating incentives, and forging transparent communication on key economic mechanisms for users.

Recommendations:

For investors

- VIRTUAL must be evaluated separately from the product and the protocol's financial indicators. A positive evaluation of the product and the Virtuals agent ecosystem doesn't automatically mean VIRTUAL is rendered highly attractive for investment.
- The token should be treated as a high-risk and quite volatile asset, and one should limit the size of one's position in advance.
- Be careful about locking up tokens for a long time. It's best to start with small volumes and shorter locking times until there is full transparency for how rewards are distributed in this model.
- When using LP and farming strategies, IL must definitely be calculated and compared with the promised profitability, since due to the asset's volatility, IL risk is very high.
- It's recommended to monitor the agenda and decisions of the DAO (especially when it comes to changes in the staking conditions, points distribution, and rewards), as well as

the treasury policy, since they have a substantial effect on changing the balance between the token's supply and demand.

- Release strategies must be planned in advance, considering multiple different scenarios (positive, negative, and standard). This can help provide a quick orientation during moments of market stress.

For the project

- VIRTUAL's role and what it represents must be laid out and emphasized: whether it's a utility token or a tool for taking part in the ecosystem's growth, allowing people to obtain particular rewards from the platform.
- If the token will be positioned down the line as a utility token, its utility needs to be fortified in the product; in particular, it needs to have all key economic functions within the protocol tied to it. And at the same time, the number of entities in the protocol (points, access levels, etc.) needs to be reviewed and, possibly, minimized if they substitute for the usage of VIRTUAL rather than fortifying its role.
- If the priority is a model where the token is used as a tool for participation in the ecosystem's growth, then the model where the protocol makes money and the token stays sitting on the sidelines needs to be abandoned. To do so will require defining the portion of the protocol's income that will be directed in favor of VIRTUAL (burnt, distributed in the form of user rewards, etc.).
- Review the mechanics under which a portion of VIRTUAL tokens received by the protocol (commissions, payments for using agents, protocol fees) isn't returned immediately back onto the market but is sent to the treasury for it to be subsequently frozen for a fixed period of time (6-12 months). This scheme temporarily reduces the actual supply on the market and partially compensates for pressure brought on by incentive programs.
- Review the current and future incentives programs so they are directed at supporting users' long-term participation in the ecosystem. Campaigns need to be designed so that when they're concluded, the user retains the economic motivation to use the product, not just farm the token within a limited time period.
- Set out transparent rules for using the treasury: annual token usage limits, as well as areas where they will not be distributed.
- Perception of the tokenomics and profitability distribution needs to be simplified for users and investors: unpack the complex mechanics as scenarios that are straightforward for users, and add calculators. Right now, only a small circle of users understand them.

Risk profile

Risk assessment (0–100)	Rating	Interpretation
0–20	AA	Very low risk: Stable infrastructural asset with minimal reliance on the market and incentives.
21–35	A	Low risk: Robust project with certain risks present, but they're under control.
36–50	AB	Moderate risk: Functional product, but there are structural vulnerabilities within it.
51–65	B	Elevated risk: Significant reliance on the token's model, incentives, or market cycle.
66–80	BC	High risk: The economics are sensitive to the team's/the DAO's decisions and market interest.
81–100	C	Critical risk: Speculative asset with the possibility of abrupt and profound drops.

Assessment criteria:

1. Market and liquidity assessment (0-15 points)

0-4 points: high liquidity, low volatility, the token is present on many platforms. 5-9 points: normal liquidity, average volatility. 10-15 points: low liquidity, major price jumps, reliance on several exchanges, price clearly decided based on hype.

2. Tokenomics and supply assessment (0-15 points)

0-4 points: straightforward model, fixed supply, unlocks have already occurred, moderate concentration. 5-9 points: model is generally clear, but there are substantial unlocks or a noticeable share of tokens is in the hands of early-stage participants. 10-15 points: large number of future unlocks, high concentration of tokens in several particular addresses, dubious transparency in vesting.

3. Utility assessment (0-30 points)

0-5 points: token is distinctly integral to the product, key functions are unavailable without using it, there is a clear relationship between income and the product. 6-17 points: there is utility, but it can be circumvented, and the relationship between it and income is weak or intermediated. 18-30 points: the token is almost unnecessary for the product; is mainly used for staking, farming, and campaigns; protocol earnings almost don't reach holders at all.

4. Treasury and governance assessment (0-10 points)

0-3 points: the share the treasury has is moderate, there is a clearly defined policy for expenditure, DAO decisions are transparent and do not depend on a few key addresses. 4-7 points: the treasury holds a large share; they have a formal policy but with a large share of flexibility; governance is in reality controlled by the main group of users. 8-10 points: the treasury or a fund holds a particularly large pool of tokens, there are no clear rules for expenditures, one decision can wreak substantial destruction on the market.

5. Technical and operational risk assessment (0-10 points)

0-3 points: they have code audits, mature architecture, standard or manageable risks. 4-7 points: they've done audits, but the architecture is complex, updates are frequently released, and their risks aren't critical but must be tracked. 8-10 points: high technical complexity without many audits performed or they are outdated, strong reliance on external infrastructure.

6. Demand and user activity stability assessment (0-10 points)

0-3 points: stable or growing user base, notable share of organic usage, the product lives on fine without constant promos being conducted. 4-7 points: activity is going on, but it depends a lot on campaigns and events, which, after they are over, the metrics palpably cool off, even though they don't die. 8-10 points: activity is mostly for the sake of points or airdrops; after campaigns are over, users and transactions sharply subside.

7. Model incentives assessment (0-5 points)

0-1 point: moderate incentives, significant share of profitability comes from real commissions and revenue, not just from handouts. 2-3 points: substantial share of profitability is created by incentives, but they have a plan to reduce reliance, program parameters appear manageable. 4-5 points: high reliance on handouts/campaigns, profitability is low without incentivization, risk of mass exit of TVL and users if they're turned off.

8. Regulator and contractor risk assessment (0-5 points)

0-1 point: the structure is straightforward, there are no notable regulatory risks, moderate reliance on specific contractors. 2-3 points: a part of the token's logic or model may attract

regulators' attention, strong reliance on particular exchanges and jurisdictions. 4-5 points: high probability of regulatory issues (close to "security" mechanics), serious reliance on 1-2 key contractors, one of them abandoning them would be critical.

VIRTUAL overall risk assessment:

1. Market and liquidity: 11 out of 15 score

The token has good liquidity. People can enter and exit. But the price massively fluctuates and is highly reliant on hype. So the score is 11 points: liquidity brings the risk down while movement and hype raise it.

2. Tokenomics and supply: 9 out of 15 score

There are no future unlocks scheduled, and the total supply is fixed. But there is a very large treasury pool, which could theoretically put pressure on supply via programs and sales. So the score is 9 points: it looks decent on the whole, but there is a notable structural risk.

3. Utility and relationship with the product and revenue: 27 out of 30 score

From a utility perspective, everything is decent (the token functions as a payment method in the agents protocol, there's a basic liquidity pair, and agent operations are completed using it), but from the perspective of value to the holder, things are quite bad indeed. Practical income practically doesn't reach the holder at all, and the token is propped up by hype and incentives. So the score is 27 points: under this segment, the risk is high.

4. Treasury and governance: 8 out of 10 score

On one hand, there is a treasury and DAO management. On the other, a large volume of the tokens is under the control of a limited circle of persons, plus there are no limits to the disbursal of tokens to programs out of this pool. So the score here is 8 points: there are significant governance and treasury risks.

5: Technical and operational risks assessment: 4 out of 10 score

The WP has a section detailing audits. A lot of audits have been performed, but the technical complexity of the protocol is quite high. A 4-point score here.

6. Demand and user activity stability: 7 out 10 score

The ecosystem is large. There are a lot of agents, users and transactions as well, and the protocol is humming. Meanwhile, though, one can see that the activity is highly grounded in

campaigns and general market sentiment, and without incentivization, the metrics cool off. So the score is 7 points.

7. incentives model stability: 4 out of 5 score

Highly dependent on points. Genesis and programs with elevated APR. Without those elements, interest in the token palpably falls. This risk here is quite high, hence the 4 points.

8. Regulatory and contradictory risks: 2 out of 5 score

Listings exist, there's volume, and the project can be observed openly. They are reliant on CEX and infrastructure, but there are no discernible risks. So the score is 2 points.

Total score: 72 out of 100 points. Rating: B. This is in the high-risk zone, but not quite the critical-risk zone.

VIRTUAL token rating under the 8Blocks method

Total rating: 59/100

Letter rating : BB

VIRTUAL gets a 59/100 score. The token has a clear product role: it's used as a base calculation unit within the AI agent ecosystem, as a liquid pair for agent tokens, in staking and in campaigns. However, the model's key issue is a weak transfer of value reaped from growth from the protocol to VIRTUAL holders. The ecosystem's earnings and activity don't always directly convert into stable demand for the token, while a significant portion of users' motivation is tied to points, campaigns, farming, and market interest in the AI narrative.

Block	Weight	Score (0–5)	Score (0–100)	Contribution
Token Product Linkage	40%	2.65	53	21.2
Tokenomics Sustainability	20%	3.10	62	12.4
Fundamentals	15%	3.70	74	11.1
Governance / Control Risk	10%	2.00	40	4.0
Security	10%	3.10	62	6.2

Block	Weight	Score (0–5)	Score (0–100)	Contribution
Market Layer	5%	3.70	74	3.7
Base score	100%	—	—	58.6