Fundamental Report - Metaverse

Prime Rating Report V1.2

Protocol: Aavegotchi
Category: Gaming
Version: 1
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Previous Report: N/A

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Season/competition: Metaverse Rate-athon

Scorecard

1. Value Proposition	Points
a) Novelty of the solution	12 / 15
b) Target market size	11 / 15
c) Product-market fit	10 / 15
Total Points - Value Proposition	**33 / 45**
2. Competitive moat	**Points**
a) Integrations & partnerships	6 / 10
b) Intellectual property	6 / 10
c) Infrastructure - security	8 / 10
d) Infrastructure - fees and ancillary infrastructure	9 / 10
e) Treasury management	7 / 10
Total Points - Value Proposition	**36 / 50**
3. Tokeneconomics	**Points**
a) Genesis token distribution	12 / 15
b) Purpose of the token	8 / 10

c) Ongoing token issuance / inflation	**8 / 10**
d) Value capture	**6 / 10**
e) Token liquidity	**4 / 5**
f) Extrinsic productivity	**3 / 5**
Total Points - Tokenomics	**41 / 55**
4. Team	**Points**
a) Credibility and reputation	**8 / 10**
b) Relevant experience	**13 / 15**
c) Thought leadership and public presence	**5 / 10**
d) Ability to foster a community and coordinate resources	**13 / 15**
Total Points - Team	**39 / 50**
5. Governance	**Points**
a) Extent of governance capabilities	**8 / 10**
b) Active governance contributors	**4 / 5**
c) Governance infrastructure robustness	**8 / 10**
d) Process and ease of use	**4 / 5**
Total Points - Governance	**24 / 30**
Total	**173 / 230**

1. Value Proposition

The "Value Proposition" section assesses the value a protocol delivers to its users. The rating is based on the size of the problem a protocol addresses and the product/market fit of the protocol's solution

a) Novelty of the solution (15 points)

This score evaluates the novelty (uniqueness) of the protocol. Has the protocol introduced any innovations that help solve users' problems, either technical or organisational? Or has it just forked someone else's code?

Answer:

Aavegotchi is a DeFi-enabled crypto-collectibles game developed by Singapore-based Pixelcraft Studios that allows players to stake non-fungible tokens (NFTs) avatars with interest-generating tokens and interact with the Aavegotchi metaverse. It is a unique combination of many popular aspects of crypto into one unified platform: decentralized finance (DeFi), blockchain gaming, staking, and digital land ownership. Aavegotchi was officially launched in September 2020.
It is based on the Tamagotchi game and is hosted on the Polygon network. Tamagotchi was rather popular during the nineties when millions of people across Japan, China, Europe, and the United States, had a Tamagotchi friend to feed, bathe, clothe, and nurture into adulthood.
Aavegotchis are pixelated ghosts living on the Polygon network, backed by the ERC-721 standard. With Aavegotchi, players can create their own Gotchis, which are represented by non-fungible tokens that can be staked.
Their value is determined by rarity level, which is calculated via multiple factors, such as base traits, amount of staked collateral/aTokens, and equipped wearables.
To level up their Aavegotchis, players can participate in a variety of activities including mini-games, governance, and meetups. Aavegotchis can also increase their rarity level by equipping in-game wearables and leveling up.
Rare Aavegotchis not only have higher secondary bazaar value, but they also enable the Aavegotchi to perform better in rarity farming—a minigame that rewards the rarest Aavegotchis with GHST tokens. Aavegotchi is governed by AavegotchiDAO which manages all funds generated through the GHST token distribution.

GHST is the primary utility token and the base ecosystem currency for the purchase of various on-chain Aavegotchi assets, including Aavegotchis themselves. GHST can also be staked for additional rewards and can be transferred between users just like other cryptocurrencies. A novel feature of the GHST token is the ability to purchase it directly from the Bonding Curve (TBC). This means that the total supply of the GHST token is dynamic. When investors purchase GHST using DAI from the bonding curve, new GHST tokens are minted and the total supply of circulating GHST would increase. When GHST tokens are sold back into the bonding curve, the GHST tokens would be burnt, the seller would receive an equivalent amount in DAI based on the prevailing GHST price on the bonding curve, and the circulating supply of GHST tokens would decrease.

So what makes Aavegotchi unique? It is not just a gaming platform where users can buy and create in-game collectibles. The use of Gotchis goes beyond NFTs and game collectibles, as Gotchis can be used as collateral as well. To enable interaction with Gotchis, users first need to deposit other supported cryptocurrencies, which gives value to Gotchis aside from player activity. By posting collateral, players can also earn interest that is visible in real-time. Aside from earning interest, users can also earn GHST rewards. The protocol generates income from the market (the baazaar) of collectibles and wearables, and from minigame fees.

Aavegotchi holds value both as a blockchain-based game, similar to CryptoKitties, and as a DeFi protocol where users can earn interest on deposited cryptos. Aavegotchi was also one of the very first fully on-chain games, as well as being the first gaming protocol to ship with native lending functionality.

While Aavegotchi was one of the original integrations of DeFi + NFTs, there are currently a lot of competing projects in the space.

Score: 12

b) Target market size (15 points)

The target market size evaluates the current and future size of the problem a protocol aims to solve. While the term Metaverse is all-encompassing, what is the target market size for the relevant sector? For example, NFT games are trying to disrupt the traditional gaming industry, which is reported to be worth roughly $175 billion.

Answer:

Via a new NFT report by NonFungible.com and L'Atelier BNP Paribas, detailing the 2021 market: NFT sales reached $17.7 billion in 2021, up from $82.5 million in 2020 — a jump of more than 200 times. Total NFT profits when reselling or buying also skyrocketed from $12 million in 2020 to $5.4 billion in 2021.

The overall gaming industry was also worth around $176bn in 2021, according to NewZoo. It's predicted to climb from there to $269bn by 2025. Crypto-specific gaming continues to make up >50% of all blockchain transactions according to dAPPRadar. Game-related interactions overtook DeFi back in August and haven't looked back since.

Individually, each space is experiencing massive exponential growth, and Aavegotchi combines the explosive potential of both. Aavegotchi is currently ranked #20 on dAPPRadar's gaming section.

However seeing as Aavegotchi is an on-chain game, which is a barrier to adoption for many gamers. This creates implications in terms of users they can access in their target market.

Score: 11

c) Product-market fit (15 points)

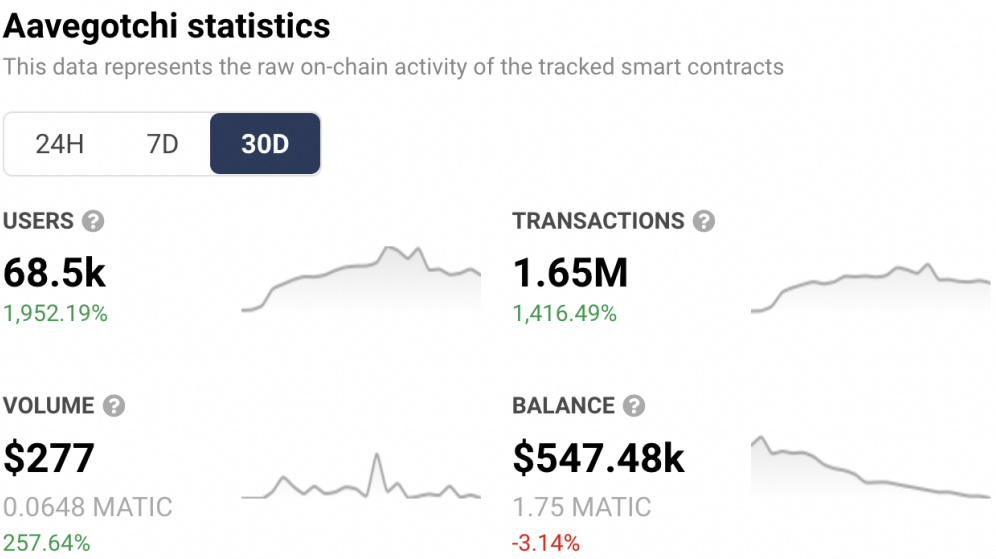
Product-market fit evaluates the degree to which a protocol satisfies market demand in their specific sector. How many users does a protocol have? What is the trading or transaction volume on a platform? Is there growth on both the buy and sell side of the market? Is the protocol targeting the right product segment at all?

Answer:

Aavegotchi certainly has found a product-market fit. It is currently the #20 ranked crypto game on dAPPRadar. It is also in the top 20 Metaverse projects under CoinGecko's Metaverse category. Aavegotchi has a very strong user base, according to dAPPRadar, with over 69k users in the past 30 days. Transaction volume on the platform is also high with over 1.7M transactions in the past 30 days.

		CATEGORY	BALANCE	USERS
19	Aavegotchi Polygon	Games	$547.48k	11.93k -2.47%
20	Bomb Crypto BNB Chain	Games	$268.06k	11.41k -26.47%
21	Wombat Dungeon Master EOS • WAX	Games	$4.88k	11.21k -0.69%
22	Dragons Valley WAX	Games	$1.65k	9.86k -31.26%
23	PROSPECTORS WAX • EOS	Games	$6.26M	8.65k +0.05%

Source: Top Blockchain Games | dAPPRadar



Source: Aavegotchi statistics | dAPPRadar

Score: 10

2. Competitive Moat

The "Competitiveness" section looks at a protocol's competitive moat in the space and its unforkable assets. This includes integrations and partnerships, intellectual property, the underlying infrastructure being used, and treasury management.

a) Integrations & partnerships (10 points)

Due to crypto's open-source nature, the code of most protocols can easily be forked. This score represents one piece of unforkable value. Some indicators are the number of applications built on top of the protocol (vertical integration) and other entities integrating the protocol's services (horizontal integration).

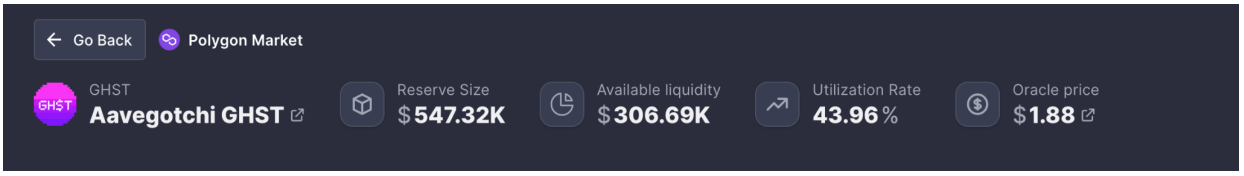
Answer:

While it might not be evident from the name, Aavegotchi's biggest integration is with the Aave Protocol. Aave is a liquidity protocol that allows users to earn interest, borrow assets, and build applications. Aave invested in the video game that uses its tokens and Aavegotchi is also a recipient of an Aave Ecosystem Grant. But they are not an official Aave project. However, Aave has been extremely helpful and they are in close contact with the team.

Stani Kulechov, the founder of Aave, was their first Aadvisor.

Each Aavegotchi ERC721 NFT manages an escrow contract address that holds Aave-backed ERC20 collateral, or "aToken" (known as maTokens on layer 2). aTokens generate yield via Aave's Lending Pool, which increases the number of aTokens held in the wallet. Thus, the amount of aTokens held in the Aavegotchi's escrow address grows over time.Examples of popular aTokens include aDAI, aUSDT, aLINK, aLEND, and aSNX.

The native token of Aavegotchi (GHST) is also available for deposit and borrow on Aave's Polygon Market.



Source: Aave Polygon Market | GHST

Other Aavegotchi partners include but are not limited to:
Yield Guild Games (YGG) is a play-to-earn gaming guild that brings players together to earn via blockchain-based economies. Yield Guild Games and its SubDAOs partnered with Aavegotchi for a purchase of $800K worth of NFT Assets in Aavegotchi Metaverse. The purchase includes securing exclusive YGG themed land plots and participation in the Gotchiverse Land Auction. Co-founder of Pixelcraft Studios, Jesse Johnson, expressed great excitement about the collaboration, “Like the wider community, the YGG leadership team is responsive and very hands-on. It’s very clear to me why they are the number one guild in the world, and I think YGG will see tremendous success in The Gotchiverse.”

ReadyPlayerDAO is a decentralized autonomous organization that is committed to harnessing and developing the collective powers of play-to-earn gaming. They announced a partnership with Pixelcraft Studios late last year. They have invested 50 ETH in acquiring Aavegotchi’s, wearables, REALMs, and a coveted partner parcel inside the Citaadel. In addition, Ready Player DAO aims to deploy a team of its scholars (from its ‘Ready Scholar School’) to immerse themselves in adventures, making frens, and harvesting the bounty of REALMS.

Crypto Gaming United (CGU) is a platform that brings people from developing countries together to build a new virtual economy and earn a sustainable income while learning new digital skills and engaging with the global blockchain gaming community. In November 2021, they announced a partnership with Aavegotchi with an Investment in excess of $500,000. CGU’s partnership with Aavegotchi includes investment into all verticals of the ecosystem, including REALM parcels, Aavegotchis, and wearables, as well as an exclusive, CGU-branded Paartner Parcel.

Other prominent partners include Metaguild and GamerHash.

Guilds however can’t really be seen as partners, as while they can increase the number of players in the game, their main aim is to extract value from the game, even though some are now trying to find novel approaches to bringing in value.

Score: 6

b) Intellectual property (10 points)

Intellectual property is and will continue to be a crucial part of the metaverse. This score considers if a project, for example, developed a unique IP that creates a sustainable competitive moat around it or, as an alternative, secured IP through agreements with outside parties.

Answer:

While the Aavegotchi name and brand itself could be considered unique IP, no information around whether it is legal IP owned by PixelCraft Studios which is based in Singapore could be found. However, the Aavegotchi brand has grown to become a well known name in the Metaverse space. They even have an official collaboration with multi-platinum music artist Lil Pump, the artist who they attribute as the inspiration for the #GotciGang term they have been playing off since inception.

Aavegotchi, recently released its new open-world game, The Gotchiverse, on March 31, 2022. Pixelcraft Studio’s flagship title and RPG metaverse allows users to explore, battle, and craft exclusive NFTs. The metaverse is built on the Polygon network and is co-created with direct input from the community via AavegotchiDAO.

Since Aavegotchi's original NFT launch more than a year ago, its player base has grown significantly thanks to a number of initiatives such as Rarity Farming, NFT Raffles, the Baazaar NFT marketplace, and GBM Bid-To-Earn Auctions. However, the new play-to-earn ecosystem incorporates four new fair-launch ERC-20 tokens, FUD, FOMO, ALPHA, and KEK, that represent the four elements of the Gotchiverse and are collectively known as Gotchus Alchemica. They can be traded for GHST, the game's native eco-governance token, or crafted together to build and upgrade installations, key structures like harvesters, reservoirs, and black holes that provide players with more defense and earning productivity. "Gotchus Alchemica are some of the most innovative ERC-20 tokens to date," says Pixelcraft Studios Co-Founder and COO, Jesse Johnson (aka goldnXross). "They're also the keys to 'making it' in the Gotchiverse and getting the most out of this one-of-a-kind gameplay experience."
Multiple ecosystem partners like YGG, CGU, Metaguild, GamerHash and many others have made significant investments in parcels as well as Aavegotchi and their wearables in the Gotchiverse

Score: 6

c) Infrastructure - security (10 points)

Metaverse projects make all kinds of choices when it comes to infrastructure. Some build their own solutions, whether Ethereum side-chains or a new blockchain entirely, and some deploy to an existing sidechain or a level 1 blockchain. These decisions have significant trade-offs across security, maintenance, ease of use, costs and scalability, etc. This score assesses specifically the security of the chosen infrastructure solution.

Answer:

Aavegotchi is deployed on Polygon, the leading side chain to Ethereum. Polygon is an Ethereum-based scaling solution that achieves scale by utilizing sidechains for off-chain computation while ensuring asset security using the Plasma framework and a decentralized network of Proof-of-Stake (PoS) validators. It is a decentralized platform that ensures faster and extremely low-cost transactions with finality on the main chain.
Polygon strives to solve the scalability and usability issues while not compromising on decentralization and leveraging the existing developer community and ecosystem.
The Polygon blockchain leverages a combination of zk-rollups, optimistic rollups, and other standalone sidechains to process transactions more quickly while maintaining security from the underlying Ethereum blockchain.

The Polygon development team announced in a blog post last year that a vulnerability was discovered, but unfortunately, an exploit took place before a fix could be put in place. The hacker in question carted away with 801,601 MATIC tokens before the vulnerability was fixed. Polygon's core development team with help from bug bounty platform Immunefi successfully fixed the critical network vulnerability that put more than 9B MATIC tokens held in smart contracts at risk.
Aavegotchi itself has not seen any hacks since its launch early last year.

Score: 8

d) Infrastructure - fees and ancillary infrastructure (10 points)

The section above assessed specifically the security of the chosen infrastructure solution. This score, however, looks at the other side of the scalability trilemma - fees and the ancillary infrastructure like bridges, wallets, etc.

Answer:

On Polygon, protocols can beef up their transaction throughput while still remaining part of the Ethereum network.The standard gas fee of Polygon is extremely cheap, being less than $0.01 per transaction, while the network supports up to 7200 transactions per second ensuring near-instant transfers, low fees and conducive economics for micro-transactions.

As per an Aavegotchi team member, moving to Polygon was the right thing to do. They found that they saved users $14.4 million dollars in gas fees only 15 days after the Aavegotchi contract was deployed.

Score: 9

e) Treasury management (10 points)

Treasury management refers to the project's management of its assets and balance sheet. How diversified is its treasury? If diversified, are the assets productive? For example, does the project own its liquidity? Are there procedures and plans in place for managing the treasury?

Answer:
The Aavegotchi treasury currently contains two assets, their native GHST token and the $DAI stablecoin.
AavegotchiDAO earns 0.3% of all trades on the Aavegotchi Bonding Curve on Ethereum Mainnet, which goes to the DAO treasury, this is the current source of a significant portion of DAO funds.
The DAO currently has a Treasury Taask Force which was created through governance in February 2022. The Aavegotchi DAO Treasury Taask Force is a dynamic committee assigned to making DAO treasury management proposals to the community and the DAO for consideration.
Soon after its creation, the DAO Treasury Taask Force (DTF) proposed depositing ~80% of GHST (3,000,000 GHST) held in their DAO Treasury into Aave as collateral to earn passive yield, immediately taking advantage of the Aave GHST listing. The current utilization rate is at 45% with a deposit APR of ~4.8%.

The project, via a dedicated treasury management team, is using assets held in their treasury productively to generate yield. However, the assets themselves are not very diverse, with a large concentration of the protocol's native token. This is reflected in the score.

Score: 7

3. Token Economics

The "Token Economics" section assesses the function of a protocol's token. This includes the token distribution, its functionality, the ability of the token to incentivise desired behaviours and value capture potential.

a) Genesis token distribution (15 points)

Token distribution can be an indicator of a healthy protocol and, if done well, can improve coordination and alignment among different stakeholders. Was the initial distribution fair and balanced? Are the tokens distributed widely or is the ownership concentrated?

Answer:

The supply of the GHST token is based on a Token Bonding Curve (TBC), which is a mathematical concept that defines a relationship between price and token supply. This means that the GHST token has no maximum supply. The price increases as the supply of the token increases, and decreases as the supply decreases. The bonding curve is continuous, never-ending as long as Ethereum exists. This continuous distribution allows the supply of GHST tokens to wax or wane depending on their utility and demand by the community.

The GHST token however did have an initial token distribution which saw 5 million GHST tokens go to private sale participants, 500,000 to presale participants, and 2 million to the development team, with the rest being distributed via public sale through the bonding curve. GHST was distributed in multiple stages:

The Private Sale

Size: 5,000,000 GHST Price: 0.05 DAI / GHST

The private sale was held in August 2020. Anyone who performed KYC and met a 20k DAI minimum could join. The funds raised during this round were allocated to Pixelcraft Studios, the company behind Aavegotchi, to ensure the successful development of the Aavegotchi game.

The Pre-Sale

Size: 500,000 GHST Price: 0.1 DAI / GHST

The GHST Pre-Sale was held on 14 September 2020, with a time limit of 14 days or whenever the supply sold out, whichever came first. All Level 6 Aagents who had performed KYC by the aforementioned date were eligible to purchase GHST at this stage. To conduct the sale, a snapshot of all Level 6 Aagents at the time was taken. This was then cross-checked with those who performed KYC. Then, a special "Verified Level 6" badge was assigned to all eligible participants in the Discord. These participants were then added to a special discord channel, where links to the presale were posted.

The funds raised here were used to bootstrap liquidity in the Token Bonding Curve reserve pool, at a reserve ratio of 100%.

Ecosystem Fund

The Ecosystem fund consists of 1,000,000 GHST locked according to the same schedule as the Private and Pre-Sale rounds. Unlocked funds can be deployed via proposals made to the AavegotchiDAO V2.0 and above, for legitimate use cases such as funding development by non-Aavegotchi core team members, promotion, and marketing of AavegotchiDAO, as well as any other use case the AavegotchiDAO deems useful.

Team Fund

The Team Fund consists of 1,000,000 GHST locked according to the same schedule as the Private Round. However, once funds have been fully unlocked, they will be distributed according to a 3-year vesting schedule, and the remaining funds will be locked into a new vesting contract for another two years, and drip-released to the Aavegotchi core team.

Public Bonding Curve Sale

There was no limit on the supply of GHST in this round, and no limit on the time. The price opened at *0.2 DAI/ GHST*, and fluctuated along the curve. There was no lockup in this round – tokens could be claimed straight away from the curve. Anyone who participated in KYC and had their address whitelisted by the Aavegotchi team was able to purchase straight from the curve.

Participants of the Private Sale and Pre-Sale had their GHST tokens vested over a period of one year, beginning from the close of the Pre-Sale round. After 180 days, an initial release equivalent to roughly 50% of the total amount was released, followed by a drip release of the remaining tokens over the next 185 days.

The genesis token distribution is reasonable and does a fair job of aligning stakeholders for the betterment of the protocol.The vesting schedule and lock-ups for the private and pre-sale are rather short at just one year, this is reflected in the final score. But the team fund has a 3-year vesting schedule and the team fund is primarily used to incentivize core Aavegotchi team members to contribute with their full effort to the project, as well as to compensate external advisors.

Community allocation is also quite significant as the token has no supply cap, which means that newer community members can purchase the token at any given time albeit at a higher price as the popularity of Aavegotchi soars.

Score: 12

b) Purpose of the token (10 points)

This score evaluates the purpose of a token in the project's ecosystem. For example, does it provide utility? Does it have governance rights attached to it or a built-in value capture mechanism?

Answer:

The GHST token specifically helps align the respective goals of the AavegotchiDAO, GHST holders, and Aavegotchi NFT holders.

The token is meant to be used as the base ecosystem currency for the purchase of various on-chain Aavegotchi assets. These include Portals, wearables, consumables, and collectibles, amongst other goods. Beyond this, GHST also has several other functions, such as staking and enabling players to vote in DAO governance.

GHST can be staked in the Staking Contract to earn FRENS. FRENS are a non-transferable balance within the Aavegotchi Staking Contract. FRENS cannot be purchased. They are meant to reward stakers for their contributions to the Aavegotchi project. FRENS can be converted into Raffle Tickets or Drop Tickets:

- Raffle Tickets can be entered into periodic Wearable Raffles to win Wearables.
- Drop Tickets can be entered into NFT Raffles to win Portals and REALM Parcels.

Players have to buy GHST and spend it in the process of summoning and training Aavegotchis. A portion of this is transferred directly back to the DAO to continue funding the development of the ecosystem. At the same time, part of the value is also distributed as rewards for wise governance in the DAO, and as rewards for engaging in rarity farming.

Last but not least, GHST can be staked in the GotchiVault. New and existing members of the Aavegotchi community can deposit their GHST and Aavegotchis into a permissionless contract, where these assets will be securely managed by veteran community members, with the goal to optimize GHST yield for all participants. The projected minimum vGHST (staked GHST) APR is 22.99%, with over 4.9M GHST currently staked.

GHST, therefore, gives holders utility and governance rights but does not capture any revenue. Any revenue captured by the protocol goes directly to the Aavegotchi DAO Treasury.

Score: 8

c) Ongoing token issuance / inflation (10 points)

Most tokens have built-in inflation. This section evaluates the purpose of that inflation. Is it justifiable? Does it help improve the coordination and alignment of incentives for the protocol? Does it incentivise positive-sum behaviour? Are the benefits flowing to all relevant stakeholders or just select groups?

Answer:

There are currently over 59M GHST in circulation. The token doesn't have a capped supply as an unlimited number of GHST can be purchased from the Token Bonding Curve (TBC). As more GHST is bought from the Bonding Curve, the supply increases, as does the cost of subsequent GHST bought from the TBC. Similarly, GHST can be sold back to the Bonding Curve at any time, which both reduces the supply and lowers the price of subsequent tokens bought from the TBC.
The inflation of GHST tokens through net purchases on the bonding curve is positively correlated to the GHST price. The bonding curve has been mathematically programmed to increase the price of GHST as the circulating supply of GHST increases.

Revenue Sharing Overview

A core part of the Aavegotchi experience is spending time with your Gotchis and equipping them with wearables in rarity farming. To incentivize continuous and active engagement with the game's ecosystem, part of the revenue

earned from portal sales and wearables will go towards rewarding the top rarity farmers. To that end, **40% (EARN IT)** of all earned GHST will be distributed back to players via player rewards.

15% (DAO IT) of revenue will initially be distributed to the DAO treasury. As the DAO continues to mature, this percentage may eventually increase. The end goal, of course, is for the DAO to grow into an entity fully capable of managing and even upgrading the protocol.

5% (BURN IT) of all GHST earned via portal and item sales will be burned forever. GHST is a token with a dynamic supply. Its supply increases with demand, meaning that the burn rate does not entail the rapid deflation of the token. That's a problem for tokens with a fixed supply. Burning GHST is a deflationary counterbalance to the downward pressure on GHST's price, as potentially caused by giving out GHST gaming rewards in the form of GHST. Sending GHST directly to the burn address also locks DAI within the bonding curve, creating a rising price floor for GHST.

Last, but most definitely not least, **40% (BUIDL IT)** of the revenue goes to the development team. This is to prevent poorly-aligned incentives for protocol developers as this is a huge contributor to protocol failure, and is an issue Aavegotchi hopes to prevent. The Aavegotchi bonding curve distributes DAI from the reserve to Pixelcraft Studios via a community-governed tap mechanism every month to ensure a working budget for active development.

GHST token's innovative economic model incentivizes positive behavior from all relevant stakeholders. Players are encouraged to continue playing the game to earn rewards through initiatives such as rarity farming. And a significant portion (40%) is directed to developers in order to prevent poorly-aligned incentives

Score: 8

d) Value capture (10 points)

The ability to accrue value and consequently distribute it to stakeholders can be an effective coordination mechanism and deliver long-term benefits to a project.

Answer:

User incentives play a huge part in any project. In this case, GHST provides the economic incentives to encourage greater participation in the Aavegotchi ecosystem. Specifically, the token helps to align the respective goals of the AavegotchiDAO, GHST holders, and Aavegotchi holders.

While players have to buy GHST and spend it in the process of summoning and training Aavegotchis. All protocol revenue is distributed to the players (40%) as rewards for wise governance in the DAO, and as rewards for engaging in rarity farming, the development team (40%), and the DAO treasury (15%) to continue funding the development of the

ecosystem. A more in-depth explanation can be found in the previous section. The remaining 5% is burned as a deflationary counterbalance to the downward pressure on GHST's price.

However, the only direct value accrual to GHST token holders is through the GotchiVault, where the Aavegotchi community can deposit their $GHST and Aavegotchis into a permissionless contract, where these assets will be securely managed by veteran community members, with the goal to optimize $GHST yield for all participants.

Score: 6

e) Token liquidity (5 points)

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

Answer:

The GHST token is pretty liquid on both Centralized and Decentralized Exchanges. There are a couple of ways to buy GHST tokens:

- Buying it straight from the Bonding Curve on Ethereum Mainnet (though this requires KYC, which unfortunately precludes citizens of the United States and China). There is no difference between buying from the Bonding Curve or on CEXs and DEXs, but purchases from the bonding curve help to support the AavegotchiDAO as a portion of this revenue goes to their treasury.
- Buying it from Decentralized Exchanges on Ethereum Mainnet such as Uniswap and Matcha. Most of the liquidity on Ethereum DEXs can be found on the GHST-ETH pair on Uniswap V3, but liquidity is extremely shallow at a TVL of $425k.
- Buying it from Decentralized Exchanges on Polygon such as QuickSwap. Most of the liquidity on Polygon DEXs can be found in the GHST-WETH and USDC-GHST pairs on QuickSwap.
- Buying it from Centralized Exchanges such as Crypto.com, OKex, and Binance.
- Buying it straight onto Polygon via Transak.

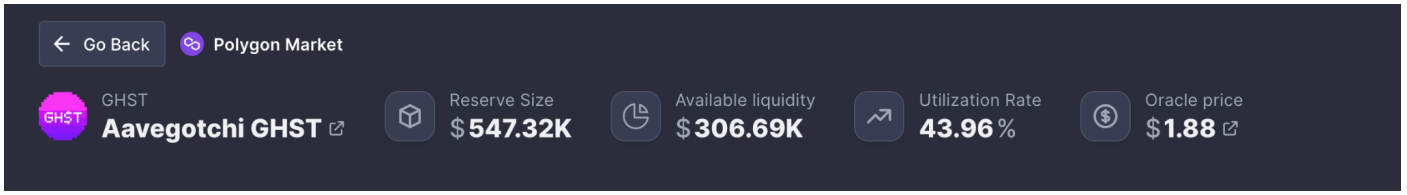
Score: 4

f) Extrinsic productivity (5 points)

Can the token be used outside of the project's ecosystem? For example, can it be used as collateral elsewhere, be staked for yield or rewards, etc.

Answer:

The GHST token can be used for lending and borrowing on Aave's V2 and V3 markets on Polygon. This is a very important extrinsic productivity opportunity as Aave is considered a major DeFi blue-chip protocol. It is also one of the few DeFi protocols that have never experienced a hack, they also have an excellent PrimeRating (A+).



Source: Aave V2 Polygon Market | GHST

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FRENS can be converted into Raffle Tickets or Drop Tickets:

- Raffle Tickets can be entered into periodic Wearable Raffles to win Wearables.
- Drop Tickets can be entered into NFT Raffles to win Portals and REALM Parcels.

Aavegotchis and GHST tokens can be deposited into GotchiVault to passively maximize their yield. This allows you to never again worry about petting, voting for XP, or managing your Gotchiverse rentals. In the GotchiVault, your assets are managed securely, on-chain, by a multi-sig of veteran and trusted Aavegotchi community members. The GotchiVault consists of two smart contracts:

1. An ERC20 contract for the vGHST token, derived from QiDao's camTokens (this code allows the vGHST token to represent a share of the underlying pool of an asset, in this case, GHST. Thus, as the contract accrues GHST from fees and FRENS staking, the amount of GHST backing a single token of vGHST continues to go up). The Projected Minimum vGHST APR is currently 22.81% and the average vQi APR is 31%.
2. A "vault" for depositing Aavegotchis. At the core of the Aavegotchi staking is a double mapping that tracks who deposited each Aavegotchi to the contract. This means that every token ID of every ERC721 address maps to a single address – the person who deposited the token. This allows control of the Aavegotchi only to the depositor. Aavegotchi staking will optimize kinship petting, voting XP and, most importantly, gotchi lending in the Gotchiverse.

The token currently has only one safe extrinsic use case with Aave Protocol. But apart from that, there is limited productivity use cases outside of the Aavegotchi ecosystem.

Score: 3

4. 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) Credibility and reputation (10 points)

Are the identities of the core team public? In the case of anon team members, do they have a track record or reputation in the crypto space?

Answer:
Aavegotchi was founded by Pixelcraft Studios in September 2020.

Pixelcraft Studios Pte. Ltd is based in Singapore and was founded in August 2020 by Jesse Johnson and his pseudonymous co-founder Coder Dan. Most of the core team have disclosed their identities and are publicly identifiable. Any pseudonymous team members are highly reputable and trusted in the crypto ecosystem.

The core team (also referred to as summoners) is currently composed of 4 members:

Coder Dan - CEO and Summoner of Aavegotchi
Jesse "gldnXross" Johnson - COO and Summoner of Aavegotchi
Xavier Iturralde aka xibot - Aavegotchi Chief Visionary | Art Director
Nick Mudge - Smart Contracts Lead

Score: 8

b) Relevant experience? (15 points)

Does the team have a track record of execution? Have individual team members built a product or a business before? Does the team have the necessary skills? For example, if a project is making a game, do they have a game developer?

Answer:

Aavegotchi and the Gotchiverse are currently PixelCraft's only projects so they have no past experience that they can be judged on. But individual team members have the necessary skills and experience to manage the project.

Coder Dan (CEO and Co-Founder) is a full stack developer and the creator of Yield Hero, a DeFi dapp that enables users to redirect their AAVE yield toward any address they wish. He is also known for his lead role in developing the first ERC721 staked with ERC20s NFT platform, Bullionix. In addition to his work in tech, Dan is a tier 1 growth hacker leading Aavegotchi's initial growth to over 10k Twitter followers and 6000 active Discord citizens.

Jesse Johnson aka GldnXross (COO and Co-Founder) is a product-centric founder who has had a leadership role in developing the very first NFT minting platform, Mintable, which is now available on both Ethereum and Zilliqa blockchains. He is also the creator of the above-mentioned Bullionix.io which was the first to offer 3D, high-resolution digital collectibles staked with gold stable coins. Prior to his work with Ethereum dapps, Jesse was heavily involved on the digital assets exchange side of the industry serving as the head of business development for ZB Group.

Xavier Iturralde aka xibot (Aavegotchi Chief Visionary | Art Director) is one of the Crypto Art scene's most accomplished artists and entrepreneurs. His distinct pixel artwork has earned him the attention (and sales volume) of NFT traders on OpenSea and Rarible. His innovative $PIXEL token was among the very first social tokens to take hold and demonstrate that NFTs tied to social tokens is a model with legs.

Nick Mudge is one of Ethereum's most accomplished solidity developers. The ERC998 composable standard was authored by Mudge and is among the most important aspect of the Aavegotchi game, allowing a "parent" NFT to equip and carry "child" NFTs with them. More recently, Mudge has headed Ethereum research and development for what has been dubbed the Diamond Standard. This standard offers major breakthroughs for upgradeable contracts and is quickly being adopted by governance-focused DAOs.

Their team consists of at least 10 developers and engineers and has continued to grow as Aavegotchi scales its ambitions. There is a mixture of game design, front-end, back-end software, and solidity developers, all of which are required for a game like this.

Score: 13

c) Thought leadership and public presence (10 points)

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

Answer:

The team occasionally attends public events. Both founders have a pretty modest Twitter following with less than 10K followers between them, on which they actively promote Aavegotchi and share their thoughts and opinions.

Jesse Johnson is quite active in attending public events. He was recently a panelist at Miami NFT Week and he also attends virtual events like a recent AMA with DaapRadar.

Caleb Brown, an Aavegotchi Senior Engineer also attends events such as NFCSummit in Lisbon.

Overall public engagement and thought leadership is just a moderate effort from the team.

Score: 5

d) Ability to foster a community and coordinate resources (15 points)

How effective is the team at attracting and coordinating resources for the benefit of the protocol? Do they manage the community well, fostering a welcoming and positive environment? Does the community represent the project well externally?

Answer:

The team has fostered a fairly large community.

They have over 96,000 Twitter followers, 33,000 Discord members, and 10,600 Telegram users. Like many other projects, their primary stream of communication is their Discord, however, they always make announcements on all their social media platforms. Their growth strategy for the Aavegotchi Token platform is currently focused on a global market, this is evidenced by the availability of discord channels in many diverse languages, including but not limited to Chinese, French, and Spanish. This allows the project to have a global reach as well as an engaged non-English speaking community.

The community represents the project extremely well, as there is an Aambassador Program. To become an Aambasador, you start off by forming your own #GotchiGang. You can create a #GotchiGang for your town, your city, your university, the choice is up to the community. Once a group reaches 100 legitimate members, they are officially recognized as an Aavegotchi Aambassador.

They are many different active #GotchiGangs and Aambassadors who are avid about promoting Aavegotchi and onboarding newer members to the Gotchiverse.

Aavegotchi also has one of the highest governance participation rates in crypto. They have over 7,000 members who have joined their snapshot space and consistently see over 2,000 unique voters on all of their recent core proposals.

Score: 13

5. Governance

The "Governance" section evaluates all aspects of the protocol's governance, from infrastructure to processes and distribution of governance power.

a) Extent of governance capabilities (10 points)

Distributed governance should allow token holders to participate in the governance process. How much influence does the current governance process have when everything works as intended? What parts of the protocol does governance touch? Who can put forward a vote, and are there any limits or requirements (number of tokens, only the team can queue votes up, etc.)?

Answer:

Aavegotchis is governed by the AavegotchiDAO, which allows token holders to vote in order to shape the way the organization makes decisions.

Aavegotchi follows in the footsteps of successful DeFi protocols such as Compound and Synthetix. They follow a process of progressive decentralization. In the beginning, Pixelcraft Studios organized a DAO-governed token distribution event (DAICO) culminating in the placing of the governance capabilities of Aavegotchi, including all game mechanics, smart contracts, and funding, under the auspices of the AavegotchiDAO. But subject always to the prevailing regulatory environment.

Aaavegotchi will have four phases of progressive decentralization namely Genesis, Cocoon, Metamorphosis, and Oasis. They are currently in the Cocoon stage (V1.5 of AavegotchiDAO), the intermediate point between Genesis and Metamorphosis. The priority for the Cocoon stage is to influence game mechanics.
Its features include:

- Contract calls called by Pixelcraft
- No contract upgrades
- GHST token-based governance
- Platform: Discourse -> Snapshot -> Aragon
- Rewards: XP for Core Votes
- Layer: Polygon

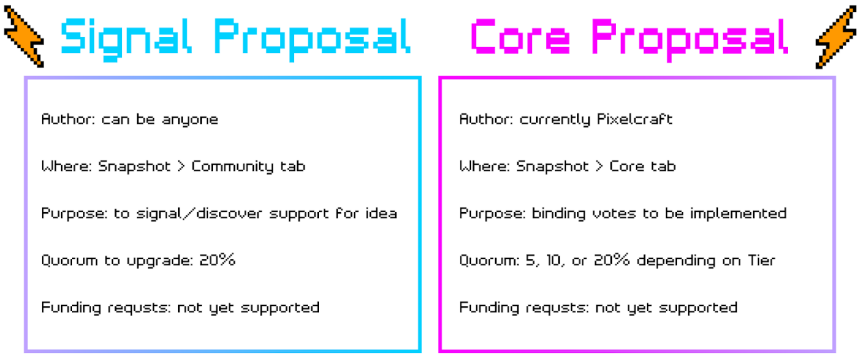
There are 2 types of voting in the current stage (Cocoon):

1. **Signal Proposal**

A Signal Proposal can be posted by anyone to the Community tab on Snapshot, there are no limits or requirements to queue up a vote and anyone can. These votes are non-binding, but if a quorum is achieved, the proposal will automatically be upgraded into a binding Core Proposal. Before a contributor can come up with a Signal Proposal, it is mandatory to discuss it with the community on Discord and/or the Discourse Forum. The rationale is to ideate further and to discover whether there is worthy support to move forward with the Signal Proposal.

2. **Core Proposal**

A Core Proposal is a proposal that only the Pixelcraft team can put forward, with options based on Signal Proposals that reached or nearly reached quorum. These votes are binding and are eligible for XP rewards to participants.



Core Proposals are further subdivided into 3 types:

Note: Quorum percentages are calculated from the amount of circulating GHST eligible to vote on Polygon, not the total supply.

- **Smol votes:** Quorum of 5%. These votes are intended for small decisions that do not affect the overall meta or value of existing Aavegotchis in any significant way (e.g. introduction of a cosmetic feature, a proposal for a marketing strategy).
- **Medium votes:** Quorum of 10%. These votes are intended for decisions that may have some notable effect on the meta (e.g. introducing a new game item, allocating XP to some item or event, changing something about an Aavegotchi that does not affect its rarity score).
- **Galaxy votes:** Quorum of 20%. These votes are intended for major decisions that have significant effects on the meta and wider Aavegotchi ecosystem (e.g. a new Haunt, changing something about an Aavegotchi that affects its rarity score).

More information on consensus around vote differentials, and creating and voting on governance proposals can be found here. A list of all historic Aavegotchi Improvement Proposals (AGIPs) can be found here.

Score: 8

b) Active governance contributors (5 points)

Governance is time-consuming, and governance apathy is a common problem in most democratic systems, including crypto. Therefore, it's essential to have a sufficient number of community members allocate resources to the governance process of the protocol. How many individuals participate in the debate around the protocol? How active are voters? Is delegation enabled?

Answer:

Aavegotchi has one of the highest governance participation rates in crypto. Most public conversations related to governance proposals happen on the Governance forum. Many governance forum topics have over 1,000 views, with over 4,000 views on their most viewed post. Most topics and proposals usually get between 20 and 100, up to 200 comments. These metrics show that there is an active governance contributor presence and that the community is very interested and active in discussions around governance.

When it comes to snapshot voting, there are even more active governance contributors, with just over 1,000 unique voters on their last Signal proposal, as of this writing. Core Proposals (AGIPs) consistently have over 2,000 unique voters on each proposal, with a majority of them reaching quorum consistently.

No delegation strategies are currently enabled on their snapshot space.

Score: 4

c) Governance infrastructure robustness (10 points)

Robust infrastructure relates to how well the technology, software, and models used by the protocol's governance withstand actual use cases. Does the protocol have a reliable voting mechanism? How robust is the governance process, and does it facilitate good governance? Are the votes binding, or do they function solely as signals to the team?

Answer:

The current setup is robust, using standard and reliable infrastructure and toolings like Discourse and Snapshot. The process itself is clear and well structured. The DAOs governance is also quite decentralized with over 2,000 voters on many Aavegotchi Improvement Proposals (AGIPs), and many large GHST holders as active participants.

The setup is very conducive to good governance as the protocol encourages lengthy discussion times, with conversations starting on Discord, before moving on to the governance forum. Once sufficient discussion is had on the forum, the proposal is sent to snapshot as a Signal Proposal. Signal proposals themselves need to reach quorum before they can move to Core Proposals which are considered binding, once they pass through governance. Information relaying the specification of the proposal is presented along with the snapshot votes, including links to the discussion on the governance forum

As highlighted in the previous section, core proposals have a dynamic quorum depending on the importance of the vote. The quorum for core proposals can range from 5% for small decisions that do not affect the overall meta or value of existing Aavegotchis in any significant way; to a Quorum of 20% for major decisions that have significant effects on the meta and wider Aavegotchi ecosystem.

While Snapshot votes are binding, most proposals still have to be executed manually by the PixelCraft team. Overall, while some vulnerabilities exist, there's no evidence that any of them have been exploited or led to issues.

Score: 8

d) Process and ease of use (5 points)

This score is based on the documentation and process for governance. More specifically, how easy it is to participate in governance. Does the protocol have a formal governance process? Is sufficient documentation available? Is there a basic framework to establish social consensus? Are there channels dedicated to governance debate?

Answer:

The protocol maintains documentation on how to participate in their governance process, this information can be found on their wiki. The page includes information on how to participate in governance, how to create proposals and their different types of proposals. They also have a separate page for historic AGIPs that have passed through governance. Therefore everything is documented, shared transparently, and open to anyone in the community.

There is a low barrier to participation even for newcomers as anyone is free to create posts on the governance forum, as well their snapshot space (although this is only limited to signal proposals). Core proposals can only be created by PixelCraft currently.

Score: 4

About the Author(s):

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