

## **Bird.Money Review (BIRD)**



### **SUMMARY**

Bird.Money is a token ecosystem that is using Off-Chain Oracle Analytics to advance both the infrastructure and the legitimacy of the crypto space as a whole. The Off-Chain Oracle allows for the tracking of data from both on and off the blockchain in order to give a holistic rating of how addresses are likely to act in the future, i.e. a Blockchain Individualized Risk of Default, or BIRD Score.

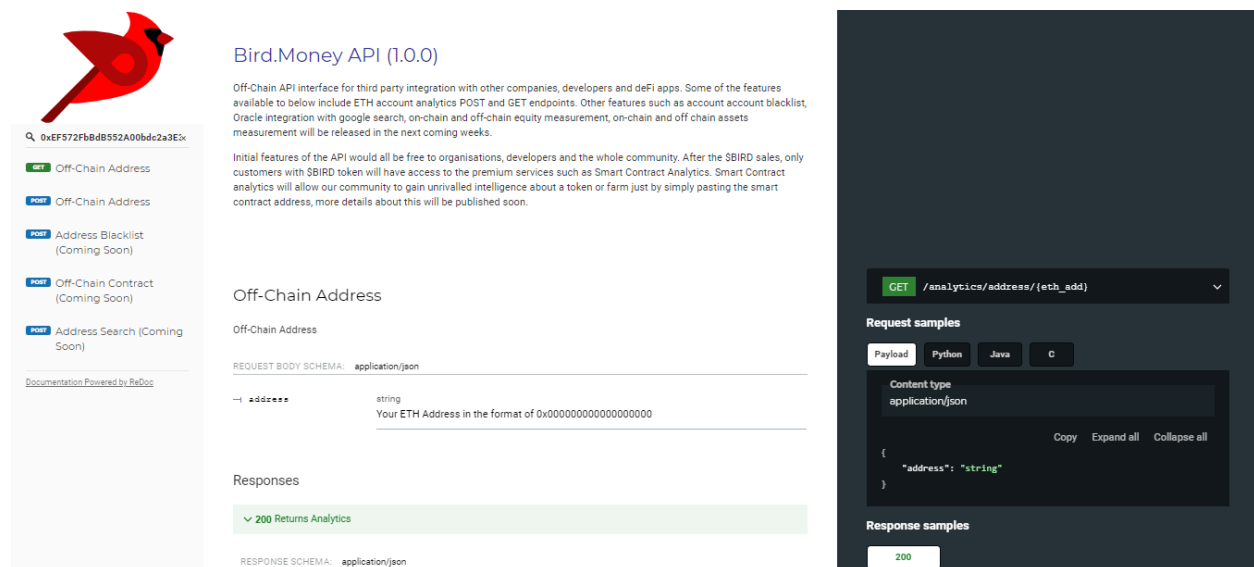
Oracles are a brilliant introduction to the crypto space, bringing real world data onto the blockchain, and providing new avenues of value transaction to the network. With oracles, digital off-chain data can be coupled with on chain-data like holding patterns to provide meaningful analysis to show if an account is truly trustworthy. Digital off-chain data includes things like elective social media sharing, browser history, and much more; all of these data sets are really powerful predictive tools for behaviors of all kinds, including financial behaviors.

This is a big deal, especially in the lending and borrowing industry for crypto. At present, there are no limitations for lending/borrowing besides that which you can provide as collateral. Bird takes the process a step further by giving each user a universal BIRD Rating that will either boost or diminish their lending/borrowing capacity. So, if an account has been negligent on their interest owed, their lending

power will be diminished; on the flip side, accounts that pay back their interest in a timely manner, and have more days active on the network, will have an increase in lending power. Additionally, the BIRD Rating is not exclusive to the BIRD protocol. Other protocols can also integrate the BIRD Rating and the BIRD APIs into their ecosystem, like Moontools and Uniwhales have already! Having other protocols integrate BIRD's technology means BIRD has the potential for vast influence and adoption in the crypto space. With multiple protocols already integrating and more on the way, BIRD is well positioned to be a major player moving forward.

Alongside providing the direct incentive of the Bird Rating, BIRD plans on expanding the use cases of their Off-Chain Analytics to other datasets like Launchpad ratings, IDO ratings, loan aggregation sets, blacklisted accounts, and more. With a significant amount of development already completed, and much more to come, BIRD has the potential to be a new industry standard in Lending and Data Analysis.

## The Off-Chain Analytics Interface



The image displays the Bird.Money API (1.0.0) documentation on the left and a dark-themed API client interface on the right.

**Bird.Money API (1.0.0)**

Off-Chain API interface for third party integration with other companies, developers and dEfi apps. Some of the features available to below include ETH account analytics POST and GET endpoints. Other features such as account account blacklist, Oracle integration with google search, on-chain and off-chain equity measurement, on-chain and off chain assets measurement will be released in the next coming weeks.

Initial features of the API would all be free to organisations, developers and the whole community. After the SBIRD sales, only customers with SBIRD token will have access to the premium services such as Smart Contract Analytics. Smart Contract analytics will allow our community to gain unrivalled intelligence about a token or farm just by simply pasting the smart contract address, more details about this will be published soon.

**Off-Chain Address**

Off-Chain Address

REQUEST BODY SCHEMA: application/json

→ address string  
Your ETH Address in the format of 0x00000000000000000000

**Responses**

200 Returns Analytics

RESPONSE SCHEMA: application/json

The API client interface on the right shows a dropdown menu with 'GET /analytics/address/{eth\_addr}' selected. Below this, there are tabs for 'Payload', 'Python', 'Java', and 'C'. The 'Payload' tab is active, showing a 'Content type' of 'application/json' and a JSON body: { "address": "string" }. There are buttons for 'Copy', 'Expand all', and 'Collapse all'. At the bottom, there is a 'Response samples' section with a '200' status code.

The Off-Chain Analytics Interface is an app built by Bird that provides information on addresses in the form of Eth POST and GET endpoints. This API is version 1.0.0, with multiple new iterations coming that will include Address Blacklisting, Off-Chain Contract searches, and Address searches.

Note, you can check your Bird Rating right now! The version available now is an earlier beta, so check back often to see updates to the Bird scoring methodology.

You can visit this URL to do so (be sure to replace “your-eth-address” with your actual Eth address):

<https://bird.money/analytics/address/your-eth-address>

## **What makes BIRD different?**

### **Heuristic Models vs Statistical Models**

Protocols that deal with risk related assets (like borrowing/lending) are likely to be using heuristic models that are prone to adverse risk selection. This means that when we create contracts, the only information included is that which both parties provide and both are aware of. In other words, loans are contracts that are based upon what we as people view as important; ironically, data has shown that what we view as intuitively important, in relation to risk and credit scores, is not. This brings multiple risk threats and will be described below, with the solutions offered by BIRD:

- Heuristic models are inherently disadvantageous from a risk standpoint due to adverse selection:
  - For example: if Borrower A doesn't have to disclose significant information to Lender A, like whether or not they've defaulted on a past loan, then the borrower can take advantage of the lender, potentially defaulting on another loan. If this problem persists, the protocol administering the loans will eventually default entirely. This is also known as insolvency, and results in loss of funds for investors.
  - BIRD's solution for the inherent risk present in heuristic models is to use machine learning and statistics to automatically classify an ETH address' credit risk. For example, knowing whether or not an address has defaulted on a previous loan is important information. Machine learning will be used to automatically select for an address that has lower risk than another based on previous defaults, which is beneficial to the borrower, lender, and protocol in general. The fascinating part about machine learning, is that if models come across a new correlation between sets of data, the models can integrate those data sets to create a more accurate model for the Bird Rating. Therefore, possibilities for machine learning in the crypto ecosystem are frankly astounding, and shouldn't be underestimated.

## Smart Contracts, Machine Learning, and the DAO

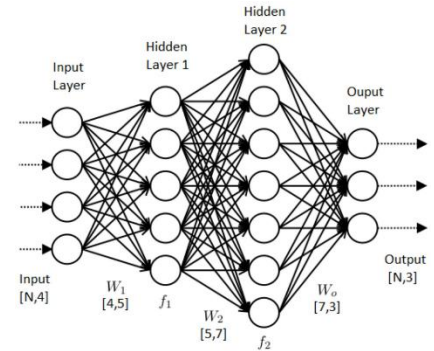
- Smart Contracts and Machine Learning have given us the opportunity to create more efficient and accurate credit models than ever before. Since heuristic models are dependent upon human judgement, they are woefully disadvantageous compared to statistical models. BIRD aims to fix this problem through the use of data science and smart contracts:
  - Statistical models that are utilized by Ethereum smart contracts are able to consistently update data, via Off-Chain Oracles, that are relevant to the loan contract. The statistical models can analyze data such as loan default rates, buying/selling patterns, staking patterns, or pre-sale holding patterns, to give accurate, live data for both borrowers and lenders. The result of this analysis is represented as the BIRD Rating. Having accurate and live knowledge of user data is really important, because it not only decreases risk, but also gives more accurate pricing during contract creation.
  - For example: BIRD Ratings can be used to give specific interest rates for specific borrowers. By using smart contracts both the lender and borrower can facilitate a loan more accurately, efficiently, and for less overhead cost, all while using live data.
- Another advantage that Smart Contracts give to BIRD is the anonymity provided to users on the protocol. Since all contracts are created in code, there is no need for a lender and borrower to physically meet, but rather each, must only submit a simple transaction. Not only is this a much simpler process, but it also helps prevent discriminatory loan practices common in traditional finance.
  - Since BIRD runs through smart contracts and is exploring the implementation of Zero Knowledge Proofs (ZKP), also known as ZK-Rollups, which are used to verify the validity of concealed data between parties without exposing that data to one another, anyone can interact as long as they have an internet connection. Since only pertinent data are shared, users can interact with the loan protocol anonymously. The only data that is shared to a lender, who wishes to obtain an address' Bird Rating for example, is whether or not the

score is high enough to pass the satisfactory borrowing score imposed by the lender.

- This pseudo-anonymous system, dependent on only an account address, allows for *anyone* to interact with the Bird Lending protocol, regardless of their origin or background, their score being entirely based upon their address analytics. The Bird Lending protocol thus provides a more equitable lending protocol, and can act as a better option for those who have been mistreated in legacy lending systems.
- The DAO is also a crucial feature behind the governance, development and growth of BIRD. In the legacy system, every credit bureau is centralized. This means that the scores they provide to people, that determine highly significant values for things like loans and interest rates, are trade secrets. Not only are they trade secrets, but centralization also allows for the monopolization of power. Both of these are issues because it gives an overwhelming amount of power to the credit bureaus. Consumers can have scores lowered for unknown reasons, or if the credit bureau is the only one available in the local area, then the consumer might be forced to accept high rates or unfavorable loan terms.
  - BIRD will begin its journey using a centralized structure of governance in order to prevent the inherent risk in allowing a fully decentralized governance straight away. Immediately converting to a DAO gives bad actors the potential to attack the protocol, which is the opposite of BIRD's goals.
  - As such, BIRD will convert from a centralized governance to a DAO over time, giving the users of the protocol control over the rules themselves. There are a host of possible choices for the future conversion of BIRD's governance to a DAO, and each will be taken purposefully, for the benefit of the entire protocol and its users.
- Lastly, although the previous lending protocols in Defi have continued to use heuristic models in their credit scores, the heuristic models continue to fall further and further behind statistical models. This is primarily due to the impressive advancements made in the field of data science over the past few decades.

- BIRD is taking full advantage of cutting-edge research in the field of data science, utilizing methods like Artificial Neural Networks (ANNs) and Genomic Programming (GP). Both of these are described briefly below.

To show an example of an ANN, here's an example of one with only 4 layers, 19 total nodes, 4 inputs, and 3 outputs. Although quite complex at first glance, this fairly simple ANN is capable of analyzing highly complex relationships, and can do so much faster and more reliably than any human brain ever could. Scaling this process up allows for the analysis of basically all the information you need when creating accurate credit models.



GP is an improvement upon ANNs, where instead of only taking inputs and giving outputs, the model can use inputs and outputs, analyze the efficiency or effectiveness of said model, and select for that which is more efficient. To put it another way: GP is code that can evolve. It will continue to improve itself by selecting for the most optimal model based on all past data and iterations.

By using both of these advanced techniques, BIRD will provide the most advantageous credit model in relation to risk management, accuracy, efficiency, and pricing. This is only the start for what BIRD can do with this technology, and the BIRD Rating for lending/borrowing is just the first of many possible use cases. (like creating IDO, Launchpad, or Auditor ratings)

For more information about ANN's or GP, you can follow the links below!

- <https://www.nature.com/articles/nbt1386>
- <https://deepai.org/machine-learning-glossary-and-terms/genetic-programming>

## **PARTNERSHIPS**

Bird.Money have already partnered with some big names in the space, which can be found in the following graphic. These partners have clearly identified the value

in what Bird.Money are trying to do, and as such have future plans to work with them on various applications of the BIRD Rating,



## **TOKEN USE CASES**

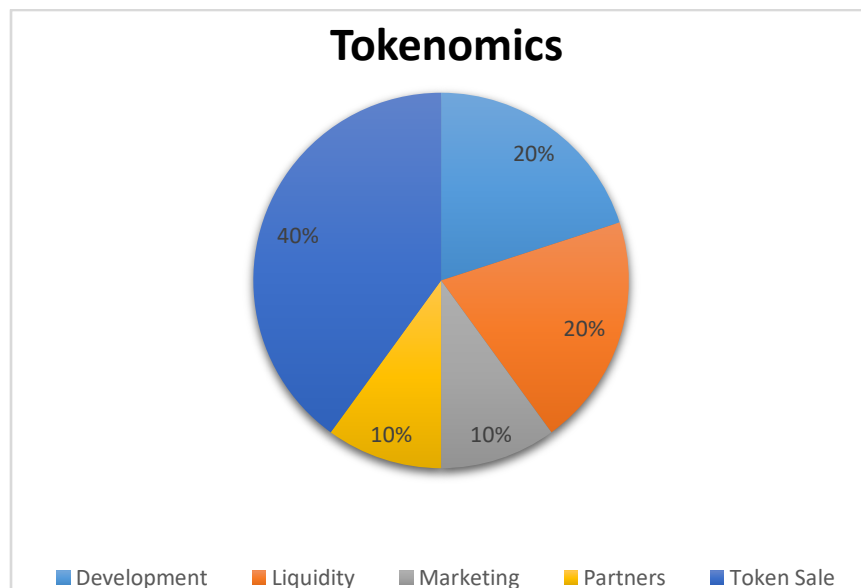
Transactions that are used to obtain Bird Ratings are paid for in the native BIRD token (i.e. you need to pay in BIRD to access the Bird Ratings that are important for reducing risk to borrowers and lenders). The BIRD token also has staking and liquidity farming incentives through their partnership with Cyberfi. Both of these mechanisms are used to lock up supply of BIRD tokens, enable more pairs to be created to ensure deep liquidity and to further secure the protocol as a whole. As more tokens are staked or paired, the circulating supply will continue to decrease, driving both price and Total Value Locked (TVL).

## **TOKENOMICS**

**The maximum total supply of Bird is 140,000. 40% were sold at presale, 20% were allocated for project development, 20% were allocated for Liquidity and for associated yield farming, 10% were allocated for partnerships and 10% were allocated for marketing purposes. A simple breakdown of the token distribution as a pie-chart is shown below.**

**\$BIRD** has a comprehensive distribution model. Its total supply consists of 140,000 **\$BIRD**. The new updated token distribution are as follows:

- *40% will be sold via presale*
- *20% will be used for project development*
- *20% will be used to provide Liquidity and yield farming*
- *10% tokens will be allocated for development and partnerships (For 5 years, these tokens will be locked to instill confidence in the community)*
- *10% will be used for marketing*



**As of the time of publication, the best place to purchase Bird tokens are at uniswap:**

<https://app.uniswap.org/#/swap?outputCurrency=0x70401dfd142a16dc7031c56e862fc88cb9537ce0>



## **THE TEAM**

The team behind BIRD is full of heavyweights. With over 50 years of combined experience in developing, and decades of combined experience in crypto, revolutionizing the lending ecosystem is within their grasp. Beyond the impressive amounts of actual experience, this team is also full of high-profile academics who are using state-of-the-art data science to develop the Bird Ratings with an intent to make the crypto space better as a whole.

LinkedIn profiles can be found on the website for the majority of team members, being fully transparent with who they are and what they've done in their industries. With a platform focused on transparency, it's a perfect fit! Alongside the developers, the community managers are always watching the socials to answer questions and help out, and all updates from the team are consistently announced on time, or even ahead of schedule.

With a significant amount of work already completed this quarter, and much more planned for the rest of 2021, it will be exciting to watch this team continue to impress.

## **ROADMAP**



## Q1 - 2021 (Mainnet Season)

Our focus for the early first-quarter of 2021 is to get the platform in full gear with the Oracle and Lending platform migrated from testnet to mainnet within a short period of time. We also aim to further build on the Oracle platform by launching our Trust Network, which incentivizes data providers [Read more here](#)

- Contract Audits Lending and Oracle ✓
- Mainnet Off-Chain Oracle Analytics (Try the App) ✓
- Mainnet Lending Platform(Try the APP) ✓
- Data Providers(Incentivised Oracle Nodes) ✓
- Trust Network(Mainnet) ✓
- Exchange Listing ✓
- Deflationary Staking and Farming Launch ✓
- Comprehensive API and Documentation 2.0 Initial Release ✓



## Q2 - 2021 (Cross-Chain Season)

Second-quarter will see a focus Cross-Chain integration beyond the Ethereum network with a view to make our services available across multiple blockchain networks to ease the adoption of Bird services.

- Cross-Chain Oracle Launch
- Cross-Chain Collateral Lending
- Oracle Network Release 2.0 (Beyond Analytics)
- Additional Exchange Listings
- Off-Chain Oracle Marketplace Release
- Trust Rating and Crypto Credit Scoring
- Data Consumer Integration
- Explore modified loan structures



### Q3 – 2021 (Middleware Season)

Third-quarter will see a focus on middleware integration and an exciting period for our community with the BIRD Governance DAO launch.

- ✚ Smart Contract Analytics Platform
- ✚ Expanded wallet transaction pattern and network visualiser
- ✚ Oracle Hackathon
- ✚ BIRD Governance DAO
- ✚ Bird GraphQL Abstraction Layer Launch
- ✚ BIRD Visual Dashboard and Monitoring Interface



### Q4 – 2021 (Expansion Season)

Fourth-quarter will see the expansion of the Trust Network beyond the Ethereum network, and focus on research and development to further improve the trust network and publish findings in reputable journals such as the IEEE Explorer and Computational Economics, and conferences such as the Blockchain Expo Global 2021 in Amsterdam and the Blockchain Summit London 2021

- ✚ Cross Chain Trust Score (Beyond Ethereum Network)
- ✚ Asset Group Trust Score
- ✚ BIRD Incubator — Research and Growth Lab
- ✚ Continuous development and improvement of the Trust Network
- ✚ Academic research and publication of Trust Score impact in the DeFi sector

With Q1 having just completed, BIRD has successfully stayed up-to-date on all of their goals, achieving each and every one so far with stellar results. Both the Lending Platform and the Off-Chain Oracle Analytics are online, with staking and farming available through their partner CyberFi's Samurai Stakepad.

Q2 will also be a busy period of development where multiple chains will be integrated into lending systems, so that BIRD can provide lending options to multiple chains and more users.

Q3 and Q4 look to hold even more impressive updates where the Smart Contract Analytics Platform will go live, updates will be made to the governance, the oracle systems, and to Trust Scores as a whole. Long term, BIRD also plans to create analytics models for other chains beyond Ethereum, to create an Incubator for Research and Growth, and to even post an academic publication on how the BIRD Trust Score has had an impact on the Defi Ecosystem.

Overall, the team has dozens of goals to accomplish before the end of the year, many of which can have extensive, long-lasting effects on the future of Defi. Over the past few months, the team has proven themselves as more than capable of building the vision that they've laid out, and will likely become leaders not only in the lending markets, but in data analytics, oracle utility, and the legitimization of Defi as institution-grade investment technology.

## **RESOURCES**

Ticker: BIRD

Total Supply – 140,000

Initial Circulating Supply – 83,733

Website – <https://bird.money/>

Medium – <https://medium.com/bird-money>

Resources – <https://bird.money/docs>

Twitter - <https://twitter.com/birdmoney>

Telegram – <https://t.me/birdmoneygroup>

Contract address – 0x70401dfd142a16dc7031c56e862fc88cb9537ce0

Decimals – 18

## **CATALYSTS**

- Lending Protocol is LIVE
- Off-Chain Oracle API (v1.0.0) is LIVE
- Borrowers and Lenders will need BIRD to obtain API data (huge buying pressure)
- Both staking and farming are live for BIRD (decreasing circulating supply)
- Using cutting edge ANNs and GP to create optimized credit rating models
- Team with over 50 years combined experience and 20 years combined in crypto
- 6 months old and only \$5M market cap
- The global lending and borrowing market is approximately \$6.8T, BIRD provides a safer, more efficient place to put that money