



TheCroods and
Metaverse

v1.0

Foreword

"TheCroods" is a strategy GameFi+NFT+P2E simulation management game. Based on the film of the same name, the game tells the story of the Crude family fighting for food and a home. The game contains two elements, puzzle solving and action. The player will control the original

The Krud family of the family hunts for food and evades attacks from various strange creatures. Players also need to hunt, make food, raise creatures and harvest fruits in the game. Crazy primitive is based on primitive era, adding tower defense elements and arpg fighting war strategy game. Multi-strategy gameplay, players play the role of tribal patriarch in the game and experience the fun of strategy. The game inherits the traditional strategy game

The mainstream gameplay of the game, and innovative modes such as real-time battle, full-scene construction, and mutual development of friends have pushed the gameplay of strategy games to a new level.



Summary

TheCroods is a community-driven metaverse virtual world that combines the advantages of DeFi and NFT through a revolutionary token economic system, using financial mechanisms and game systems to empower players, creating a truly unique and durable Play-To -

Earn ecosystem. Any player can use the platform's character NFT to create and own their own game experience on TheCroods platform, and earn Token income from it. Any player can earn tokens through skilled gaming skills and contributions to the ecosystem. Players can control their own primitive tribe world characters and pets to fight, reproduce, nurture and build huge primitive tribes.



SECTION Metaverse

The Metaverse first originated in science fiction, defining a virtual world parallel to the real world. Science fiction writer Neil Stephenson first proposed the concept of the Metaverse in his 1992 novel Avalanche. Subsequent The term is often used to describe the concept of future iterations of the Internet, consisting of a continuously shared three-dimensional virtual space linked to a perceptible virtual world, that is, a parallel and persistent virtual world built on top of the real world through technological capabilities. People who live in virtual time and space in the form of digital avatars also have fully functioning social and economic systems in the virtual world. While some metaverse definitions vary, there are consistent common themes and characteristics within each definition, which we will focus on later.

While the Metaverse appears as a series of real-time and ultimately interconnected online experiences, it is actually empowered and characterized by transformative trends long known to leading brands and marketers, including shared social spaces, Digital payments and gamification and more. The future of the metaverse, however, will feature absolute evolution in most of its unfamiliar forms, most notably in blockchain technology, cryptocurrencies, digital commodities, non-fungible tokens (NFTs) and personal digital doubles (Avatars).

Characteristics of the Metaverse

Before discussing the properties of the metaverse, let us first define some of the most basic common understandings of the metaverse. We've tried to summarize some features that most experts in this field will mention:

Sociability: Sharing virtual scenes with other users in the same world, and having a real presence in the virtual world, is a key element of the metaverse. There are no hardware limitations: these digital worlds can be accessed using different forms of hardware. Users can interact with these worlds through extended reality (VR/AR) glasses, phones, tablets, and wearables;

User-generated content: The metaverse will be largely creator-driven and will be enriched by user-generated or enhanced content and experiences;

Endless: The Metaverse will be a real-time and never-ending parallel reality rich in economic activity: these digital worlds will have fully functional economies based on cryptocurrencies and offer transactions, investments and real ownership;

Bridged worlds: Users will be able to seamlessly jump between virtual worlds and bring personal items from one world to another. These digital worlds can also interact with the real world in the form of access points (such as QR codes) and mixed ownership of real/virtual products.

closed world and open world

Abundance of content: open and free creation and continuous generation of content. In order for the Metaverse to serve as a virtual space for users to live for a long time, it must develop content tools and ecology, open third-party interfaces to lower the threshold for creation, and form a self-evolution mechanism.

Sociability: The metaverse can break through the limitations of physical time and space, and not only form a replacement for offline relationships, but also bring about major changes to mainstream social models based on the identification of virtual environments and existence.

Economic system: With independent economic attributes, anyone can create, trade, and "work" to get rewards, forming an economic and cultural prosperity similar to real life.

A few typical examples of game-centric metaverses based on Web 2.0 are Minecraft, Fortnite and Roblox. Today's metaverses are basically a series of closed worlds or "walled gardens" in which content, business activities and consumer experience can only exist in specific virtual environments, and cannot be taken out of these virtual worlds.

Most of the "closed" worlds were created in Web2.0 and started to adopt some features of Web3 to upgrade their platforms. Although not quite Web3, they are still marked as part of the metaverse because they already have some of the characteristics of the metaverse. How far are we from a truly decentralized and open metaverse? Much closer than most people think. We provide some specific cases in the "Shan Hai Jing - Divine Beast Metaverse Ecosystem" section later in this article.

open world

Let's use an analogy to help you understand the important role blockchain plays in the metaverse. If we think of the metaverse as an Earth, then think of each virtual world as a nation separated by oceans. The introduction of blockchain is as revolutionary to the world as the invention of ships. Users can store their digital items (tokens) on their ships (blockchain wallets) and travel between different virtual worlds, blockchain technology provides users with a third-party area to store their items, and Allow them to take it with them. Suppose one day the world where a user originally purchased the item no longer exists, he/she can still own the item. If a user wants to sell the item in a different world than the one they originally acquired the item, they can do so too, which is true ownership in the virtual world.

ERC-20: Has become the technical standard for all smart contracts on the Ethereum blockchain for token implementation. This standard is used for currencies in a similar world; the currency is fungible and can be exchanged with other currencies of the same kind.

ERC-721: This standard applies to non-fungible tokens. According to the ERC-721 standard, each item is unique - think of it as something like a painting or other unique digital collectible. Because the item is unique, it comes with a programmable smart contract that states the additional benefits it carries. The item can also be sold to another party.

FUNGIBLEVS.NON-FUNGIBLE

TOKENS (NFT) By now, you have seen the word token (token) used frequently in this article. A token is a unit of data stored on a digital ledger, and understanding these tokens is critical to fundamentally understanding how consumers will interact with each other in the metaverse, and how brands will interact with users. There are two types of tokens, Fungible and Non-Fungible.

FungibleTokens

Fungible items, such as digital currency tokens (such as Bitcoin), can be exchanged for other tokens of the same type. Since the open world adopts blockchain technology, users can trade assets between different worlds and actually own their items in the virtual world on the blockchain. This concept of true ownership is critical to understanding digital goods.

Non-FungibleTokens

BSC

Binance Smart Chain (BSC for short) is a main chain in the dual public chain mechanism of Binance, the world's largest digital currency exchange. BSC can be regarded as a blockchain parallel to the Binance Chain. Serving the DeFi and NFT ecosystem. BSC has smart contract functionality and is compatible with the Ethereum Virtual Machine (EVM). Its design goal is to maintain the high throughput of the full Binance Chain while introducing smart contracts into its ecosystem.

SECTION Project Description

"TheCroods" is a strategy GameFi+NFT+P2E simulation management game.

Based on the film of the same name, the game tells the story of the Crude family fighting for food and a home. The game contains two elements, puzzle solving and action. Players will control the original Krud family to find food and avoid the attacks of various strange creatures. Players also need to hunt, make food, raise creatures and harvest fruits in the game. Crazy primitive is based on primitive era, adding tower defense elements and arpg fighting war strategy game. Multi-strategy gameplay, players play the role of tribal patriarch in the game and experience the fun of strategy. The game inherits the mainstream gameplay of traditional strategy games, with innovative modes such as real-time battles, full-scene construction, and mutual development of friends, pushing the gameplay of strategy games to a new level.

TheCroods Composition

NFT

In-game characters, genesis eggs, or other props that appear in the future are represented as BEP-721, BEP-1155 tokens. To ensure persistent scarcity and verifiable scarcity of non-fungible items, we use both token standards. This standard enables smart contracts to track token ownership at the individual token level: each item has a unique identifier, and unique properties (optional) stored as metadata.

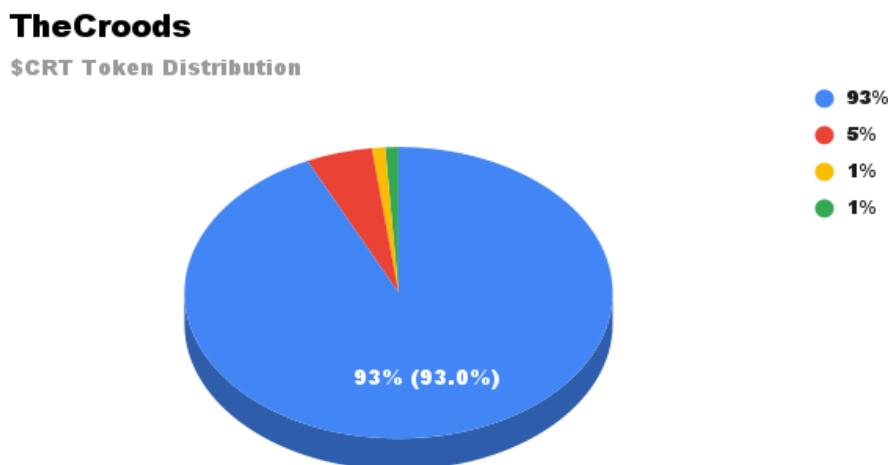
CRT

The entire ecology of TheCrood will start the dual currency mode. CRT and FOOD are two name tokens.

CRT is a tool used as a basis for transactions and interactions, and is also the only governance token in the entire platform. It is built on BEP-20 tokens on BSC. And FOOD tokens will be consumed and obtained in GameFi games later.

TheCrood is working on establishing key mechanisms that will be closely tied to TheCrood platform and its values. CRT is used as the basis for intra-platform transactions. Players need to spend CRT to purchase game characters or blindly. In the early stage, they purchased Genesis eggs on the trading platform , and then accessed the game platform.

Token Details



TheCroods token distribution

Total 3,000,000,000

Liquidity mining 93%

Ecological construction 5%

Team 1%

Fund 1%

No private placement, no IDO

Completely open, fair, without any private placement, without IDO, to ensure fairness and justice for all users.

other power sources

As the number of community creators, players, and market assets increases, so does the demand for utility tokens to reward the increased number of stakeholders participating in the platform.

Blockchain API

APIs are critical to blockchain technology. A strong API infrastructure can enable users to win first and profit from the blockchain faster. TheCroods will be published via an API on the BSC Developer Platform (ApplicationProgrammingInterface, application programming interface) officially opened the blockchain technology, providing a new application scenario access mode for participants in various formats.

TheCroods API allows applications to register users, query the blockchain, and publish transaction-related signals, allowing developers to quickly test chaincodes or query transaction status. Therefore, TheCroods will create a vertical application platform for pan-commercial games, which is committed to aggregating game companies and game service organizations of various formats around the world to provide high-quality multi-domain services.

TheCroods Smartwallet

• **One-stop management:** Unified management of multiple digital currencies through TheCroods smart wallet, not only supports Bitcoin, The storage and management of mainstream assets such as Ethereum will also support the standard protocols of smart contract platforms such as Ethereum and BSC, and rapidly increase the number of tokens issued based on each platform. While reducing the burden of user management, it also provides wallet service support for new blockchain projects for users, allowing the project team to focus more on core services.

Decentralized service: TheCroods smart wallet adheres to the core essence of blockchain and provides users with decentralization The digital currency storage scheme, wallet keys and address private key information of all types of currencies are stored in the user's local system. At the same time, TheCroods smart wallet provides a convenient key backup solution - users only need to make a backup once, write down a word, and save it in a safe place. Even if the types of digital currency are added in the future, all types of digital currency assets can be restored with the backed up 12 words.

Multiple security guarantees: Multiple security guarantees: In addition to giving users full control over wallet keys, TheCroods smart wallet also provides Modular digital asset management provides multi-signature technical guarantee and two-step authorization verification. Users can choose to perform verification methods such as mobile phone verification code, fingerprint, and live body during transfer transactions to ensure the security of digital currency assets in an all-round way.

Blockchain wallets are software programs that store encrypted digital currency, and each registered user of TheCroods has a private key (secret number) that leads to their wallet. This key is the only way to access their digital currency address and therefore the only way to receive or send credit.

In the wallet, users keep their application tokens in TheCroods ecosystem, and changes in application tokens correspond to Changes in the mainnet ledger information of TheCroods platform. The essence of managing wallets is managing private keys, and once the private key is lost, there is almost no chance of recovery.

In order to solve the problems of information asymmetry and evaluation fraud, TheCroods will use asymmetric encryption technology to The information is encrypted and saved to the system. In order to ensure that the information on the chain is valid, authentic and safe. The specific application principle is as follows: Users in each link of TheCroods need to register on the system, and the registered users will have a unique The unique private key used to prove the true identity of the identity. Every user with a private key can record information on the blockchain and view information within the authority.

The mechanism of privacy protection is as follows:

First, generate a 256-bit private key (yellow key) from the ciphertext through the SHA256 (SecurityHash) algorithm. When the HASH function is used, the length of the data changes, and the length of the hash value remains unchanged ; each Data character corresponds to a unique hash value, which can be used as a data fingerprint. Use this private key with elliptic encryption algorithm to generate a public key (light purple key), which can be known to everyone. Everyone can get the user's address through the HASH function through this public key. Due to the one-way nature of the HASH function, that is: Hash(x)=y, it is difficult to find x through y. If you want to crack the public key through the address, or crack the user's private key through the public key, it is almost impossible.

Blockchain underlying services

Task decomposition: Decompose a problem into several independent tasks, and each task runs on a node to achieve concurrent execution of multiple tasks.

- Node Communication: Nodes communicate with each other, and need to design a specific communication protocol to achieve. The protocol can be in the form of RPC or MessageQueue.

An engineering problem of TheCroods in the field of transaction payment: high concurrent transactions, massive data operation, these can be solved using distributed systems. According to the level division and organization structure in the application system, the structure of distributed system can be divided into two-layer C/S structure and multi-layer structure (three-layer C/S structure). The former is a traditional and mature application technology, and the latter is becoming increasingly popular and developing.

- Fast execution: Thin clients reduce the workload on the client side. High performance improves application execution speed through load balancing and data caching capabilities in the middle layer.
- High security: The middle layer isolates the client's direct access to the database server and protects the security of the database.

Let Distributed Database System

(TheCroodsBase)

TheCroodsBase is a highly reliable, high-performance, column-oriented, scalable distributed database designed to solve the limitations of TheCroods relational database in processing massive data

TheCroodsBase distributed database system divides a table into several regions according to rows and columns, and then stores them on different machines. TheCroodsBase cluster is mainly composed of 2~3 Masters and a large number of RegionServers. Master avoids single-point problems through multiple instances. It is mainly responsible for the management of Table and Region, such as adding, deleting, modifying, and checking the metadata of Table; managing the load balancing of RegionServer and adjusting the distribution of Regions. After a Region is split, it is responsible for the allocation of new Regions; after a RegionServer fails, it is responsible for the automatic migration of Regions on it. RegionServer is mainly responsible for responding to user I/O requests.

Non-Fungible Digital Asset (NFT) Data Structure

Non-Fungible Digital Asset (NFT) Data Structure

Non-homogeneous digital assets (NFT) is a type of digital assets used in distributed accounting networks. Asset instances are unique. By optimizing the structure of non-homogeneous digital assets (NFT), it can be used more flexibly . in blockchain online games.

TheCroods redesigned the data structure and added custom data storage to accommodate possible game data and expansion content. At the same time, key processes such as consensus, witness, and block generation are also adjusted accordingly to match the new data structure.

The prop data in TheCroods is only fully recorded in the block data when it is generated and its attributes are changed. During ordinary transactions and transfers, only the hash pointer is recorded to ensure that the volume of the block data will not increase too quickly due to long-term transactions.

Data separation of assets and contracts: Homogeneous, non-fungible assets (NFT) and smart contract data are stored on-chain separately. There will be a large number of ongoing transactions in TheCroods network. It is necessary to reduce the computing cost of asset analysis and circulation as much as possible. The separation of assets and contracts can realize the separate analysis and execution of contracts and the operation of necessary results on the chain. In asset and contract data storage

Under the design of separation of storage and storage, the asset owner has all the permissions of the asset, and the operation of the asset can only be completed by the owner's authorization. It can avoid the situation of destroying the asset properties or calling other people's assets by modifying the contract content because the asset contracts are not separated, and it is easier to realize the cross-chain acceptance of non-homogeneous assets (NFT) without considering the constraints of the contract factors. Therefore, assets Separating from contracts is a safer design.

SECTION TEAM

Madrid-CEO

Madrid is the co-founder and CEO of TheCroods. As an operation manager of Softbank, he has 5 years of large-scale Internet data marketing experience and many years of blockchain operation experience.

Borget – CMO

Borget is the co-founder and COO of TheCroods. He is a Ph.D. from the University of Waterloo in Canada. He has 10 years of experience in software development. He is engaged in the design and development of intelligent lighting equipment and has in-depth research on blockchain development.

Lucas-CTO

Has been leading the mobile game studio for over a decade. He has won more than 6 blockchain and computer programming awards, 12 professional certifications in programming and data science, and has extensive experience in generative model implementation, design and development of game systems and blockchain underlying systems.

Tony - Lead Producer

The core creator of TheCroods worldview. He has ten years of experience in the financial industry,

SECTION Ecological construction

GameFi Developer ecosystem

With the support of BSC's underlying technology, TheCroods can provide developers on Dapp with an easy-to-use and complete blockchain game infrastructure, including a visual development kit and on-chain ecological environment. Developers do not need to pay attention to the implementation of blockchain technology., you can directly and graphically complete the development of blockchain games with low threshold, fast and efficient.

TheCroods hopes to provide players with a fair, just and open game environment with transparent data, transparent rules, no background manipulation of props drop rates, and maliciously induced consumption. It is hoped that game players' assets can be stored in a long-term, safe and decentralized manner. At the same time, TheCroods hopes to carry the value fission of the digital asset economic model through the NFT model, helping developers and players achieve better interest consistency:

Metaverse Game Ecology

TheCroods believes that in the Internet world created by Metaverse, people are both participants and creators. Everyone's current experience of virtual games is unparalleled by the unparalleled excitement and huge explosive force brought by the metaverse at that time.

In the future, with the continuous development of VR and AR technologies and the support of blockchain technology for transactions, Metaverse, a blockchain-based decentralized platform, is expected to move from a certain gaming audience to a larger audience. In the crowd, the boundaries between reality and games will become more blurred, and the virtual will be closer to reality. As far as current technology looks, the most likely way to realize the concept of the metaverse is through games. Because virtual reality requires a large number of technologies to restore real scenes, and this is what the game field is good at. In order to improve the user's immersion, it can even be supplemented by VR, AR and other technologies to enhance the user experience, and the sensory experience of the virtual world is also Exactly what game production can achieve. TheCroods is to use existing technology and the concept of metaverse community of ancient worldview blockchain games to form its own metaverse model.

core business value

- **Technology:** TheCroods has very mature and strong technical support, in blockchain, games, artificial intelligence, He has accumulated rich industry and technical experience in NFT, Metaverse, VR/AR and other fields, and has made industry-leading breakthroughs in the development and application of blockchain underlying technology.
- **Industry resources:** TheCroods team perfectly brings together multiple industries, years of practical operation experience, and Experienced professionals with deep insights into industry development. In addition, TheCroods will sign a strategic cooperation agreement with the top leading companies in the target industry, which will provide strong support for TheCroods to enter the target industry, so as to truly promote The actual landing of TheCroodsNFT+ metaverse game application.
- **DAO Business Governance:** Unlike general game projects, TheCroods has a clear and unambiguous understanding of the target industry Strategic planning and continuous empowerment of free, fair and high-value ecological prosperity in the form of an autonomous community. TheCroods is more dedicated and professional to use the distributed decentralization, immutability and encryption security and point-to-point transmission value of blockchain technology to penetrate the target industry and quickly gain market share.
- **Funds management:** TheCroods's fund management will be under the leadership of the CRT Ecological Development Foundation and strictly abide by the The principles of fairness, impartiality, openness, and the development of TheCroods as the primary purpose. The CRT Ecological Development Foundation specially keeps and ensures the security and sustainability of the funds. All funds used by TheCroods will be regularly disclosed to all investors to ensure the openness of the use of funds.
- **Development space:** TheCroods' target industry is the trillion-level game market. The development team developed a comprehensive

To sum up, with the support of core competitiveness, TheCroods has a clear commercialization logic. Based on the BSC framework system, each technical link and organization of TheCroods has strong targeting and logic genes, and on this basis, many modularizations are proposed. , Transformed technical solutions or mechanisms. Binance Smart Chain (BSC for short) is a main chain in the dual public chain mechanism of Binance, the world's largest digital currency exchange. BSC can be regarded as a blockchain parallel to the Binance Chain. Serving the DeFi and NFT ecosystem.

BSC has certain innovations in the consensus algorithm. The PoSA (ProofofStakeAuthority) consensus algorithm it adopts combines the functions of the Delegated Proof of Stake (DPoS) and the Proof of Authority (PoA) mechanism. It is built on a network of 21 verification nodes, which can be used in seconds. Block time can build a high-speed infrastructure for DeFi protocols. The word "smart" in BSC is reflected in the functions related to smart contracts: BSC supports the function of writing smart contracts and is compatible with the existing Ethereum Virtual Machine EVM (Ethereum Virtual Machine) and all applications and tools under its ecosystem. Personnel can easily migrate and deploy Ethereum DApps, saving development effort. Finally, as a parallel chain that can interact with BC, BSC natively supports cross-chain communication and transactions. Overall, the technical advantages of BSC are more obvious, which are reflected in the following aspects:

- Smart contracts: BSC has the function of writing smart contracts. DApps with different functions are the basic elements of the DeFi ecosystem, and smart contracts represent the underlying rules and operation logic of DApps. At the same time, programmability also greatly increases the scalability of BSC and realizes the diversification of DApp functions. Therefore, smart contracts are the cornerstone of Binance's DeFi ecological "building".
- Compatible with EVM: BSC is compatible with the existing Ethereum Virtual Machine EVM (EthereumVirtualMachine) and its All applications and tools under the ecosystem greatly reduce the threshold for developers to develop DApps. Developers can easily
- Cross-chain function: The significance of cross-chain is to enrich the currency of the DeFi ecosystem and increase liquidity. Up to now, Binance's "Token Canal" has completed the cross-chain of BTC, ERC20 (ETH, LINK, USDT, DAI, etc.) on Ethereum, XRP, BCH, LTC, ADA, DOT, XTZ, BSC and other assets Intercommunication. This means that these assets can be migrated to the Binance Smart Chain and become the liquidity for DEFI operations.

SECTION R O A D - M A P

Date	Target	
Q 3 2022	<ul style="list-style-type: none"> • first stage development • White papers and website • Smart contract deployment and NFT issuance 	
Q4 2022	<ul style="list-style-type: none"> • NFT Genesis Sales • Tested on the BSC testnet • Start genesis node mining Start the exchange pool • Pancakeswap goes live 	
Q1 2023	<ul style="list-style-type: none"> • TheCroodsNFT platform officially released • Optimize liquidity mining strategy smart contracts with the goal of higher yield • Support cross-chain NFT through TheCroods bridge 	
Q2 2023	Support cross-chain liquidity mining for cross-chain NFT through TheCroods bridge	
Q3 2023	Version 1.0 of the game is officially launched Alpha test release	
Q4 2023	<ul style="list-style-type: none"> • Turn on GameFi to play and earn money, Play-to-Earn 	
Q1 2024	Join VR and AR Move-to-Earn Concept	

Riskwarning

It is the responsibility of any CRT, FOOD purchaser to know and comply with all applicable laws and regulations of any relevant jurisdiction. Any potential purchaser of CRT, FOOD should consider the risk factors identified in this section. If any of these risks materialize, it may have a negative impact on the issuer's financial and operating performance, thereby preventing the issuer from fulfilling its obligations under this white paper.

On the date of registration of this white paper, the Issuer Governance Committee has identified challenges and risks. This does not rule out the possibility of other risk threats. Buyers must be aware that the impact on issuers may be exacerbated due to a combination of several risks that arise simultaneously.

One of the main challenges of the project is the usage rate of the artist and creator community starting to trade assets, which will be the key point behind CRT, FOOD demand generation. As such, we've focused on developing a robust, multi-platform product that spreads at scale by providing a tool to create voxel art focused on solving problems and community needs. So we are developing strong communities in different parts of the world, with a focus on Asia. We think the awareness and learning curve in Asia will have more potential. The success rate of the program will depend on the priorities and preferences of consumers and their ability to rapidly anticipate, identify and exploit those priorities and preferences. The industry in which the issuer operates is an emerging, disruptive and fast-moving industry. This includes, but is not limited to, developments related to the business itself, the underlying technology, and the resulting regulatory and legal implications. Specifically, in terms of public knowledge and understanding of emerging technologies such as distributed ledger technology, smart contracts, and other innovative technological arrangements. As of the date of registration of this white paper, this knowledge and understanding is still incomplete. The resulting risks may not be fully understood and new additional risks may arise in the future. Because Issuer's commitments depend on the continued and proper functioning of its technical infrastructure, Issuer faces various risks in properly maintaining its technical infrastructure. These risks include, but are not limited to, cyber attacks, data theft or other unauthorized use of data, and other malicious interference. Some parts of the infrastructure may be outsourced to third parties. In this case, the issuer relies on technical arrangements made by such third parties to perform its underwriting, and therefore it faces the risk of failure of such technical arrangements. Publisher is bound by various laws, including those promulgated under those laws

regulations and

rules and are at risk due to changes in law and the timing and impact of corresponding changes in law. This includes changes in its interpretation that the issuer cannot predict. The growth of the issuer and its business can be attributed in part to the efforts and capabilities of its governance team members and other key personnel, particularly its executive committee. If one or more members of this group are unable or unwilling to continue in their current positions, the issuer may not be able to replace them within a short period of time, which in turn could have a material adverse effect on the issuer's business.

