CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

White paper drafted under the European Markets in Crypto-Assets Regulation (EU) 2023/1114 for FFG 8N2VXJKB1

CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

Preamble

00. Table of Contents

CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

01. Date of notification

2025-07-07

02. Statement in accordance with Article 6(3) of Regulation (EU) 2023/1114

This crypto-asset white paper has not been approved by any competent authority in any Member State of the European Union. The person seeking admission to trading of the crypto-asset is solely responsible for the content of this crypto-asset white paper.

03. Compliance statement in accordance with Article 6(6) of Regulation (EU) 2023/1114

This crypto-asset white paper complies with Title II of Regulation (EU) 2023/1114 of the European Parliament and of the Council and, to the best of the knowledge of the management body, the information presented in the crypto-asset white paper is fair, clear and not misleading and the crypto-asset white paper makes no omission likely to affect its import.

04. Statement in accordance with Article 6(5), points (a), (b), (c), of Regulation (EU) 2023/1114

The crypto-asset referred to in this crypto-asset white paper may lose its value in part or in full, may not always be transferable and may not be liquid.

05. Statement in accordance with Article 6(5), point (d), of Regulation (EU) 2023/1114

The token has no utility other than being holdable and transferable and can not be exchanged for any goods or services at the time of writing this white paper (2025-06-28).

06. Statement in accordance with Article 6(5), points (e) and (f), of Regulation (EU) 2023/1114

The crypto-asset referred to in this white paper is not covered by the investor compensation schemes under Directive 97/9/EC of the European Parliament and of the Council or the deposit guarantee schemes under Directive 2014/49/EU of the European Parliament and of the Council.

Summary

07. Warning in accordance with Article 6(7), second subparagraph, of Regulation (EU) 2023/1114

Warning: This summary should be read as an introduction to the crypto-asset white paper. The prospective holder should base any decision to purchase this crypto –asset on the content of the crypto- asset white paper as a whole and not on the summary alone. The offer to the public of this crypto-asset does not constitute an offer or solicitation to purchase financial instruments and any such offer or solicitation can be made only by means of a prospectus or other offer documents pursuant to the applicable national law. This crypto-asset white paper does not constitute a prospectus as referred to in Regulation (EU) 2017/1129 of the European Parliament and of the Council or any other offer document pursuant to Union or national law.

08. Characteristics of the crypto-asset

The crypto asset referred to in this white paper involves two tokens, which are available on BNB Smart Chain and opBNB.

The crypto-asset name "Binance Coin" (BNB) refers to the native token of the BNB Smart Chain distributed ledger (DL), which supports decentralized applications and smart contracts.

BNB Smart Chain was launched in 2020 by Binance as a parallel chain to Binance Chain, supporting Ethereum Virtual Machine (EVM) compatibility. It uses a Proof-of-Staked-

Authority (PoSA) consensus model, combining staking and validator authority to achieve fast block times and scalable performance.

BNB is primarily used to pay for transaction fees and smart contract execution on the BNB Smart Chain. It may also function as a medium of exchange and a governance or staking asset within the ecosystem.

The token has no inherent rights or redemption value and is not issued or backed by any central authority. The network is maintained by a set of decentralized validators and supported by various independent ecosystem participants.

The crypto-asset BNB is also used on opBNB, an Optimistic Rollup built on BNB Smart Chain to scale EVM-compatible applications with lower fees.

Launched in 2023, opBNB inherits security and consensus from the BNB Smart Chain's PoSA mechanism.

09. Information about the quality and quantity of goods or services to which the utility tokens give access and restrictions on the transferability

Since holding the crypto-asset does not grant access to any goods or services, this is not applicable at the time of writing this white paper (2025-06-28).

10. Key information about the offer to the public or admission to trading

Crypto Risk Metrics GmbH is seeking admission to trading on any Crypto Asset Service Provider platform in the European Union in accordance to Article 5 of REGULATION (EU) 2023/1114 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937. In accordance to Article 5(4), this crypto-asset white paper may be used by entities admitting the token to trading after Crypto Risk Metrics GmbH as the person responsible for drawing up such white paper has given its consent to its use in writing to the repective Crypto Asset

CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

Service Provider. If a CASP wishes to use this white paper, inquiries can be made under info@crypto-risk-metrics.com.

Part A – Information about the offeror or the person seeking admission to trading

A.1 Name

Crypto Risk Metrics GmbH

A.2 Legal form

2HBR

A.3 Registered address

DE, Lange Reihe 73, 20099 Hamburg, Germany

A.4 Head office

Not applicable.

A.5 Registration date

2018-12-03

A.6 Legal entity identifier

39120077M9TG0O1FE242

A.7 Another identifier required pursuant to applicable national law

Crypto Risk Metrics GmbH is registered with the commercial register in the the city of Hamburg, Germany, under number HRB 154488.

A.8 Contact telephone number

+4915144974120

A.9 E-mail address

info@crypto-risk-metrics.com

A.10 Response time (Days)

030

A.11 Parent company

Not applicable.

A.12 Members of the management body

Name	Position	Address
Tim Zölitz	Chairman	Lange Reihe 73, 20099 Hamburg, Germany

A.13 Business activity

Crypto Risk Metrics GmbH is a technical service provider, who supports regulated entities in the fulfillment of their regulatory requirements. In this regard, Crypto Risk Metrics GmbH acts as a data-provider for ESG-data according to article 66 (5). Due to the regulations laid out in article 5 (4) of the REGULATION (EU) 2023/1114 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 May 2023 on markets in crypto-assets, and amending Regulations (EU) No 1093/2010 and (EU) No 1095/2010 and Directives 2013/36/EU and (EU) 2019/1937, Crypto Risk Metrics GmbH aims at providing central services for crypto-asset white papers in order to minimize market confusion due to conflicting white papers for the same asset.

A.14 Parent company business activity

Not applicable.

A.15 Newly established

Crypto Risk Metrics GmbH has been etablished since 2018 and is therefore not newly established (i. e. older than three years).

A.16 Financial condition for the past three years

Crypto Risk Metrics GmbH's profit after tax for the last three financial years are as follows:

2024 (unaudited): negative 50.891,81 EUR

2023 (unaudited): negative 27.665,32 EUR

2022: 104.283,00 EUR.

As 2023 and 2024 were the years building Software for the MiCAR-Regulation which was not yet in place, revenue streams from these investments are expeted to be generated in 2025.

A.17 Financial condition since registration

This point would only be applicable if the company were newly established and the financial conditions for the past three years had not been provided in the bulletpoint before.

Part B – Information about the issuer, if different from the offeror or person seeking admission to trading

B.1 Issuer different from offeror or person seeking admission to trading

Yes

B.2 Name

The crypto asset BNB is the native asset of the DL BNB Smart Chain (formerly Binance Smart Chain). The crypto asset and the underlying network have been available since September 2020. The chain was developed as a parallel, EVM-compatible network, designed to support smart contracts and decentralized applications with the intention of significantly lower fees and faster block times than many existing blockchains.

Although the technical and strategic development was originally initiated by Binance, the network is now supported by a large number of participants. There is no central legal control over the BNB Smart Chain, the BNB Chain community coordinates governance processes through a decentralized governance mechanism (e.g., BEP proposals and validator consensus). The connection to the broader BNB ecosystem remains intact.

The crypto-asset and its decentralized network are (at the time this white paper was created, 2025-06-29) not operated by a legal entity and thus do not have a corresponding legal entity.

The crypto asset BNB is also used on the opBNB network, an Optimistic Rollup built to scale the BNB Smart Chain.

Launched in 2023, opBNB is EVM-compatible and designed to reduce transaction costs and increase throughput by processing transactions off-chain.

While originally developed within the Binance ecosystem, opBNB operates without a central legal entity and relies on BNB Smart Chain for consensus and security.

As of June 2025, opBNB remains part of the broader BNB ecosystem, but does not constitute an independent blockchain or legal structure.

B.3 Legal form

The crypto-asset and its decentralized distributed ledger is not operated by a legal entity and thus do not have a legal form.

B4. Registered address

Due to the explanation given in field B.3 the crypto-asset does not have a registered address.

B.5 Head office

Due to the explanation given in field B.2 the crypto-asset does not have a head office.

B.6 Registration date

Due to the explanation given in field B.2 the crypto-asset does not have a registration date.

B.7 Legal entity identifier

Not applicable

B.8 Another identifier required pursuant to applicable national law

Not applicable

B.9 Parent company

The crypto-asset and its decentralized network are not operated by a legal entity and thus do not have a parent company.

B.10 Members of the management body

Due to the nature of the decentralized network, the crypto-asset does not have a management body as defined in Article 3(1), point (27), of Regulation (EU) 2023/1114.

B.11 Business activity

Due to the nature of the decentralized network, the crypto-asset itself does not have a business activity.

B.12 Parent company business activity

Not applicable.

Part C – Information about the operator of the trading platform in cases where it draws up the crypto-asset white paper and information about other persons drawing the crypto-asset white paper pursuant to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

C.1 Name

Not applicable

C.2 Legal form

Not applicable.

C.3 Registered address

Not applicable.

C.4 Head office

Not applicable.

C.5 Registration date

Not applicable.

C.6 Legal entity identifier

Not applicable.

C.7 Another identifier required pursuant to applicable national law

Not applicable.

C.8 Parent company

Not applicable.

C.9 Reason for crypto-Asset white paper Preparation

Not applicable.

C.10 Members of the Management body

Not applicable.

C.11 Operator business activity

Not applicable.

C.12 Parent company business activity

Not applicable.

C.13 Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

Not applicable.

C.14 Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114

Not applicable.

Part D – Information about the crypto-asset project

D.1 Crypto-asset project name

Long Name: "Binance Coin", Short Name: "BNB" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2025-06-28).

D.2 Crypto-assets name

See F.13.

D.3 Abbreviation

See F.13.

D.4 Crypto-asset project description

BNB Chain is a decentralized blockchain infrastructure launched in 2020, originally developed by Binance to support smart contracts and decentralized applications (dApps) with lower fees and faster block times compared to earlier networks. It is fully compatible with the Ethereum Virtual Machine (EVM) and uses a Proof-of-Staked-Authority (PoSA) consensus mechanism, combining elements of delegated staking and validator authority. Over time, BNB Chain has evolved into a broader ecosystem that includes additional components such as opBNB, a Layer 2 rollup solution introduced in 2023 to improve scalability.

opBNB functions as an Optimistic Rollup, executing transactions off-chain and periodically submitting state data back to BNB Chain. It maintains EVM compatibility while significantly reducing transaction costs and increasing throughput for end-users. Although developed within the Binance ecosystem, both BNB Chain and opBNB are operated in a decentralized manner without a central legal entity.

BNB, the native token of the network, is used to pay for transaction fees across both BNB Chain and opBNB. It may also serve as a utility, governance, or staking asset within the broader ecosystem. As of June 2025, BNB Chain and its Layer 2 extension opBNB are maintained by a distributed set of validators, developers, and ecosystem participants, with no formal issuer or controlling organization.

D.5 Details of all natural or legal persons involved in the implementation of the crypto-asset project

Name	Role
Binance Holdings Ltd. and subsidiaries	Binance Holdings and its subsidiaries are considered historically significant, but it has no formal control over the decentralized network.
BNB Chain Foundation	A non-profit organization that supports the network and ecosystem.
BNB Chain Innovation Limited	This legal entity operates the official website and communication channels of the BNB Smart Chain. However, according to the terms of use, it does not control the network.
opBNB & OP Stack Community	These technically open rollup components are maintained by a community of developers. opBNB is built on the Optimism OP Stack.

D.6 Utility Token Classification

The token does not classify as a utility token.

D.7 Key Features of Goods/Services for Utility Token Projects

Not applicable.

D.8 Plans for the token

According to an official roadmap for 2025, the following plans are in place (https://www.bnbchain.org/en/blog/bnb-chain-tech-roadmap-2025, accessed 2025-06-29):

The BNB Chain 2025 Tech Roadmap outlines a strong focus on scalability, usability, and AI integration. Key goals include achieving sub-second block times and supporting up to 100 million daily transactions, positioning BNB Chain as one of the fastest and most scalable blockchains available. The roadmap expands on the "MegaFuel" initiative, initially launched in 2024, allowing users to pay gas fees in stablecoins or other BEP-20 tokens. This model introduces a flexible paymaster system, enabling third parties to sponsor transaction fees.

A central theme for 2025 is an "AI-first" approach. BNB Chain plans to further integrate artificial intelligence through tools such as AI code copilots, autonomous agents, and smart wallet automation. Over 60 AI-related projects are already live on the network, and more are expected as developer support improves.

Security enhancements continue to focus on preventing malicious MEV activity, including sandwich attacks. Network-level improvements such as optimized mempool management, better block propagation, and more efficient validator communication are in development.

The roadmap also emphasizes developer experience, with plans to streamline SDKs and APIs, expand support for tokenization and meme-coin projects, and embed AI assistance directly into the development workflow.

It must be clearly stated that this roadmap has no legally binding effect and does not entitle the investor to any claims. Developments may also have negative consequences for the investor.

D.9 Resource allocation

Could not be found while drafting this white paper (2025-06-29).

D.10 Planned use of Collected funds or crypto-Assets

Not applicable, as this white paper was drawn up for the admission to trading and not for collecting funds for the crypto-asset-project.

Part E – Information about the offer to the public of crypto-assets or their admission to trading

E.1 Public offering or admission to trading

The white paper concerns the admission to trading on any Crypto Asset Service Providers platform that has obtained the written consent of Crypto Risk Metrics GmbH as the person drafting this white paper.

E.2 Reasons for public offer or admission to trading

As already stated in A.13, Crypto Risk Metrics GmbH aims to provide central services to draw up crypto-asset white papers in accordance to COMMISSION IMPLEMENTING REGULATION (EU) 2024/2984. These services are offered in order to minimize market confusion due to conflicting white papers for the same asset drawn up from different Crypto Asset Service Providers. As of now, such a scenario seems highly likely as a Crypto Asset Service Provider who drew up a crypto-asset white paper and admitted the respective token in the Union has no incentive to give his written consent to another Crypto Asset Service Provider according to Article 5 (4 b) of the REGULATION (EU) 2023/1114 to use the white paper for his regulatory obligations, as this would 1. strenghthen the market-positioning of the other Crypto Asset Service Provider (who is most likely a competitor) and 2. also entail liability risks.

E.3 Fundraising target

Not applicable.

E.4 Minimum subscription goals

Not applicable.

E.5 Maximum subscription goals

Not applicable.

E.6 Oversubscription acceptance

Not applicable.

E.7 Oversubscription allocation

Not applicable.

E.8 Issue price

Not applicable.

E.9 Official currency or any other crypto-assets determining the issue price

Not applicable, as this white paper is written to support admission to trading and not for the initial offer to the public.

E.10 Subscription fee

Not applicable, as this white paper is written to support admission to trading and not for the initial offer to the public.

E.11 Offer price determination method

Once the token is admitted to trading its price will be determined by demand (buyers) and supply (sellers).

E.12 Total number of offered/traded crypto-assets

As of June 2025, the total number of BNB tokens in circulation is variable and subject to change over time. BNB was initially issued with a maximum supply target of 200 million tokens (according to https://support.binance.us/en/articles/9843884-all-about-bnb, accessed on 2025-06-29). However, the total supply is gradually reduced through a token burn mechanism, which permanently removes tokens from circulation based on usage and predefined rules. While this mechanism aims to reduce overall supply and support long-term scarcity, it does not guarantee a fixed or minimum future supply, and actual circulating amounts may vary due to market activity and on-chain dynamics. This mechanism means that risks remain with regard to changes supply, as this is not guaranteed.

E.13 Targeted holders

ALL

CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

E.14 Holder restrictions

The Holder restrictions are subject to the rules applicable to the Crypto Asset Service Provider as well as additional restrictions the Crypto Asset Service Providers might set in force.

E.15 Reimbursement notice

Not applicable.

E.16 Refund mechanism

Not applicable.

E.17 Refund timeline

Not applicable.

E.18 Offer phases

Not applicable.

E.19 Early purchase discount

Not applicable.

E.20 Time-limited offer

Not applicable.

E.21 Subscription period beginning

Not applicable.

E.22 Subscription period end

Not applicable.

E.23 Safeguarding arrangements for offered funds/crypto- Assets

Not applicable.

E.24 Payment methods for crypto-asset purchase

The payment methods are subject to the respective capabilities of the Crypto Asset Service Provider listing the crypto-asset.

E.25 Value transfer methods for reimbursement

Not applicable.

E.26 Right of withdrawal

Not applicable, as this white paper is written to support admission to trading and not for the initial offer to the public.

E.27 Transfer of purchased crypto-assets

The transfer of purchased crypto-assets are subject to the respective capabilities of the Crypto Asset Service Provider listing the crypto-asset.

E.28 Transfer time schedule

Not applicable, as this white paper is written to support admission to trading and not for the initial offer to the public.

E.29 Purchaser's technical requirements

The technical requirements that the purchaser is required to fulfil to hold the crypto-assets of purchased crypto-assets are subject to the respective capabilities of the Crypto Asset Service Provider listing the crypto-asset.

E.30 Crypto-asset service provider (CASP) name

Not applicable.

E.31 CASP identifier

Not applicable.

E.32 Placement form

Not applicable.

E.33 Trading platforms name

The trading on all MiCAR-compliant trading platforms is sought.

E.34 Trading platforms Market identifier code (MIC)

Not applicable.

E.35 Trading platforms access

This depends on the trading platform listing the asset.

E.36 Involved costs

This depends on the trading platform listing the asset. Furthermore, costs may occur for making transfers out of the platform (i. e. "gas costs" for blockchain network use that may exceed the value of the crypto-asset itself).

E.37 Offer expenses

Not applicable, as this crypto-asset white paper concerns the admission to trading and not the offer of the token to the public.

E.38 Conflicts of interest

MiCAR-compliant Crypto Asset Service Providers shall have strong measurements in place in order to manage conflicts of interests. Due to the broad audience this white-paper is adressing, potential investors should always check the conflicts of Interest policy of their respective counterparty.

E.39 Applicable law

Not applicable, as it is referred to on "offer to the public" and in this white-paper, the admission to trading is sought.

E.40 Competent court

Not applicable, as it is referred to on "offer to the public" and in this white-paper, the admission to trading is sought.

Part F – Information about the crypto-assets

F.1 Crypto-asset type

The crypto-asset described in the white paper is classified as a crypto-asset under the Markets in Crypto-Assets Regulation (MiCAR) but does not qualify as an electronic money token (EMT) or an asset-referenced token (ART). It is a digital representation of value that can be stored and transferred using distributed ledger technology (DLT) or similar technology, without embodying or conferring any rights to its holder.

The asset does not aim to maintain a stable value by referencing an official currency, a basket of assets, or any other underlying rights. Instead, its valuation is entirely market-driven, based on supply and demand dynamics, and not supported by a stabilization mechanism. It is neither pegged to any fiat currency nor backed by any external assets, distinguishing it clearly from EMTs and ARTs.

Furthermore, the crypto-asset is not categorized as a financial instrument, deposit, insurance product, pension product, or any other regulated financial product under EU law. It does not grant financial rights, voting rights, or any contractual claims to its holders, ensuring that it remains outside the scope of regulatory frameworks applicable to traditional financial instruments.

F.2 Crypto-asset functionality

There is none, other than the ability to hold and transfer the crypto-asset.

F.3 Planned application of functionalities

All functionalities referred to in F.2 have already been applied. There were no statements made to further functionalities for the token as of 2025-06-28.

A description of the characteristics of the crypto asset, including the data necessary for classification of the crypto-asset white paper in the register referred to in Article 109 of Regulation (EU) 2023/1114, as specified in accordance with paragraph 8 of that Article

F.4 Type of crypto-asset white paper

The white paper type is "other crypto-assets" (i. e. "OTHR").

F.5 The type of submission

The white paper submission type is "NEWT", which stands for new token.

F.6 Crypto-asset characteristics

1. Decentralization

- No central authority controls the crypto-asset; it operates via a peer-to-peer network maintained by validators and nodes

- Governance occurs through community consensus and open-source development processes.

2. Fixed Supply Target

- The total supply aims to reach 100 million BNB token eventually, though various mechanisms

3. Security & Immutability

- Transactions are recorded on a public blockchain secured by Proof of Staked Authority (PoSA).

- Once confirmed, data on the chain cannot be altered or censored.

4. Pseudonymity

- Transactions are linked to token/wallet addresses, not personal identities.

5. Borderless & Permissionless

- Anyone with an internet connection can send and receive the crypto-asset without intermediaries.

6. Open Source & Programmable

- BNB Smart Chain maintains full support for the Ethereum Virtual Machine (EVM).

- Developers can deploy and interact with programmable smart contracts using open-source tooling.

F.7 Commercial name or trading name

See F.13.

F.8 Website of the issuer

https://www.bnbchain.org/en

F.9 Starting date of offer to the public or admission to trading

2025-08-04

F.10 Publication date

2025-08-04

F.11 Any other services provided by the issuer

It is not possible to exclude a possibility that the issuer of the token provides or will provide other services not covered by Regulation (EU) 2023/1114 (i.e. MiCAR).

F.12 Language or languages of the crypto-asset white paper

EN

F.13 Digital token identifier code used to uniquely identify the crypto-asset or each of the several crypto assets to which the white paper relates, where available

HWRGLMT9T;T4FV9055Q

F.14 Functionally fungible group digital token identifier, where available

8N2VXJKB1

F.15 Voluntary data flag

Mandatory.

F.16 Personal data flag

The white paper does contain personal data.

F.17 LEI eligibility

Unknow, as there is no central issuer.

F.18 Home Member State

Germany

F.19 Host Member States

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden

Part G – Information on the rights and obligations attached to the crypto-assets

G.1 Purchaser rights and obligations

There are no rights or obligations attached for/of the purchaser.

G.2 Exercise of rights and obligations

There are no rights or obligations attached for/of the purchaser.

G.3 Conditions for modifications of rights and obligations

As the token grants neither rights nor obligations, there are no conditions under which the rights and obligations may be modified applicable.

G.4 Future public offers

Information on the future offers to the public of crypto-assets were not available at the time of writing this white paper (2025-06-29).

G.5 Issuer retained crypto-assets

Not applicable.

G.6 Utility token classification

No

G.7 Key features of goods/services of utility tokens

As the crypto-asset grants no access to neither goods nor services this information is not applicable.

G.8 Utility tokens redemption

Not applicable.

G.9 Non-trading request

The admission to trading is sought.

G.10 Crypto-assets purchase or sale modalities

Not applicable, as the admission to trading of the tokens is sought.

G.11 Crypto-assets transfer restrictions

The crypto-assets as such do not have any transfer restrictions and are generally freely transferable. The Crypto Asset Service Providers can impose their own restrictions in agreements they enter with their clients. The Crypto Asset Service Providers may impose restrictions to buyers and sellers in accordance with applicable laws and internal policies and terms.

G.12 Supply adjustment protocols

As of June 2025, the total number of BNB tokens in circulation is variable and subject to change over time. BNB was initially issued with a maximum supply of 200 million tokens. However, the total supply is gradually reduced through a token burn mechanism, which permanently removes tokens from circulation based on usage and predefined rules. While this mechanism aims to reduce overall supply and support long-term scarcity, it does not guarantee a fixed or minimum future supply, and actual circulating amounts may vary due to market activity and on-chain dynamics. This mechanism means that risks remain with regard to changes supply, as this is not guaranteed.

G.13 Supply adjustment mechanisms

See G.12.

G.14 Token value protection schemes

No, the token does not have value protection schemes.

G.15 Token value protection schemes description

Not applicable.

G.16 Compensation schemes

No, the token does not have compensation schemes.

G.17 Compensation schemes description

Not applicable.

G.18 Applicable law

Applicable law likely depends on the location of any particular transaction with the token.

G.19 Competent court

Competent court likely depends on the location of any particular transaction with the token.

Part H – information on the underlying technology

H.1 Distributed ledger technology (DTL)

See F.13.

H.2 Protocols and technical standards

The crypto-asset operates on a well-defined set of protocols and technical standards that are intended to ensure its security, decentralization, and functionality. Below are some of the key ones:

1. Network Protocols

- BNB Smart Chain and opBNB uses a peer-to-peer (P2P) protocol with nodes communicating over DevP2P.

- The network relies on Proof-of-Staked-Authority (PoSA) consensus.

- Smart contracts are executed via the Ethereum Virtual Machine (EVM).

- opBNB is implmented via Smart contracts on BNB Smart Chain that interact with various opBNB nodes

2. Transaction and Address Standards

- Address format: 20-byte Keccak-256 hashes of public keys.

3. Blockchain Data Structure & Block Standards

- Blocks include a header (parent hash, state root, timestamp, nonce) and a list of transactions.

- Block time: 0.75 seconds

4. Upgrade & Improvement Standards

- Network changes follow BNB Evolution Proposals (BEPs), adopted via informal community consensus.

H.3 Technology used

1. Decentralized Ledger

The BNB Smart Chain blockchain acts as a decentralized ledger for all token transactions, designed to preserve an unalterable record of token transfers and ownership. This ensures transparency, trust, and network-wide security without relying on a single central authority.

2. Private Key Management

To safeguard their token holdings, BNB Smart Chain and opBNB users must securely store their wallet's private keys and recovery phrases. Loss of these credentials results

in permanent loss of access to the associated funds, reinforcing the need for secure key storage practices.

3. Cryptographic Integrity

BNB Smart Chain and opBNB employs elliptic curve cryptography (ECDSA using the secp256k1 curve) to generate public-private key pairs and to sign transactions securely.

4. OP Stack

opBNB uses a fork of the OP Stack, which is a technology stack used to build and operate optimistic layer 2 rollups on top of a layer 1 blockchain.

H.4 Consensus mechanism

BNB Smart Chain (BSC) uses a hybrid consensus mechanism called Proof of Staked Authority (PoSA), which combines elements of Delegated Proof of Stake (DPoS) and Proof of Authority (PoA). This method ensures fast block times and low fees while maintaining a level of decentralization and security.

Core Components:

   1. Active Validators: Active Validators on BSC are responsible for producing new blocks, validating transactions, and maintaining the network's security. On a daily basis the 45 validators with the highest stake and delegation are selected to be active validators.

   2. Validators: To become a validator, an entity must run a validator node and stake a significant amount of BNB (Binance Coin).

   3. Delegators: Token holders who do not wish to run validator nodes can delegate their BNB tokens to validators. This delegation helps validators increase their stake and improves their chances of being selected to produce blocks. Delegators earn a share of the rewards that validators receive, incentivizing broad participation in network security.

   4. Inactive Validators: Inactive Validators are nodes that have staked the required amount of BNB and are in the pool waiting to become active validators. They have the

minimum required amount of BNB staked, but less that all active Validators. Candidates play a crucial role in ensuring there is always a sufficient pool of nodes ready to take on validation tasks, thus maintaining network resilience and decentralization.

Consensus Process:

4. Active Validator Selection: Active Validators are chosen based on the amount of BNB staked and delegated to them. The 45 Validators with the most staked/delegated BNB become active validators for a timeperiod (currently 24h).

5. Every epoch (240 blocks ~ 20 min) 21 consensus validators are picked out of the active validators.

5. Block Production: Consensus validators take turns in creating new blocks.

6. Transaction Finality: BSC achieves fast block times of around 0.75 seconds and quick transaction finality. This is achieved through the efficient PoSA mechanism that allows validators to rapidly reach consensus.

Security and Economic Incentives:

7. Staking: Validators are required to stake a substantial amount of BNB, which acts as collateral to ensure their honest behavior. This staked amount can be slashed if validators act maliciously. Staking incentivizes validators to act in the network's best interest to avoid losing their staked BNB.

8. Delegation and Rewards: Delegators earn rewards proportional to their stake in validators. This incentivizes them to choose reliable validators and participate in the network's security. Validators and delegators share transaction fees as rewards, which provides continuous economic incentives to maintain network security and performance.

9. Transaction Fees: BSC employs low transaction fees, paid in BNB, making it cost-effective for users. These fees are collected by validators as part of their rewards, further incentivizing them to validate transactions accurately and efficiently.

opBNB, built as an Optimistic Rollup on top of BNB Smart Chain (BSC), does not employ its own consensus mechanism. Instead, it inherits consensus from the underlying BSC Layer 1, which uses Proof of Staked Authority (PoSA). opBNB batches and executes transactions off-chain and posts data back to BSC, relying on fraud proofs and challenge periods to ensure correctness.

H.5 Incentive mechanisms and applicable fees

BNB Smart Chain (BSC) uses the Proof of Staked Authority (PoSA) consensus mechanism to ensure network security and incentivize participation from validators and delegators.

Incentive Mechanisms

   1. Validators:

   - Staking Rewards: Validators must stake a significant amount of BNB to participate in the consensus process. They earn rewards in the form of transaction fees when they produce blocks.

   - Selection Process: On a daily basis, so called, active Validators are selected out of all availible validators by the amount of BNB staked and delegated to them. Out of the active validators block producers are picked in a systematic fashion.

   2. Delegators:

   - Delegated Staking: Token holders can delegate their BNB to validators. This delegation increases the validator's total stake and improves their chances of being selected as an active validator.

   - Shared Rewards: Delegators earn a portion of the rewards that validators receive. This incentivizes token holders to participate in the network's security and decentralization by choosing reliable validators.

   3. Inactive Validators:

   - Pool of Potential Validators: Inactive validators are nodes that have staked the required amount of BNB and are waiting to become active validators. They ensure that

there is always a sufficient pool of nodes ready to take on validation tasks, maintaining network resilience.

4. Economic Security:

- Slashing: Validators can be penalized for malicious behavior or failure to perform their duties. Penalties include slashing a portion of their staked tokens, ensuring that validators act in the best interest of the network.

- Opportunity Cost: Staking requires validators and delegators to lock up their BNB tokens, providing an economic incentive to act honestly to avoid losing their staked assets.

Fees on the Binance Smart Chain

1. Transaction Fees:

- Low Fees: BSC is known for its low transaction fees compared to other blockchain networks. These fees are paid in BNB and are essential for maintaining network operations and compensating validators.

- Dynamic Fee Structure: Transaction fees can vary based on network congestion and the complexity of the transactions.

4. Smart Contract Fees:

- Deploying and interacting with smart contracts on BSC involves paying fees based on the computational resources required. These fees are also paid in BNB and are designed to be cost-effective, encouraging developers to build on the BSC platform.

opBNB relies on BNB Smart Chain (its L1) to secure transactions via its consensus mechanism. Special opBNB nodes called sequencers regularly store the state of the opBNB rollup on the BNB Smart chain in compressed form. Users can request withdrawals from opBNB to BNB Smart chain claiming a sufficient balance in their corresponding opBNB address. These claims can be challenged by other network

participants. This triggers a resolution process where the parties involved submit further evidence that can be used in combination with the compressed L1 data to proof which side is right. The rightful party will receive compensation for their efforts, which overall incentivizes honest behavior. On opBNB itself the fee model is like the fee model on BNB Chain plus an additional charge for writing the data to L1 eventually. However, overall fees are generally much lower, because data is only stored in a compressed form on L1.

H.6 Use of distributed ledger technology

No, DLT is not operated by the issuer or a third party acting on the issuer's behalf.

H.7 DLT functionality description

Not applicable.

H.8 Audit

As we are understanding the question relating to "technology" to be interpreted in a broad sense, the answer answer to whether an audit of "the technology used" was conducted is "no, we can not guarantee, that all parts of the technology used have been audited". This is due to the fact this report focusses on risk, and we can not guarantee that each part of the technology used was audited.

H.9 Audit outcome

Not applicable.

Part I – Information on risks

I.1 Offer-related risks

1. Regulatory and Compliance

This white paper has been prepared with utmost caution; however, uncertainties in the regulatory requirements and future changes in regulatory frameworks could potentially impact the token's legal status and its tradability. There is also a high probability that

other laws will come into force, changing the rules for the trading of the token. Therefore, such developments shall be monitored and acted upon accordingly.

2. Operational and Technical

Blockchain Dependency: The token is entirely dependent on the blockchains the crypto-asset is issued upon (as of 2025-06-10). Any issues, such as downtime, congestion, or security vulnerabilities within the blockchain, could adversely affect the token's functionality.

Smart Contract Risks: Smart contracts governing the token may contain hidden vulnerabilities or bugs that could disrupt the token offering or distribution processes.

Connection Dependency: As the trading of the token also involves other trading venues, technical risks such as downtime of the connection or faulty code are also possible.

Human errors: Due to the irrevocability of blockchain-transactions, approving wrong transactions or using incorrect networks/addresses will most likely result in funds not being accessibly anymore.

Custodial risk: When admitting the token to trading, the risk of losing clients assets due to hacks or other malicious acts is given. This is due to the fact the token is hold in custodial wallets for the customers.

3. Market and Liquidity

Volatility: The token will most likely be subject to high volatility and market speculation. Price fluctuations could be significant, posing a risk of substantial losses to holders.

Liquidity Risk: Liquidity is contingent upon trading activity levels on decentralized exchanges (DEXs) and potentially on centralized exchanges (CEXs), should they be involved. Low trading volumes may restrict the buying and selling capabilities of the tokens.

4. Counterparty

As the admission to trading involves the connection to other trading venues, counterparty risks arise. These include, but are not limited to, the following risks:

General Trading Platform Risk: The risk of trading platforms not operating to the highest standards is given. Examples like FTX show that especially in nascent industries, compliance and oversight-frameworks might not be fully established and/or enforced.

Listing or Delisting Risks: The listing or delisting of the token is subject to the trading partners internal processes. Delisting of the token at the connected trading partners could harm or completely halt the ability to trade the token.

5. Liquidity

Liquidity of the token can vary, especially when trading activity is limited. This could result in high slippage when trading a token.

6. Failure of one or more Counterparties

Another risk stems from the internal operational processes of the counterparties used. As there is no specific oversight other than the typical due diligence check, it cannot be guaranteed that all counterparties adhere to the best market standards.

Bankruptcy Risk: Counterparties could go bankrupt, possibly resulting in a total loss for the clients assets hold at that counterparty.

7. Spillover effects

In general, when evaluating crypto assets, the total number of tokens issued across different networks must always be taken into account, as spillover effects can be adverse for investors.

I.2 Issuer-related risks

1. Insolvency

As with every other commercial endeavor, the risk of insolvency of the issuer is given. This could be caused by but is not limited to lack of interest from the public, lack of funding, incapacitation of key developers and project members, force majeure (including pandemics and wars) or lack of commercial success or prospects.

2. Counterparty

In order to operate, the issuer has most likely engaged in different business relationships with one or more third parties on which it strongly depends on. Loss or changes in the leadership or key partners of the issuer and/or the respective counterparties can lead to disruptions, loss of trust, or project failure. This could result in a total loss of economic value for the crypto-asset holders.

3. Legal and Regulatory Compliance

Cryptocurrencies and blockchain-based technologies are subject to evolving regulatory landscapes worldwide. Regulations vary across jurisdictions and may be subject to significant changes. Non-compliance can result in investigations, enforcement actions, penalties, fines, sanctions, or the prohibition of the trading of the crypto-asset impacting its viability and market acceptance. This could also result in the issuer to be subject to private litigation. The beforementioned would most likely also lead to changes with respect to trading of the crypto-asset that may negatively impact the value, legality, or functionality of the crypto-asset.

4. Operational

Failure to develop or maintain effective internal control, or any difficulties encountered in the implementation of such controls, or their improvement could harm the issuer's business, causing disruptions, financial losses, or reputational damage.

5. Industry

The issuer is and will be subject to all of the risks and uncertainties associated with a memecoin-project, where the token issued has zero intrinsic value. History has shown that most of this projects resulted in financial losses for the investors and were only set-up to enrich a few insiders with the money from retail investors.

6. Reputational

The issuer faces the risk of negative publicity, whether due to, without limitation, operational failures, security breaches, or association with illicit activities, which can damage the issuer reputation and, by extension, the value and acceptance of the crypto-asset.

7. Competition

There are numerous other crypto-asset projects in the same realm, which could have an effect on the crypto-asset in question.

8. Unanticipated Risk

In addition to the risks included in this section, there might be other risks that cannot be foreseen. Additional risks may also materialize as unanticipated variations or combinations of the risks discussed.

I.3 Crypto-assets-related risks

1. Valuation

As the crypto-asset does not have any intrinsic value, and grants neither rights nor obligations, the only mechanism to determine the price is supply and demand. Historically, most crypto-assets have dramatically lost value and were not a beneficial investment for the investors. Therefore, investing in these crypto-assets poses a high risk, and the loss of funds can occur.

2. Market Volatility

Crypto-asset prices are highly susceptible to dramatic fluctuations influence by various factors, including market sentiment, regulatory changes, technological advancements, and macroeconomic conditions. These fluctuations can result in significant financial losses within short periods, making the market highly unpredictable and challenging for investors. This is especially true for crypto-assets without any intrinsic value, and investors should be prepared to lose the complete amount of money invested in the respective crypto-assets.

3. Liquidity Challenges

Some crypto-assets suffer from limited liquidity, which can present difficulties when executing large trades without significantly impacting market prices. This lack of liquidity can lead to substantial financial losses, particularly during periods of rapid market

movements, when selling assets may become challenging or require accepting unfavorable prices.

4. Asset Security

Crypto-assets face unique security threats, including the risk of theft from exchanges or digital wallets, loss of private keys, and potential failures of custodial services. Since crypto transactions are generally irreversible, a security breach or mismanagement can result in the permanent loss of assets, emphasizing the importance of strong security measures and practices.

5. Scams

The irrevocability of transactions executed using blockchain infrastructure, as well as the pseudonymous nature of blockchain ecosystems, attracts scammers. Therefore, investors in crypto-assets must proceed with a high degree of caution when investing in if they invest in crypto-assets. Typical scams include – but are not limited to – the creation of fake crypto-assets with the same name, phishing on social networks or by email, fake giveaways/airdrops, identity theft, among others.

6. Blockchain Dependency

Any issues with the blockchain used, such as network downtime, congestion, or security vulnerabilities, could disrupt the transfer, trading, or functionality of the crypto-asset.

7. Privacy Concerns

All transactions on the blockchain are permanently recorded and publicly accessible, which can potentially expose user activities. Although addresses are pseudonoymous, the transparent and immutable nature of blockchain allows for advanced forensic analysis and intelligence gathering. This level of transparency can make it possible to link blockchain addresses to real-world identities over time, compromising user privacy.

8. Regulatory Uncertainty

The regulatory environment surrounding crypto-assets is constantly evolving, which can directly impact their usage, valuation, and legal status. Changes in regulatory

frameworks may introduce new requirements related to consumer protection, taxation, and anti-money laundering compliance, creating uncertainty and potential challenges for investors and businesses operating in the crypto space. Although the crypto-asset do not create or confer any contractual or other obligations on any party, certain regulators may nevertheless qualify the crypto-asset as a security or other financial instrument under their applicable law, which in turn would have drastic consequences for the crypto-asset, including the potential loss of the invested capital in the asset. Furthermore, this could lead to the sellers and its affiliates, directors, and officers being obliged to pay fines, including federal civil and criminal penalties, or make the crypto-asset illegal or impossible to use, buy, or sell in certain jurisdictions. On top of that, regulators could take action against the issuer as well as the trading platforms if the the regulators view the token as an unregistered offering of securities or the operations otherwise as a violation of existing law. Any of these outcomes would negatively affect the value and/or functionality of the crypot-asset and/or could cause a complete loss of funds of the invested money in the crypto-asset for the investor.

9. Counterparty risk

Engaging in agreements or storing crypto-assets on exchanges introduces counterparty risks, including the failure of the other party to fulfill their obligations. Investors may face potential losses due to factors such as insolvency, regulatory non-compliance, or fraudulent activities by counterparties, highlighting the need for careful due diligence when engaging with third parties.

10. Reputational concerns

Crypto-assets are often subject to reputational risks stemming from associations with illegal activities, high-profile security breaches, and technological failures. Such incidents can undermine trust in the broader ecosystem, negatively affecting investor confidence and market value, thereby hindering widespread adoption and acceptance.

11. Technological Innovation

New technologies or platforms could render the blockchains design less competitive or even break fundamental parts (i.e., quantum computing might break cryptographic

algorithms used to secure the network), impacting adoption and value. Participants should approach the crypto-asset with a clear understanding of its speculative and volatile nature and be prepared to accept these risks and bear potential losses, which could include the complete loss of the asset's value.

12. Community and Narrative

As the crypto-asset has no intrinsic value, all trading activity is based on the intended market value is heavily dependent on its community and the popularity of the memecoin narrative. Declining interest or negative sentiment could significantly impact the token's value.

13. Interest Rate Change

Historically, changes in interest, foreign exchange rates, and increases in volatility have increased credit and market risks and may also affect the value of the crypto-asset. Although historic data does not predict the future, potential investors should be aware that general movements in local and other factors may affect the market, and this could also affect market sentiment and, therefore most likely also the price of the crypto-asset.

14. Taxation

The taxation regime that applies to the trading of the crypto-asset by individual holders or legal entities will depend on the holder's jurisdiction. It is the holder's sole responsibility to comply with all applicable tax laws, including, but not limited to, the reporting and payment of income tax, wealth tax, or similar taxes arising in connection with the appreciation and depreciation of the crypto-asset.

15. Anti-Money Laundering/Counter-Terrorism Financing

It cannot be ruled out that crypto-asset wallet addresses interacting with the crypto-asset have been, or will be used for money laundering or terrorist financing purposes, or are identified with a person known to have committed such offenses.

16. Market Abuse

It is noteworthy that crypto-assets are potentially prone to increased market abuse risks, as the underlying infrastructure could be used to exploit arbitrage opportunities through schemes such as front-running, spoofing, pump-and-dump, and fraud across different systems, platforms, or geographic locations. This is especially true for crypto-assets with a low market capitalization and few trading venues, and potential investors should be aware that this could lead to a total loss of the funds invested in the crypto-asset.

17. Timeline and Milestones

Critical project milestones could be delayed by technical, operational, or market challenges.

I.4 Project implementation-related risks

As this white paper relates to the "Admission to trading" of the crypto-asset, the implementation risk is referring to the risks on the Crypto Asset Service Providers side. These can be, but are not limited to, typical project management risks, such as key-personal-risks, timeline-risks, and technical implementation-risks.

I.5 Technology-related risks

As this white paper relates to the "Admission to trading" of the crypto-asset, the technology-related risks mainly lie in the settling on the BNB Smart Chain Network.

1. Blockchain Dependency Risks

 BNB Smart Chain Downtime: Potential outages or congestion on the BNB Smart Chain could interrupt on-chain token transfers, trading, and other functions.

2. Wallet and Storage Risks

Private Key Management: Token holders must securely manage their private keys and recovery phrases to prevent permanent loss of access to their tokens, which includes Trading-Venues, who are a prominent target for dedicated hacks.

3. Network Security Risks

Attack Risks: The BNB Smart Chain may face threats such as denial-of-service (DoS) attacks or exploits targeting its consensus mechanism, which could compromise network integrity.

4. Evolving Technology Risks: Technological Obsolescence: The fast pace of innovation in blockchain technology may make BNB Smart Chain appear less competitive or become outdated, potentially impacting the usability or adoption of the token.

I.6 Mitigation measures

None

Part J – Information on the sustainability indicators in relation to adverse impact on the climate and other environment-related adverse impacts

J.1 Adverse impacts on climate and other environment-related adverse impacts

S.1 Name

Crypto Risk Metrics GmbH

S.2 Relevant legal entity identifier

39120077M9TG0O1FE242

S.3 Name of the cryptoasset

Binance Coin

S.4 Consensus Mechanism

BNB Smart Chain (BSC) uses a hybrid consensus mechanism called Proof of Staked Authority (PoSA), which combines elements of Delegated Proof of Stake (DPoS) and Proof of Authority (PoA). This method ensures fast block times and low fees while maintaining a level of decentralization and security.

Core Components:

1. Active Validators: Active Validators on BSC are responsible for producing new blocks, validating transactions, and maintaining the network's security. On a daily basis the 45 validators with the highest stake and delegation are selected to be active validators.

2. Validators: To become a validator, an entity must run a validator node and stake a significant amount of BNB (Binance Coin).

3. Delegators: Token holders who do not wish to run validator nodes can delegate their BNB tokens to validators. This delegation helps validators increase their stake and improves their chances of being selected to produce blocks. Delegators earn a share of the rewards that validators receive, incentivizing broad participation in network security.

4. Inactive Validators: Inactive Validators are nodes that have staked the required amount of BNB and are in the pool waiting to become active validators. They have the minimum required amount of BNB staked, but less that all active Validators. Candidates play a crucial role in ensuring there is always a sufficient pool of nodes ready to take on validation tasks, thus maintaining network resilience and decentralization.

Consensus Process:

4. Active Validator Selection: Active Validators are chosen based on the amount of BNB staked and delegated to them. The 45 Validators with the most staked/delegated BNB become active validators for a timeperiod (currently 24h).

5. Every epoch (240 blocks ~ 20 min) 21 consensus validators are picked out of the active validators.

5. Block Production: Consensus validators take turns in creating new blocks.

6. Transaction Finality: BSC achieves fast block times of around 0.75 seconds and quick transaction finality. This is achieved through the efficient PoSA mechanism that allows validators to rapidly reach consensus.

Security and Economic Incentives:

7. Staking: Validators are required to stake a substantial amount of BNB, which acts as collateral to ensure their honest behavior. This staked amount can be slashed if validators act maliciously. Staking incentivizes validators to act in the network's best interest to avoid losing their staked BNB.

8. Delegation and Rewards: Delegators earn rewards proportional to their stake in validators. This incentivizes them to choose reliable validators and participate in the network's security. Validators and delegators share transaction fees as rewards, which provides continuous economic incentives to maintain network security and performance.

9. Transaction Fees: BSC employs low transaction fees, paid in BNB, making it cost-effective for users. These fees are collected by validators as part of their rewards, further incentivizing them to validate transactions accurately and efficiently.

opBNB, built as an Optimistic Rollup on top of BNB Smart Chain (BSC), does not employ its own consensus mechanism. Instead, it inherits consensus from the underlying BSC Layer 1, which uses Proof of Staked Authority (PoSA). opBNB batches and executes transactions off-chain and posts data back to BSC, relying on fraud proofs and challenge periods to ensure correctness.

S.5 Incentive Mechanisms and Applicable Fees

BNB Smart Chain (BSC) uses the Proof of Staked Authority (PoSA) consensus mechanism to ensure network security and incentivize participation from validators and delegators.

Incentive Mechanisms

1. Validators:

   - Staking Rewards: Validators must stake a significant amount of BNB to participate in the consensus process. They earn rewards in the form of transaction fees when they produce blocks.

- Selection Process: On a daily basis, so called, active Validators are selected out of all availible validators by the amount of BNB staked and delegated to them. Out of the active validators block producers are picked in a systematic fashion.

2. Delegators:

- Delegated Staking: Token holders can delegate their BNB to validators. This delegation increases the validator's total stake and improves their chances of being selected as an active validator.

- Shared Rewards: Delegators earn a portion of the rewards that validators receive. This incentivizes token holders to participate in the network's security and decentralization by choosing reliable validators.

3. Inactive Validators:

- Pool of Potential Validators: Inactive validators are nodes that have staked the required amount of BNB and are waiting to become active validators. They ensure that there is always a sufficient pool of nodes ready to take on validation tasks, maintaining network resilience.

4. Economic Security:

- Slashing: Validators can be penalized for malicious behavior or failure to perform their duties. Penalties include slashing a portion of their staked tokens, ensuring that validators act in the best interest of the network.

- Opportunity Cost: Staking requires validators and delegators to lock up their BNB tokens, providing an economic incentive to act honestly to avoid losing their staked assets.

Fees on the Binance Smart Chain

1. Transaction Fees:

- Low Fees: BSC is known for its low transaction fees compared to other blockchain networks. These fees are paid in BNB and are essential for maintaining network operations and compensating validators.

- Dynamic Fee Structure: Transaction fees can vary based on network congestion and the complexity of the transactions.

4. Smart Contract Fees:

- Deploying and interacting with smart contracts on BSC involves paying fees based on the computational resources required. These fees are also paid in BNB and are designed to be cost-effective, encouraging developers to build on the BSC platform.

opBNB relies on BNB Smart Chain (its L1) to secure transactions via its consensus mechanism. Special opBNB nodes called sequencers regularly store the state of the opBNB rollup on the BNB Smart chain in compressed form. Users can request withdrawals from opBNB to BNB Smart chain claiming a sufficient balance in their corresponding opBNB address. These claims can be challenged by other network participants. This triggers a resolution process where the parties involved submit further evidence that can be used in combination with the compressed L1 data to proof which side is right. The rightful party will receive compensation for their efforts, which overall incentivizes honest behavior. On opBNB itself the fee model is like the fee model on BNB Chain plus an additional charge for writing the data to L1 eventually. However, overall fees are generally much lower, because data is only stored in a compressed form on L1.

S.6 Beginning of the period to which the disclosure relates

2024-06-30

S.7 End of the period to which the disclosure relates

2025-06-30

S.8 Energy consumption

90228.00000 kWh/a

S.9 Energy consumption sources and methodologies

For the calculation of energy consumptions, the so called 'bottom-up' approach is being used. The nodes are considered to be the central factor for the energy consumption of the network. These assumptions are made on the basis of empirical findings through the use of public information sites, open-source crawlers and crawlers developed in-house. The main determinants for estimating the hardware used within the network are the requirements for operating the client software. The energy consumption of the hardware devices was measured in certified test laboratories. When calculating the energy consumption, we used - if available - the Functionally Fungible Group Digital Token Identifier (FFG DTI) to determine all implementations of the asset of question in scope and we update the mappings regulary, based on data of the Digital Token Identifier Foundation. The information regarding the hardware used and the number of participants in the network is based on assumptions that are verified with best effort using empirical data. In general, participants are assumed to be largely economically rational. As a precautionary principle, we make assumptions on the conservative side when in doubt, i.e. making higher estimates for the adverse impacts.

S.10 Renewable energy consumption

27.3000000000 %

S.11 Energy intensity

0.00000 kWh

S.12 Scope 1 DLT GHG emissions – Controlled

0.00000 tCO2e/a

S.13 Scope 2 DLT GHG emissions – Purchased

37.40520 tCO2e/a

S.14 GHG intensity

0.00000 kgCO2e

S.15 Key energy sources and methodologies

To determine the proportion of renewable energy usage, the locations of the nodes are to be determined using public information sites, open-source crawlers and crawlers developed in-house. If no information is available on the geographic distribution of the nodes, reference networks are used which are comparable in terms of their incentivization structure and consensus mechanism. This geo-information is merged with public information from Our World in Data, see citation. The intensity is calculated as the marginal energy cost wrt. one more transaction.

Ember (2025); Energy Institute - Statistical Review of World Energy (2024) – with major processing by Our World in Data. "Share of electricity generated by renewables – Ember and Energy Institute" [dataset]. Ember, "Yearly Electricity Data Europe"; Ember, "Yearly Electricity Data"; Energy Institute, "Statistical Review of World Energy" [original data]. Retrieved from https://ourworldindata.org/grapher/share-electricity renewables.

S.16 Key GHG sources and methodologies

To determine the GHG Emissions, the locations of the nodes are to be determined using public information sites, open-source crawlers and crawlers developed in-house. If no information is available on the geographic distribution of the nodes, reference networks are used which are comparable in terms of their incentivization structure and consensus mechanism. This geo- information is merged with public information from Our World in Data, see citation. The intensity is calculated as the marginal emission wrt. one more transaction.

Ember (2025); Energy Institute - Statistical Review of World Energy (2024) – with major processing by Our World in Data. "Carbon intensity of electricity generation – Ember and Energy Institute" [dataset]. Ember, "Yearly Electricity Data Europe"; Ember, "Yearly Electricity Data"; Energy Institute, "Statistical Review of World Energy" [original data]. Retrieved from https://ourworldindata.org/grapher/carbon-intensity electricity Licenced under CC BY 4.0