CRYPTO RISK METRICS
DON'T TRUST. VERIFY.

White paper drafted under the European Markets in Crypto-Assets Regulation (EU) 2023/1114 for FFG V15WLZJMF

Preamble

00. Table of Contents

01. Date of notification

2025-03-31

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 (2025-03-08).

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

Bitcoin tokens this white paper refers to are crypto-assets other than EMTs and ARTs (DTI FFG shown in F.14) which are the native tokens of the Bitcoin Blockchain.

The crypto-asset was originally created by a pseudonymous individual or group known as "Satoshi Nakamoto". Its key characteristics include a fixed supply of 20,999,999.97690000 BTC, intended to make it a scarce asset, and it is used primarily as a store of value and medium of exchange. Bitcoin transactions are intended to be secured through a blockchain, which should ensure they are secure, transparent, and immutable. The crypto-asset can be sent and received globally without intermediaries, making it censorship-resistant.

The tokens have no inherent rights or utility - apart from being holdable and transferable and can not be exchanged for any goods or services at the time of writing this white paper (2025-03-22).

The "Lightning Network" is also included within the FFG (as of 2025-03-22). The Lightning Network is a Layer 2 protocol built on top of the Bitcoin blockchain which is intended to enable fast, low-cost, and scalable transactions by sacrificing some features of decentralization.

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 (2025-03-11).

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

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
Dr. Sven Hildebrandt	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 was originally created by a pseudonymous individual or group known as Satoshi Nakamoto, who published the Bitcoin "white paper", explaining the core of the project in 2008 and launched the network in 2009. Since then, the crypto asset has been maintained by a global network of independent participants, including miners, developers, and users, rather than a formal legal entity.

At the time of wirting this white paper (2025-03-11), the creator/issuer of the crypto-asset remains unknown.

B.3 Legal form

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.

B4. Registered address

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

B.5 Head office

Due to the explaination given in field B.3 the crypto-asset issuer does not have a head office.

B.6 Registration date

Since the issuer of the crypto-asset did not register in a legal form there is no date of registration. The first block on the network was mined on 2009-01-03.

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

The pseudonymous individual or group known as "Satoshi Nakamoto" has maintained its pseudonymity and thus there is no knowledge on the business or professional activity of the issuer. The last known activity on any plattform was recored on December 13th, 2010. Therefore the crypto-asset does not have a management body as defined in Article 3(1), point (27), of Regulation (EU) 2023/1114

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: "Bitcoin", Short Name: " BTC;XBT" according to the Digital Token Identifier Foundation (www.dtif.org, DTI see F.13, FFG DTI see F.14 as of 2025-03-20).

D.2 Crypto-assets name

See F.13.

D.3 Abbreviation

See F.13.

D.4 Crypto-asset project description

As described within the original white paper (https://bitcoin.org/bitcoin.pdf, accessed at 2025-03-10), Bitcoin is intended to function as a decentralized, permissionless crypto-asset operating on a public, pseudonymous blockchain secured by the Proof-of-Work (PoW) consensus mechanism. Transactions are verified by miners who compete to solve cryptographic puzzles using the SHA-256 hashing algorithm, which is meant to ensure network security and immutability. Bitcoin's blockchain is structured as a linked chain of blocks, each containing a Merkle tree of transactions, with each block referencing the previous block's hash to maintain integrity. The supply is intended to be hard-capped at 20,999,999.97690000 BTC, enforced through a halving mechanism every 210,000 blocks (approximately 4 years), reducing block rewards and ensuring predictable issuance. Bitcoin's decentralized governance relies on Bitcoin Improvement Proposals (BIPs) and network consensus among full nodes, intending to prevent unilateral changes and reinforcing its censorship-resistant nature.

The Lightning Network is a Layer 2 protocol built on top of the Bitcoin blockchain which is inended to enable fast, low-cost, and scalable transactions.

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

Name	Role
Others	The pseudonymous individual or group known as Satoshi Nakamoto has maintained its pseudonymity and thus there is no knowledge on the business or professional activity of the issuer. The last known activity on any platform was recorded on December 13th, 2010.

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

1. Genesis Block (January 3, 2009)

The first Bitcoin block (Block 0) was mined by Satoshi Nakamoto, marking the birth of the Bitcoin network.

The block contained the message: "The Times 03/Jan/2009 Chancellor on brink of second bailout for banks," referencing the financial crisis.

2. First Bitcoin Transaction (January 12, 2009)

Satoshi Nakamoto sent 10 BTC to developer Hal Finney, making it the first recorded Bitcoin transaction.

3. Bitcoin Pizza Day (May 22, 2010)

Programmer Laszlo Hanyecz made the first real-world Bitcoin purchase, buying two pizzas for 10,000 BTC.

4. Segregated Witness (SegWit) Activation (August 2017)

SegWit (BIP141) was activated to increase Bitcoin's transaction capacity by separating signature data from transaction data.

This upgrade also laid the foundation for the Lightning Network, improving Bitcoin's scalability.

5. Taproot Upgrade (November 2021)

Taproot (BIP341/BIP342) was activated, enhancing Bitcoin's privacy, efficiency, and smart contract capabilities through Schnorr signatures.

It improved multisig transactions and reduced transaction sizes, making Bitcoin more scalable and private.

With regards to future milestones, the potential updates depend on the consensus of the network and are complex to predict.

D.9 Resource allocation

Not applicable.

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 (i. e. ATTR) 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 March 11, 2025, approximately 19.8 million bitcoins have been mined, approaching the maximum supply limit of 20,999,999.97690000 BTC. However, not all mined bitcoins are actively available for trading. A significant number are considered lost due to forgotten private keys or dormant wallets, effectively reducing the circulating supply. Additionally, large holders, including institutions and governments, possess substantial amounts of bitcoin, which may not be readily available in the market. Consequently, while the total mined bitcoins provide a general overview, the actual amount available for trading is lower, influenced by factors such as lost coins and holdings by large entities, which can have a negative impact on liquidity.

E.13 Targeted holders

ALL

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. "transaction 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 since they are intrinsic to the tokens. Due to the decentralized consensus mechanism, planned functionalities are not as predictable as with centrally developed crypto-assets. A variety of updates have been proposed and been given BIP numbers (Bitcoin Improvement Proposals) but no consensus has been found yet.

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

The tokens are crypto-assets other than EMTs and ARTs, which are the native tokens of the Bitcoin blockchain. The total supply is capped at 20,999,999.97690000 BTC, while New tokens are issued through mining rewards, which decrease every halving (~4 years). The tokens are a digital representation of value, and have no inherent rights attached as well as no intrinsic utility.

F.7 Commercial name or trading name

See F.13.

F.8 Website of the issuer

Not applicable.

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

2025-03-31

F.10 Publication date

2025-03-31

F.11 Any other services provided by the issuer

Not applicable

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

4H95J0R2X;K1NS41N51

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

V15WLZJMF

F.15 Voluntary data flag

Mandatory.

F.16 Personal data flag

The white paper does contain personal data.

F.17 LEI eligibility

Unknow, as the issuer is pseudonymous as of now.

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

As the token grants neither rights nor obligations, there are no procedures and conditions for the exercise of these rights applicable.

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

Not applicable

G.5 Issuer retained crypto-assets

Estimates say there are 600.000 - 1.500.000 Bitcoin that are possibly owned by the individual or group by the name of Satoshi Nakamoto, who launched the network and the corresponding crypto-asset. The exact number is unclear.

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

The total amount of tokens for the crypto-asset is predetermined. The rewards of the validation mechanism and the so called mining is halved every 210.000 blocks. This reduces the number of tokens given as a rewards to the miner by half. At the time of writing the whitepaper (2025-03-11) the rewards is 3.125 tokens per block validated.

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 standard that are intended to ensure its security, decentralization, and functionality. Below are some of the key ones:

1. Network Protocols

- the crypto-asset follows a decentralized, peer-to-peer (P2P) protocol where nodes communicate using the "Bitcoin wire protocol" over TCP/IP.

- Bitcoin uses SHA-256 PoW to secure the network and validate transactions.

- Miners compete to find a valid nonce that satisfies the network's difficulty target.

- the crypto-assets transactions use a stack-based scripting language for defining spending conditions.

2. Transaction and Address Standards

- Legacy format: P2PKH

- Script format: P2SH

- SegWit format: Bech32

- P2PKH – Standard transactions.

- P2SH – Enables complex scripts (e.g., multisig).

- P2WPKH/P2WSH – SegWit transactions reduce fees and fix malleability issues.

3. Blockchain Data Structure & Block Standards

- Transactions in each block are organized in a Merkle tree for efficient verification.

Each block contains:

- Block Header: Previous block hash, Merkle root, timestamp, difficulty, nonce.

- Transactions: List of validated Bitcoin transactions.

- Block Size Limit: 1 MB (before SegWit), effectively ~4 MB with SegWit.

4. Upgrade & Improvement Standards

Bitcoin Improvement Proposals (BIPs)

- The crypto-asset community follows the BIP process for proposing protocol upgrades.

- Example BIPs:

  - BIP32 – Hierarchical Deterministic (HD) Wallets.

  - BIP39 – Mnemonic seed phrases for wallet backups.

  - BIP141 – Segregated Witness (SegWit).

  - BIP340 – Schnorr Signatures.

  - BIP341/342 – Taproot (Privacy & Smart Contract Enhancements).

H.3 Technology used

1. Decentralized Ledger: The Bitcoin blockchain acts as a decentralized ledger for all token transactions, with the intention to preserving an unalterable record of token transfers and ownership to ensure both transparency and security.

2. Private Key Management: To safeguard their token holdings, users must securely store their wallet’s private keys and recovery phrases.

3. Cryptographic Integrity: Bitcoin employs elliptic curve cryptography to validate and execute transactions securely, intended to ensure the integrity of all transfers. The SHA-256 Hashing Algorithm is used for mining and generating the crypto-assets addresses via public-key cryptography. The crypto-asset uses ECDSA with secp256k1 curve for key generation and digital signatures. Next to that, Schnorr Signatures were introduced in BIP340, enabling batch verification, smaller transactions, and improved privacy.

H.4 Consensus mechanism

The crypto-assets consensus mechanism is Proof-of-Work (PoW), which intends to provide security and decentralization. In PoW, miners calculate a hash function of their respective newly proposed blocks, a summary of the previous block and a nonce variable. The nonce variable is adjusted until the result of the hash function satisfies a predefined difficulty target. In a computational sense it is very difficult to find a suitable nonce, but it is very easy to verify it. When a miner finds a suitable nonce, the new block including the nonce is broadcast to other nodes to be verified. Verified blocks are then added to the blockchain. The miner who made the block is rewarded, see H5. Every 2016 blocks (around 2 Weeks) the network automatically adjusts the difficulty target, to maintain a block time of around 10 minutes. The crypto-asset follows the longest chain rule, where nodes always consider the longest valid chain as the correct version. This is intended to make the crypto-asset resistant to attacks, as altering past blocks requires altering every block since then, which requires more computational power than realistically available.

H.5 Incentive mechanisms and applicable fees

The crypto-asset's incentive mechanism is designed to encourage miners to secure the network and validate transactions. Miners are rewarded with block rewards (newly minted tokens) and transaction fees for every block that they add to the chain. The block reward is halved approximately every four years in an event known as the Bitcoin halving, which reduces the rate at which new tokens are created. This ensures a total supply cap of 20,999,999.97690000 BTC. Transaction fees are paid by users to prioritize their transactions for inclusion in the next block.

Fees are dynamic and depend on network demand. During periods of high activity, fees can increase as users compete to have their transactions included in the next block. Conversely, when the network is less congested, fees tend to decrease. This fee market helps ensure that miners continue to secure the network even as block rewards diminish over time.

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 (drawn up from 2025-02-25-2025-03-19) 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 blockchain the crypto-asset is issued upon (as of 2025-03-01). 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.

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 Bitcoin's 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 Bitcoin-Network.

1. Blockchain Dependency Risks

Bitcoin Network Downtime: Potential outages or congestion on the Bitcoin blockchain could interrupt on-chain token transfers, trading, and other functions.

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.

2. Network Security Risks

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

3. Evolving Technology Risks: Technological Obsolescence: The fast pace of innovation in blockchain technology may make Bitcoin 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

Bitcoin

S.4 Consensus Mechanism

The crypto-assets consensus mechanism is Proof-of-Work (PoW), which intends to provide security and decentralization. In PoW, miners calculate a hash function of their respective newly proposed blocks, a summary of the previous block and a nonce variable. The nonce variable is adjusted until the result of the hash function satisfies a predefined difficulty target. In a computational sense it is very difficult to find a suitable nonce, but it is very easy to verify it. When a miner finds a suitable nonce, the new block including the nonce is broadcast to other nodes to be verified. Verified blocks are then added to the blockchain. The miner who made the block is rewarded, see H5. Every 2016 blocks (around 2 Weeks) the network automatically adjusts the difficulty target, to maintain a block time of around 10 minutes. The crypto-asset follows the longest chain rule, where nodes always consider the longest valid chain as the correct version. This is intended to make the crypto-asset resistant to attacks, as altering past blocks requires altering every block since then, which requires more computational power than realistically available.

S.5 Incentive Mechanisms and Applicable Fees

The crypto-asset's incentive mechanism is designed to encourage miners to secure the network and validate transactions. Miners are rewarded with block rewards (newly minted tokens) and transaction fees for every block that they add to the chain. The block reward is halved approximately every four years in an event known as the Bitcoin halving, which reduces the rate at which new tokens are created. This ensures a total supply cap of 20,999,999.97690000 BTC. Transaction fees are paid by users to prioritize their transactions for inclusion in the next block.

Fees are dynamic and depend on network demand. During periods of high activity, fees can increase as users compete to have their transactions included in the next block. Conversely, when the network is less congested, fees tend to decrease. This fee market helps ensure that miners continue to secure the network even as block rewards diminish over time.

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

2024-03-22

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

2025-03-22

S.8 Energy consumption

174523635953.08917 kWh/a

S.9 Energy consumption sources and methodologies

For the calculation of energy consumptions, the so called “top-down” approach is being used, within which an economic calculation of the miners is assumed. Miners are persons or devices that actively participate in the proof-of-work consensus mechanism. The miners are considered to be the central factor for the energy consumption of the network. Hardware is pre-selected based on the consensus mechanism's hash algorithm: SHA-256. A current profitability threshold is determined on the basis of the revenue and cost structure for mining operations. Only Hardware above the profitability threshold is considered for the network. The energy consumption of the network can be determined by taking into account the distribution for the hardware, the efficiency levels for operating the hardware and on-chain information regarding the miners' revenue opportunities. If significant use of merge mining is known, this is taken into account.

For the calculation of the corresponding indicators, the additional energy consumption and the transactions of the Lightning Network have also been taken into account, as this reflects the categorization of the Digital Token Identifier Foundation for the respective functionally fungible group ("FFG") relevant for this reporting.

S.10 Renewable energy consumption

15.1161113934 %

S.11 Energy intensity

15.47710 kWh

S.12 Scope 1 DLT GHG emissions – Controlled

0.00000 tCO2e/a

S.13 Scope 2 DLT GHG emissions – Purchased

71903050.62182 tCO2e/a

S.14 GHG intensity

6.37650 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. This geo-information is merged with public information from the European Environment Agency (EEA) and thus determined.

For the calculation of the corresponding indicators, the additional energy consumption and the transactions of the Lightning Network have also been taken into account, as this reflects the categorization of the Digital Token Identifier Foundation for the respective functionally fungible group ("FFG") relevant for this reporting. If one would exclude these transactions, the respective estimations regarding the "per transaction" count would be substantially higher. The intensity is calculated as the marginal energy cost wrt. one more transaction.

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. This geo-information is merged with public information from the European Environment Agency (EEA) and thus determined.

For the calculation of the corresponding indicators, the additional energy consumption and the transactions of the Lightning Network have also been taken into account, as this reflects the categorization of the Digital Token Identifier Foundation for the respective functionally fungible group ("FFG") relevant for this reporting. If one would exclude these transactions, the respective estimations regarding the "per transaction" count would be substantially higher. The intensity is calculated as the marginal emission wrt. one more transaction.

CRYPTO RISK METRICS
DON'T TRUST. VERIFY.