**Sonic SVM (SONIC)**
**White paper**

**In accordance with Title II of Regulation (EU) 2023/1114 (MiCA)**

| N | Field | Content |
|---|---|---|
| 0 | Table of content | |

| 01 | Date of notification | 2025-06-12 |
|---|---|---|
| 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 operator of the trading platform 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 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 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 | false |
| 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. The crypto-asset referred to in this white paper is not covered by 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** <br> 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 admission to trading 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 (36) or any other offer document pursuant to Union or national law. |
|---|---|---|
| 08 | Characteristics of the crypto-asset | Sonic (SONIC) is a Solana-program compatible crypto-asset designed to power a decentralized gaming Layer-2 network on Solana. SONIC is a staking token for the Sonic SVM network, which is the first Solana Virtual Machine (SVM) chain extension. SONIC enables high-throughput game transaction processing via the HyperGrid framework, an orchestrated optimistic rollup system that settles on Solana Layer-1. Holders of SONIC can stake SONIC with validators to secure the HyperGrid "grids" (sidechain networks) in return for rewards. <br><br> SONIC has a maximum supply of 2 400 000 000 distributed as follows: |

| Category | Allocation |
|---|---|
| Ecosystem & Community | 30% |
| Foundation | 20% |
| Sonic HyperGrid Rewards | 20% |
| Investors | 15% |
| Early Supporters | 8% |
| Initial Claim | 7% |

SONIC tokens are freely transferable, in whole or in part, to third parties, and all associated usage rights and obligations follow the token upon transfer.

| 09 | Information about the quality and quantity of goods or services to which the utility tokens give access and restrictions on the transferability | N/A |
|---|---|---|
| 10 | Key information about the offer to the public or admission to trading | Kraken seeks admission to trading of the SONIC token so as to be compliant with MiCA and in keeping with its mission to make available for trading to its clients a wide range of assets. |

**Part I – Information on risks**

| I.1 | Offer-Related Risks | **General Risk Factors Associated with Crypto-Asset Offerings**<br>The admission to trading of crypto-assets, including SONIC, is subject to general risks inherent to the broader cryptocurrency market.<br><br>**Market Volatility**<br>The value of SONIC may experience substantial fluctuations driven by investor sentiment, macroeconomic developments, and market conditions.<br><br>**Regulatory Risks**<br>Changes in legislation, applicable laws, compliance requirements or the implementation of new regulatory frameworks could affect the availability, trading, or use of such assets.<br><br>**Security Risks**<br>The risk of exploitation, hacking or security vulnerabilities of the underlying protocol and/or contracts of the token leading to a loss.<br><br>**Reputational Risks**<br>The potential for damage to an organization's credibility or public trust, which can negatively impact stakeholder confidence and overall business viability. |
|---|---|---|
| I.2 | Issuer-Related Risks | **Execution & continuity**<br>The Sonic Foundation is a young, non-profit entity; its ability to deliver the roadmap depends on a small core team and continued funding.<br><br>**Jurisdictional Uncertainty** |

| | | The issuer's precise jurisdiction and applicable legal obligations have not been fully disclosed; this uncertainty may pose administrative hurdles and affect access to banking or other services.<br><br>**Dependence on Key Personnel**<br>Project success is heavily dependent on the founding team; loss of key personnel could slow development and diminish community trust. |
|---|---|---|
| I.3 | Crypto-Assets-related Risks | **Market Volatility**<br>The crypto-asset market is subject to significant price volatility, which may affect the value of SONIC. Prices can fluctuate rapidly and unpredictably due to various factors, including market sentiment, economic indicators, technological developments, regulatory news, and macroeconomic trends. This high level of volatility may lead to sudden gains or losses and can impact the liquidity and tradability of the crypto-asset.<br><br>**Liquidity**<br>Liquidity refers to the ability to buy or sell a crypto-asset without causing significant price impact. SONIC may experience periods of low liquidity, meaning that it could be difficult to enter or exit positions at desired prices or volumes. Reduced liquidity may result from limited market participation, exchange restrictions, or broader market conditions. This can lead to increased price volatility, slippage, and difficulty in executing transactions.<br><br>**Cybersecurity & Technology Risks**<br>Risks arising from vulnerabilities in the blockchain technology used by the project or platforms. Example risks include smart contract exploits, compromise of platforms, forking scenarios, compromise of cryptographic algorithms.<br><br>**Adoption Risks**<br>The risk associated with the project not achieving its goals leading to lower than expected adoption and use within the ecosystem, the impact leading to a reduced utility and value proposition.<br><br>**Custody & Ownership Risk**<br>The risk related to the inadequate safekeeping and control of crypto-assets e.g. loss of private keys, custodian insolvency leading to a loss.<br><br>**Concentration of holdings**<br>Early investors and the foundation together control >25 % of supply, which may influence governance or markets. |

| I.4 | Project Implementation-Related Risks | **Development delays**<br>Sonic SVM has several goals on its roadmap. There is a risk that technical challenges or resource constraints could delay or prevent the delivery of things on the roadmap. Any failure to achieve roadmap milestones could reduce confidence in the project and diminish SONIC's utility and value.<br><br>**Scaling limits**<br>HyperGrid targets millions of tx/s, but real-world ceilings remain: validator CPU/network caps, checkpoint fees on Solana, and single-mempool pressure on the shared sequencer. A viral on-chain event could flood a grid, forcing higher fees or raising exit latency as checkpoints batch more aggressively. If SOL base-fees spike at the same time, operating costs for validators rise, potentially pushing smaller operators offline and exacerbating congestion.<br><br>**Blockchain Network Risks**<br>The functionality and availability of SONIC depend on the performance of the underlying blockchain, Solana, on which it operates. Network congestion, outages, or disruptions in these networks can affect SONIC transactions (transfers, trading, staking) by causing delays or increased cost. |
| I.5 | Technology-Related Risks | **Smart contract risks**<br>SONIC uses smart contracts to facilitate automated transactions and processes. While these contracts enhance efficiency and decentralization, they also introduce specific technical risks. Vulnerabilities such as coding errors, design flaws, or security loopholes within the smart contract code may be exploited by malicious actors. Such exploits could result in the loss of assets, unauthorized access to sensitive information, or unintended and irreversible execution of transactions.<br><br>**Consensus / L1 dependency**<br>Sonic's Layer-2 finality ultimately depends on Solana: every grid must anchor its state-root to the Solana main-chain. When Solana experiences congestion or an outage, those checkpoint transactions cannot be confirmed, which means Sonic withdrawals, bridge exits, and fraud-proof windows all pause until Solana resumes normal operation. Consequently, any instability on the base layer directly propagates to Sonic's Layer-2, exposing users to delayed settlements and increased operational risk.<br><br>**Risk of Cryptographic Vulnerabilities**<br>Technological advancements, such as quantum computing, could pose potential risks to cryptocurrencies.<br><br>**Privacy**<br>Transactions involving SONIC are recorded on a public blockchain, where |

| | | transaction data is transparent and permanently accessible. While public addresses do not directly reveal personal identities, transaction histories can be analyzed and, in some cases, linked to individuals through data aggregation or external information sources. This transparency may pose privacy concerns for users seeking confidentiality in their financial activity. Participants should be aware that transaction data on public blockchains is not inherently private and could be subject to scrutiny by third parties, including regulators, analytics firms, or malicious actors. |
|---|---|---|
| I.6 | Mitigation measures | **Security Audits**<br>Sonic SVM has undergone security auditing by several audit firms. This audit process helps identify and address potential vulnerabilities, thereby reducing the risk of smart contract failures or exploits.<br><br>**Bug-Bounty Program**<br>The issuer operates a continuous bug-bounty scheme: external researchers can probe the smart contracts, back-end, and UI, then submit vulnerability reports. The team then rewards following a severity scale. This incentivises rapid detection and resolution of critical issues. |

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

| A.1 | Name | N/A |
|---|---|---|
| A.2 | Legal form | N/A |
| A.3 | Registered address | N/A |
| A.4 | Head office | N/A |
| A.5 | Registration Date | N/A |
| A.6 | Legal entity identifier | N/A |

| A.7 | Another identifier required pursuant to applicable national law | N/A |
|------|------|------|
| A.8 | Contact telephone number | N/A |
| A.9 | E-mail address | N/A |
| A.10 | Response Time (Days) | N/A |
| A.11 | Parent Company | N/A |
| A.12 | Members of the Management body | N/A |
| A.13 | Business Activity | N/A |
| A.14 | Parent Company Business Activity | N/A |
| A.15 | Newly Established | N/A |
| A.16 | Financial condition for the past three years | N/A |
| A.17 | Financial condition since registration | N/A |

**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 | true |
| B.2 | Name | Mirror World Inc. |
| B.3 | Legal form | Unknown |
| B.4 | Registered address | Not available |
| B.5 | Head office | Not available |
| B.6 | Registration Date | Not available |
| B.7 | Legal entity identifier | Not available |
| B.8 | Another identifier required pursuant to applicable national law | Not available |
| B.9 | Parent Company | Not available |
| B.10 | Members of the Management body | Not available |
| B.11 | Business Activity | Not available |

| B.12 | | |
|---|---|---|
| | Parent Company Business Activity | Not available |

**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 | Payward Global Solutions LTD |
| C.2 | Legal form | N/A |
| C.3 | Registered address | N/A |
| C.4 | Head office | N/A |
| C.5 | Registration Date | 11-07-2023 |
| C.6 | Legal entity identifier of the operator of the trading platform | 9845003D98SCC2851458 |
| C.7 | Another identifier required pursuant to applicable national law | N/A |
| C.8 | Parent Company | N/A |
| C.9 | Reason for Crypto-Asset White Paper Preparation | Kraken seeks admission to trading of the SONIC token so as to be compliant with MiCA and in keeping with its mission to make available for trading to its clients a wide range of assets. |

| C.10 | Members of the Management body | | | |
|------|-------------------------------|--|--|--|

| Full Name | Business Address | Function |
|-----------|------------------|----------|
| Shannon Kurtas | 70 Sir John Rogerson's Quay, Dublin 2, Ireland | Board Member |
| Andrew Mulvenny | 70 Sir John Rogerson's Quay, Dublin 2, Ireland | Board Member |
| Shane O'Brien | 70 Sir John Rogerson's Quay, Dublin 2, Ireland | Board Member |
| Laura Walsh | 70 Sir John Rogerson's Quay, Dublin 2, Ireland | Board Member |
| Michael Walsh | 70 Sir John Rogerson's Quay, Dublin 2, Ireland | Board Member |

| C.11 | Operator Business Activity | PGSL is the operator of a Trading Platform for Crypto Assets, in accordance with Article 3(1)(18) of Regulation (EU) 2023/1114 (MiCA). |
|------|----------------------------|---------------------------------------------|

| C.12 | Parent Company Business Activity | Payward, Inc., a Delaware, USA corporation, is the parent company of a worldwide group of subsidiaries (the following paragraphs use the term "Payward" or "Payward Group" to refer to the group) collectively doing business as "Kraken." Payward's primary business is the operation of an online virtual asset platform that enables clients to buy and sell virtual assets on a spot basis, including the transfer of crypto-assets to and from external wallets.<br><br>Payward, through its various affiliates, offers a number of other services and products, including:<br>* A trading platform for futures contracts on virtual assets ("Kraken Derivatives");<br>* A platform for buying and selling NFTs;<br>* An over-the-counter ("OTC") desk;<br>* Extensions of margin to support spot trading of virtual assets;<br>* A benchmark administrator; and<br>* Staking services. |
|------|----------------------------------|-------------------------------------|

| C.13 | Other persons drawing up the crypto-asset white paper according to Article 6(1), second subparagraph, of Regulation (EU) 2023/1114 | N/A |
| --- | --- | --- |
| C.14 | Reason for drawing the white paper by persons referred to in Article 6(1), second subparagraph, of Regulation (EU) 2023/1114 | N/A |

**Part D- Information about the crypto-asset project**

| D.1 | Crypto-asset project name | Sonic SVM |
| --- | --- | --- |
| D.2 | Crypto-assets name | Sonic SVM |
| D.3 | Abbreviation | SONIC |
| D.4 | Crypto-asset project description | Sonic SVM is a Layer-2 scaling framework that extends Solana through a network of "grids". Each grid runs a Solana-compatible virtual machine capable of processing high-frequency game transactions, then periodically posts compressed state-roots to Solana L1 for finality. The Sonic token (SONIC) underpins this ecosystem: validators must stake SONIC to secure grids. The project's goals are to deliver maximal horizontal throughput for on-chain games, lower NFT-minting and transaction fees via state compression, and onboard Web-2 players through integrations such as the SonicX TikTok mini-app. |

| D.5 | Details of all natural or legal persons involved in the implementation of the crypto-asset project | **Legal entities**<br>- Mirror World Inc.: Main development company<br>- Mirror World Foundation: Non-profit foundation<br>- LayerZero Labs Ltd.: Cross-chain messaging partner<br><br>**Core team**<br>- Chris Zhu: CEO and Co-Founder<br>- Alan Zhu: COO and Co-Founder<br>- Jonathan Bakebwa CTO and Co-Founder |
|---|---|---|
| D.6 | Utility Token Classification | false |
| D.7 | Key Features of Goods/Services for Utility Token Projects | N/A |
| D.8 | Plans for the token | March 2022: closed $4 M seed round; began Sonic SVM R&D.<br>March 2024: released Sonic SVM: HyperGrid public testnet, surpassing 600 M tx and 1 M unique wallets.<br>June 2024: raised $12 M Series A to fuel further growth for the Sonic protocol<br>Dec 2024: opened HyperGrid Node sale and community airdrop claim.<br>January 2025: Token-Generation Event (TGE) and mainnet Alpha launch.<br><br>For future milestones, please refer to the project team website for any further information. |
| D.9 | Resource Allocation | Funds raised:<br>$4M seed round, $12 M Series A and node sales (up to $12.8M)<br><br>Token allocations:<br>30% Ecosystem & Community<br>20% Foundation |
| D.10 | Planned Use of Collected Funds or Crypto-Assets | Funds raised are allocated but not limited to development of the Sonic protocol and HyperGrid technology and grants.<br><br>The Ecosystem & Community fund will be allocated to grants for game studios and dApp developers building within the Sonic SVM ecosystem while the Foundation pool will be used to pay team members and advisors from engineering, product, community & marketing, business development, strategy, and other key workstreams. |

| | | |
|---|---|---|
| **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 | ATTR |
| E.2 | Reasons for Public Offer or Admission to trading | Making secondary trading available to the consumers on the Kraken Trading platform in compliance with the MiCA regulatory framework |
| E.3 | Fundraising Target | N/A |
| E.4 | Minimum Subscription Goals | N/A |
| E.5 | Maximum Subscription Goal | N/A |
| E.6 | Oversubscription Acceptance | N/A |
| E.7 | Oversubscription Allocation | N/A |
| E.8 | Issue Price | N/A |
| E.9 | Official currency or other crypto-assets determining the issue price | N/A |
| E.10 | Subscription fee | N/A |

| | | |
|---|---|---|
| E.11 | Offer Price Determination Method | N/A |
| E.12 | Total Number of Offered/Traded crypto-assets | 2 400 000 000 maximum supply |
| E.13 | Targeted Holders | ALL |
| E.14 | Holder restrictions | N/A |
| E.15 | Reimbursement Notice | N/A |
| E.16 | Refund Mechanism | N/A |
| E.17 | Refund Timeline | N/A |
| E.18 | Offer Phases | N/A |
| E.19 | Early Purchase Discount | N/A |
| E.20 | time-limited offer | N/A |
| E.21 | Subscription period beginning | N/A |
| E.22 | Subscription period end | N/A |

| E.23 | Safeguarding Arrangements for Offered Funds/crypto-assets | N/A |
|---|---|---|
| E.24 | Payment Methods for crypto-asset Purchase | N/A |
| E.25 | Value Transfer Methods for Reimbursement | N/A |
| E.26 | Right of Withdrawal | N/A |
| E.27 | Transfer of Purchased crypto-assets | N/A |
| E.28 | Transfer Time Schedule | N/A |
| E.29 | Purchaser's Technical Requirements | N/A |
| E.30 | crypto-asset service provider (CASP) name | N/A |
| E.31 | CASP identifier | N/A |
| E.32 | Placement form | NTAV |

| E.33 | Trading Platforms name | N/A |
|---|---|---|
| E.34 | Trading Platforms Market Identifier Code (MIC) | N/A |
| E.35 | Trading Platforms Access | N/A |
| E.36 | Involved costs | N/A |
| E.37 | Offer Expenses | N/A |
| E.38 | Conflicts of Interest | All listings decisions made by Payward Global Solution Ltd are made independently by staff of the entity in line with internal policies. PGSL publishes a conflicts of interest disclosure on its website advising of potential conflicts that may arise. |
| E.39 | Applicable law | Any dispute relating to this white paper shall be governed by and construed and enforced in accordance with the laws of Ireland without regard to conflict of law rules or principles (whether of Ireland or any other jurisdiction) that would cause the application of the laws of any other jurisdiction, irrespective of whether SONIC tokens qualify as right or property under the applicable law. |
| E.40 | Competent court | Any disputes or claims arising out of this white paper will be subject to the exclusive jurisdiction of the Irish courts. |

**Part F - Information about the crypto-assets**

| F.1 | Crypto-Asset Type | SONIC is classified as a crypto-asset other than an asset referenced token or e-money token under MiCA, (EU) 2023/1114. |
|---|---|---|
| F.2 | Crypto-Asset Functionality | The SONIC token is a: 1) Payment currency inside Sonic SVM dApps and games (in-game fees, NFT purchases). 2) Staking and delegation, validators must bond SONIC to secure HyperGrid grids; users may delegate tokens and share in validator rewards. 3) Bridge collateral, SONIC can be escrowed on Solana and minted 1-for-1 on Sonic grids to pay L2 gas and interact |

| F.3 | Planned Application of Functionalities | The remaining planned critical functions will activate according to the Sonic roadmap: Staking-slashing and rewards dashboard (Phase 3 – Q2 2025).<br><br>Governance is mentioned as a functionality of the token but it's unclear when this is planned to go live.<br><br>Refer to the project website for any further information regarding future milestones. |
|---|---|---|

**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 white paper | OTHR |
|---|---|---|
| F.5 | The type of submission | NEWT |
| F.6 | Crypto-Asset Characteristics | SONIC allows holders to stake the token to participate in network security, is used as a gas token, and holders can transfer their tokens freely. |
| F.7 | Commercial name or trading name | Mirror World Inc. |
| F.8 | Website of the issuer | https://www.sonic.game/ |
| F.9 | Starting date of offer to the public or admission to trading | 2024-01-07 |
| F.10 | Publication date | 2025-07-10 |

| F.11 | Any other services provided by the issuer | N/A |
|---|---|---|
| F.12 | Identifier of operator of the trading platform | PGSL |
| F.13 | Language or languages of the white paper | English |
| F.14 | Digital Token Identifier | WLR4VX2XB |
| F.15 | Functionally Fungible Group Digital Token Identifier | N/A |
| F.16 | Voluntary data flag | Mandatory |
| F.17 | Personal data flag | true |
| F.18 | LEI eligibility | N/A |
| F.19 | Home Member State | Ireland |
| F.20 | Host Member States | Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, 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 | **Rights of SONIC Holders:**<br>Holders may stake or delegate SONIC to HyperGrid validators and share in rewards. SONIC can be used to pay L2 fees or in-game purchases.<br><br>**Obligations of SONIC Holders:**<br>There are no mandatory obligations imposed on SONIC purchasers beyond the general terms of use of the platform.<br><br>**Transferability and Trading:**<br>Holders have the ability to transfer their SONIC tokens to others (on-chain) or to trade them on available markets at will. Ownership of SONIC carries with it the aforementioned access rights, and when a token is transferred, those rights pass to the new holder. The previous holder loses access once they no longer hold the token. This means all rights (which are usage rights) are fully transferable with the token. |
|-----|------|------|
| G.2 | Exercise of Rights and obligations | **Staking**<br>1) Wallet Stake: connect a Solana or Sonic-SVM wallet, choose mainnet (Solana or Sonic), enter amount, select a staking period (flexible), sign the TX; APR is variable and auto-adjusts by algorithm.<br>2) Airdrop Stake: stake unclaimed airdrop tokens in one click; period fixed at 12 months; once staked, airdrop eligibility is forfeited. Rewards accrue continuously and can be claimed after the lock expires; early withdrawal is not allowed.<br><br>Withdrawal: after the staking period, click "Withdraw," sign the transaction; tokens plus rewards return to the wallet.<br><br>**Transfer**<br>Use any Solana wallet to send tokens; standard network fees apply. |
| G.3 | Conditions for modifications of rights and obligations | The rights and obligations attached to SONIC as described in this white paper reflect information available at the time of issuance. This white paper is issued by Kraken and does not constitute a commitment or guarantee by Sonic SVM or any other party regarding future modifications. No promises, warranties, or assurances are made herein regarding future token functionality, and this section is provided solely for informational purposes. |
| G.4 | Future Public Offers | The issuer has not publicly disclosed a scheduled future public offerings. |
| G.5 | Issuer Retained Crypto-Assets | The Sonic Foundation retains 480 000 000 SONIC or 20% of the fixed 2.4 B supply for team & advisor allocation. Early supporters retain 192 000 000 SONIC or 8% of the maximum supply. |

| G.6 | Utility Token Classification | false |
|---|---|---|
| G.7 | Key Features of Goods/Services of Utility Tokens | false |
| G.8 | Utility Tokens Redemption | N/A |
| G.9 | Non-Trading request | This white paper reflects a request to admit the token to trading. |
| G.10 | Crypto-Assets purchase or sale modalities | N/A |
| G.11 | Crypto-Assets Transfer Restrictions | Kraken may, in accordance with applicable laws and internal policies and terms, impose restrictions on buyers and sellers of these tokens. |
| G.12 | Supply Adjustment Protocols | false |
| G.13 | Supply Adjustment Mechanisms | N/A |
| G.14 | Token Value Protection Schemes | false |
| G.15 | Token Value Protection Schemes Description | N/A |

| G.16 | Compensation Schemes | false |
|------|----------------------|-------|
| G.17 | Compensation Schemes Description | N/A |
| G.18 | Applicable law | Any dispute relating to this white paper shall be governed by and construed and enforced in accordance with the laws of Ireland without regard to conflict of law rules or principles (whether of Ireland or any other jurisdiction) that would cause the application of the laws of any other jurisdiction, irrespective of whether SONIC tokens qualify as right or property under the applicable law. |
| G.19 | Competent court | Any disputes or claims arising out of this white paper will be subject to the exclusive jurisdiction of the Irish courts. |

**Part H – information on the underlying technology**

| H.1 | Distributed ledger technology | N/A |
|-----|-------------------------------|-----|
| H.2 | Protocols and technical standards | The SONIC token is based on the Solana network and Sonic SVM, which utilize decentralized Distributed-Ledger Technology. These protocols provide the foundation for secure transactions and smart contracts.<br>SPL Token Standard: The SPL standard is a technical protocol for issuing and managing tokens, ensuring that the SONIC token is compatible with most wallets, exchanges, and decentralized applications (DApps). |
| H.3 | Technology Used | The SONIC token uses the existing SPL token standard on Solana and Sonic SVM. |
| H.4 | Consensus Mechanism | Solana uses Proof-of-Stake with Tower BFT and Proof-of-History, where leaders are pre-selected by stake and transactions, including SONIC transfers, receive sub-second confirmation and high throughput.<br><br>Sonic SVM runs atop HyperGrid, a Solana-anchored roll-up framework.<br>Within each grid a small validator set uses a lightweight (Byzantine Fault Tolerance) BFT engine. Every few seconds the aggregated state-root is posted to Solana L1, so Sonic inherits Solana's Proof-of-History security while keeping near-instant, high-throughput execution inside the grid. This hybrid design lets Sonic SVM process millions of in-game actions per second (ideal conditions) while giving players and developers the confidence of Solana's global validator |

| | | |
|---|---|---|
| | | set for final settlement. |
| H.5 | Incentive Mechanisms and Applicable Fees | SONIC relies on the existing incentive mechanisms and fee structures of the Solana blockchain.<br><br>On Sonic SVM, validators earn SONIC block-fees and protocol-emission rewards; users pay minimal L2 gas denominated in SONIC or SOL. |
| H.6 | Use of Distributed Ledger Technology | false |
| H.7 | DLT Functionality Description | N/A |
| H.8 | Audit | true |
| H.9 | Audit outcome | July 2022 Token vesting (Quantstamp)<br>0 High severity issues<br>1 Medium severity issues (fixed)<br>3 Low severity issues (1 fixed, 2 acknowledged)<br>4 Informational severity issues (2 fixed, 2 acknowledged)<br><br>September 2024; Hypergrid SSN (Halborn)<br>2 Critical severity issues (both fixed)<br>1 High severity issues (fixed)<br>1 Medium severity issues (fixed)<br>1 Low severity issues (fixed)<br>4 Informational severity issues (all fixed)<br><br>September 2024; Solana Hypergrid (Halborn)<br>0 Critical severity issues<br>0 High severity issues<br>0 Medium severity issues<br>0 Low severity issues<br>4 Informational severity issues (all fixed)<br><br>December 2024; veSONIC (Beosin)<br>0 Critical severity issues<br>0 High severity issues<br>1 Medium severity issues (fixed)<br>1 Low severity issues (acknowledged)<br>2 Informational severity issues (both acknowledged) |

| | | January 2025; Sonic Staking (Beosin)<br>0 Critical severity issues<br>0 High severity issues<br>0 Medium severity issues<br>1 Low severity issues (fixed)<br>1 Informational severity issues (acknowledged) |
|---|---|---|
| **Part J - Information on the suitability indicators in relation to adverse impact on the climate and other environment-related adverse impacts** | | |
| S.1 | Name | Payward Global Solutions Limited |
| S.2 | Relevant legal entity identifier | 9845003D98SCC2851458 |
| S.3 | Name of the crypto-asset | Sonic SVM |
| S.4 | Consensus Mechanism | Solana uses a unique combination of Proof of History (PoH) and Proof of Stake (PoS) to achieve high throughput, low latency, and robust security.<br><br>Core Concepts:<br>1. Proof of History (PoH):<br>  - Time-Stamped Transactions: PoH is a cryptographic technique that timestamps transactions, creating a historical record that proves that an event has occurred at a specific moment in time.<br>  - Verifiable Delay Function: PoH uses a Verifiable Delay Function (VDF) to generate a unique hash that includes the transaction and the time it was processed. This sequence of hashes provides a verifiable order of events, enabling the network to efficiently agree on the sequence of transactions.<br><br>2. Proof of Stake (PoS):<br>  - Validator Selection: Validators are chosen to produce new blocks based on the number of SOL tokens they have staked. The more tokens staked, the higher the chance of being selected to validate transactions and produce new blocks.<br>  - Delegation: Token holders can delegate their SOL tokens to validators, earning rewards proportional to their stake while enhancing the network's security.<br><br>Consensus Process:<br>1. Transaction Validation:<br>    Transactions are broadcast to the network and collected by validators. Each transaction is validated to ensure it meets the network's criteria, such as having correct signatures and sufficient funds. |

| | | |
|---|---|---|
| | | 2. PoH Sequence Generation:<br>    A validator generates a sequence of hashes using PoH, each containing a timestamp and the previous hash. This process creates a historical record of transactions, establishing a cryptographic clock for the network.<br>3. Block Production:<br>    The network uses PoS to select a leader validator based on their stake. The leader is responsible for bundling the validated transactions into a block. The leader validator uses the PoH sequence to order transactions within the block, ensuring that all transactions are processed in the correct order.<br>4. Consensus and Finalization:<br>    Other validators verify the block produced by the leader validator. They check the correctness of the PoH sequence and validate the transactions within the block. Once the block is verified, it is added to the blockchain. Validators sign off on the block, and it is considered finalized.<br><br>Security and Economic Incentives:<br>1. Incentives for Validators:<br>  -  Block Rewards: Validators earn rewards for producing and validating blocks. These rewards are distributed in SOL tokens and are proportional to the validator's stake and performance.<br>  -  Transaction Fees: Validators also earn transaction fees from the transactions included in the blocks they produce. These fees provide an additional incentive for validators to process transactions efficiently.<br>2. Security:<br>  -  Staking: Validators must stake SOL tokens to participate in the consensus process. This staking acts as collateral, incentivizing validators to act honestly. If a validator behaves maliciously or fails to perform, they risk losing their staked tokens.<br>  -  Delegated Staking: Token holders can delegate their SOL tokens to validators, enhancing network security and decentralization. Delegators share in the rewards and are incentivized to choose reliable validators.<br>3. Economic Penalties:<br>    Slashing: Validators can be penalized for malicious behavior, such as double-signing or producing invalid blocks. This penalty, known as slashing, results in the loss of a portion of the staked tokens, discouraging dishonest actions. |
| S.5 | Incentive Mechanisms and Applicable Fees | Solana uses a combination of Proof of History (PoH) and Proof of Stake (PoS) to secure its network and validate transactions.<br><br>Incentive Mechanisms:<br>1. Validators: |

- Staking Rewards: Validators are chosen based on the number of SOL tokens they have staked. They earn rewards for producing and validating blocks, which are distributed in SOL. The more tokens staked, the higher the chances of being selected to validate transactions and produce new blocks.
- Transaction Fees: Validators earn a portion of the transaction fees paid by users for the transactions they include in the blocks. This provides an additional financial incentive for validators to process transactions efficiently and maintain the network's integrity.

2. Delegators:
- Delegated Staking: Token holders who do not wish to run a validator node can delegate their SOL tokens to a validator. In return, delegators share in the rewards earned by the validators. This encourages widespread participation in securing the network and ensures decentralization.

3. Economic Security:
- Slashing: Validators can be penalized for malicious behavior, such as producing invalid blocks or being frequently offline. This penalty, known as slashing, involves the loss of a portion of their staked tokens. Slashing deters dishonest actions and ensures that validators act in the best interest of the network.
- Opportunity Cost: By staking SOL tokens, validators and delegators lock up their tokens, which could otherwise be used or sold. This opportunity cost incentivizes participants to act honestly to earn rewards and avoid penalties. Fees Applicable on the Solana Blockchain

Transaction Fees:
1. Low and Predictable Fees:
Solana is designed to handle a high throughput of transactions, which helps keep fees low and predictable. The average transaction fee on Solana is significantly lower compared to other blockchains like Ethereum.
2. Fee Structure:
Fees are paid in SOL and are used to compensate validators for the resources they expend to process transactions. This includes computational power and network bandwidth.
3. Rent Fees:
State Storage: Solana charges rent fees for storing data on the blockchain. These fees are designed to discourage inefficient use of state storage and encourage developers to clean up unused state. Rent fees help maintain the efficiency and performance of the network.
4. Smart Contract Fees:
Execution Costs: Similar to transaction fees, fees for deploying and interacting with smart contracts on Solana are based on the

| | | |
|---|---|---|
| | | computational resources required. This ensures that users are charged proportionally for the resources they consume. |
| S.6 | Beginning of the period to which the disclosure relates | 2024-05-28 |
| S.7 | End of the period to which the disclosure relates | 2025-05-28 |
| S.8 | Energy consumption | 56.77818 kWh/a |
| S.9 | Energy consumption sources and methodologies | The energy consumption of this asset is aggregated across multiple components:<br><br>To determine the energy consumption of a token, the energy consumption of the network(s) solana is calculated first. For the energy consumption of the token, a fraction of the energy consumption of the network is attributed to the token, which is determined based on the activity of the crypto-asset within the network. When calculating the energy consumption, the Functionally Fungible Group Digital Token Identifier (FFG DTI) is used - if available - to determine all implementations of the asset in scope. The mappings are updated regularly, 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. |