Pancake Swap (CAKE)
White paper

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

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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** 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	CAKE is a fungible BEP-20 token designed for use within the PancakeSwap ecosystem. It provides holders with access to platform services and community governance rights. Holders can use CAKE to stake in Syrup Pools and liquidity-mining programs to earn protocol or partner-token rewards, purchase Lottery tickets and participate in Initial Farm Offerings, and lock CAKE as veCAKE to cast votes on emission schedules and fee distributions. CAKE 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	false
10	Key information about the offer to the public or admission to trading	Kraken seeks admission to trading of the CAKE 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:** The admission to trading of crypto-assets, including CAKE, is subject to general risks inherent to the broader cryptocurrency market. These risks are not unique to CAKE but are characteristic of the industry as a whole, and their impact may vary depending on specific market conditions and regulatory environments. **Market Volatility:** The crypto-asset market is inherently volatile. The value of CAKE may experience substantial fluctuations driven by investor sentiment, macro-economic developments, and speculative trading behavior. **Regulatory Risks:** The regulatory landscape for crypto-assets, including CAKE, remains evolving and may differ significantly across jurisdictions. Changes in legislation or the implementation of new regulatory frameworks could affect the availability, trading, or use of such assets. **Security Risks:** The risk of exploitation, hacking or security vulnerabilities of the underlying protocol and/or contracts of the token leading to a loss. **Reputational Risks:** The potential for damage to an organisation's credibility or public trust, which can negatively impact stakeholder confidence and overall business viability.
I.2	Issuer-Related Risks	**Absence of an Incorporated Issuer:** PancakeSwap is maintained by a developer collective known as "the Kitchen". No incorporated legal entity is responsible for CAKE, which limits recourse in the event of disputes or insolvency. **Regulatory & Legal Risks:** Because no registered corporate issuer exists, responsibility for complying with evolving laws on securities, consumer protection, or anti-money-laundering may be unclear, potentially exposing participants to enforcement actions in multiple jurisdictions. **Internal-Control Risks:** Key smart-contract functions (e.g., gauge-whitelisting, contract upgrades) are governed by multisig wallets controlled by the Kitchen; compromise or misuse of these keys could adversely affect CAKE holders. **Governance-Concentration Risk:**

		Although CAKE governance is open to veCAKE holders, large token holders or the Kitchen team could exert outsized influence on protocol decisions. **Personnel & Continuity Risks:** The project relies on the ongoing commitment of pseudonymous contributors; departures or diminished activity could slow development and maintenance, adversely impacting token utility.
I.3	Crypto-Assets-related Risks	**Market Volatility:** The crypto-asset market is subject to significant price volatility, which may affect the value of CAKE. Prices can fluctuate rapidly and unpredictably due to various factors, including market sentiment, economic indicators, technological developments, regulatory news, and macro-economic trends. This high level of volatility may lead to sudden gains or losses and can impact the liquidity and tradability of the crypto-asset. **Liquidity Challenges:** Liquidity refers to the ability to buy or sell a crypto-asset without causing significant price impact. CAKE 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. **Cybersecurity & Technology Risks:** 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. **Adoption Risks:** 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. **Custody & Ownership Risk:** The risk related to the inadequate safekeeping and control of crypto-assets (e.g., loss of private keys, custodian insolvency) leading to a loss.
I.4	Project Implementation-Related Risks	Delays or failures in deploying future PancakeSwap versions or cross-chain integrations could diminish CAKE's intended utility.

I.5	Technology-Related Risks	**Smart contract risks:** CAKE uses smart contracts to facilitate automated transactions and processes. While these contracts enhance efficiency and decentralisation, they also introduce specific technical risks. Vulnerabilities such as coding errors, design flaws, or security loopholes within contracts (e.g., veCAKE gauges, MasterChef) may be exploited by malicious actors and could result in the loss of assets, unauthorised access to sensitive information, or unintended and irreversible execution of transactions, notwithstanding completed audits. **Blockchain Network Risks:** CAKE operates on a public blockchain infrastructure (BNB Chain), which is maintained by a decentralised network of participants. The functionality and reliability of the crypto-asset are dependent on the performance and security of the underlying blockchain. Risks may include network congestion, high transaction fees, delayed processing times, or, in extreme cases, outages and disruptions. Additionally, vulnerabilities or failures in the consensus mechanism, attacks on the network (e.g., 51 % attacks), or protocol-level bugs could impact the operation and availability of CAKE. **Risk of Cryptographic Advances:** CAKE's security, like that of most blockchain tokens, depends on standard cryptographic algorithms. Advances in computing, such as the development of quantum computers, could in the future render these cryptographic techniques less secure. If encryption standards were broken or significantly weakened, the security of all blockchain assets, including CAKE, would be at risk and could allow bad actors to forge signatures or otherwise manipulate the blockchain. **Privacy:** Transactions involving CAKE 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** The CAKE smart contract and related PancakeSwap platform contracts have undergone independent security audits by BlockSec, PeckShield, SlowMist, OtterSec, Zellic and Halborn. These reviews help identify and mitigate potential vulnerabilities before deployment, reducing the risk of smart-contract failures or exploits.

		Use of Established Standard CAKE is implemented using a well-tested token standard (BEP20 on BNB Chain) which has been widely used and vetted. By adhering to a standard protocol and not using unproven custom code where unnecessary, the project reduces the likelihood of unknown bugs.
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	There is no legal entity behind the project

B.3	Legal form	N/A
B.4	Registered address	N/A
B.5	Head office	N/A
B.6	Registration Date	N/A
B.7	Legal entity identifier	N/A
B.8	Another identifier required pursuant to applicable national law	N/A
B.9	Parent Company	N/A
B.10	Members of the Management body	N/A
B.11	Business Activity	N/A
B.12	Parent Company Business Activity	N/A
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

<table>
<tr><td>C.2</td><td>Legal form</td><td>N/A</td></tr>
<tr><td>C.3</td><td>Registered address</td><td>N/A</td></tr>
<tr><td>C.4</td><td>Head office</td><td>N/A</td></tr>
<tr><td>C.5</td><td>Registration Date</td><td>11-07-2023</td></tr>
<tr><td>C.6</td><td>Legal entity identifier of the operator of the trading platform</td><td>9845003D98SCC2851458</td></tr>
<tr><td>C.7</td><td>Another identifier required pursuant to applicable national law</td><td>N/A</td></tr>
<tr><td>C.8</td><td>Parent Company</td><td>N/A</td></tr>
<tr><td>C.9</td><td>Reason for Crypto-Asset White Paper Preparation</td><td>Kraken seeks admission to trading of the CAKE 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.</td></tr>
<tr><td>C.10</td><td>Members of the Management body</td><td>
<table>
<tr><th>Full Name</th><th>Business Address</th><th>Function</th></tr>
<tr><td>Shannon Kurtas</td><td>70 Sir John Rogerson's Quay, Dublin 2, Ireland</td><td>Board Member</td></tr>
<tr><td>Andrew Mulvenny</td><td>70 Sir John Rogerson's Quay, Dublin 2, Ireland</td><td>Board Member</td></tr>
<tr><td>Shane O'Brien</td><td>70 Sir John Rogerson's Quay, Dublin 2, Ireland</td><td>Board Member</td></tr>
<tr><td>Laura Walsh</td><td>70 Sir John Rogerson's Quay, Dublin 2, Ireland</td><td>Board Member</td></tr>
<tr><td>Michael Walsh</td><td>70 Sir John Rogerson's</td><td>Board Member</td></tr>
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		Quay, Dublin 2, Ireland
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. Payward, through its various affiliates, offers a number of other services and products, including: * A trading platform for futures contracts on virtual assets ("Kraken Derivatives"); * A platform for buying and selling NFTs; * An over-the-counter ("OTC") desk; * Extensions of margin to support spot trading of virtual assets; * A benchmark administrator; and * 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	PancakeSwap
D.2	Crypto-assets name	PancakeSwap
D.3	Abbreviation	CAKE
D.4	Crypto-asset project description	PancakeSwap is a decentralised exchange (DEX) and DeFi platform on the BNB Chain that provides swaps, liquidity farming, staking, predictions, NFT Marketplace and other features. CAKE powers incentives and governance for all products.
D.5	Details of all natural or legal persons involved in the implementation of the crypto-asset project	PancakeSwap is maintained by a pseudonymous developer collective publicly referred to as “the Kitchen”. No individual natural persons or incorporated entities with verifiable business addresses have been disclosed.

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	CAKE key past milestones include: launch on BNB Chain in September 2020; introduction of on-chain governance via veCAKE; multichain expansion to Ethereum and Aptos via official bridges; and rollout of PancakeSwap V3 and V4 upgrades. Future milestones: Please refer to the project team website for any further information regarding future milestones.
D.9	Resource Allocation	**Fee revenue:** 0,03 % of every spot-swap trading fee and a designated share of perpetual-trading fees flow into the PancakeSwap Treasury to cover development, audits and infrastructure costs. **Emissions:** Newly minted CAKE is distributed via gauge voting to multichain liquidity farms, Lottery V2 rewards and the Ecosystem Growth Fund, which finances developer grants, user incentives and wider ecosystem initiatives.

D.10	Planned Use of Collected Funds or Crypto-Assets	N/A
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	450 000 000 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 CAKE 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	CAKE 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	CAKE enables multiple on-chain functions within the PancakeSwap ecosystem: • **Governance:** Lock CAKE to mint veCAKE and vote on emission rates, fee distributions, pool parameters and protocol upgrades. • **Staking & Yield Farming:** Stake CAKE or LP tokens to earn CAKE and partner tokens via Syrup Pools, PancakeSwap Infinity Farms and Farm Booster benefits. • **Fee Payment:** Use CAKE to pay trading and protocol fees across spot, perpetual and v4 DEX transactions, often with a fee-discount. • **Lottery & IFO Participation:** Purchase Lottery tickets and commit CAKE in Initial Farm Offerings to acquire new tokens. • **Cross-Chain Transfers:** Bridge CAKE 1:1 between BNB Chain, Ethereum and Aptos through official bridges.
F.3	Planned Application of Functionalities	No additional functionalities have been publicly announced at this time.
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	CAKE is a BEP-20 utility and governance token on BNB Chain, used for staking, voting, and rewards on PancakeSwap, with a maximum capped supply of 450 000 000 tokens and a controlled supply through burning mechanisms.
F.7	Commercial name or trading name	Not available
F.8	Website of the issuer	https://pancakeswap.finance/
F.9	Starting date of offer to the public or admission to trading	2020-09-29
F.10	Publication date	Effective or intended publication date of the white paper or of the modified white paper.
F.11	Any other services provided by the issuer	N/A
F.12	Identifier of operator of the trading platform	N/A
F.13	Language or languages of the white paper	English
F.14	Digital Token Identifier	LZ3V3Z6FD

F.15	Functionally Fungible Group Digital Token Identifier	N/A
F.16	Voluntary data flag	Mandatory
F.17	Personal data flag	false
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 CAKE Holders:** Holders of CAKE are entitled to utilize the token within the PancakeSwap ecosystem. Specifically, a purchaser of CAKE has the right to: (a) **Access Platform Services** – by holding CAKE, the user can unlock and use staking, yield-farming, lottery entry, Initial Farm Offering participation and other features; and (b) **Participate in Community Governance** – CAKE locked as veCAKE allows the holder to submit proposals and cast votes on emission schedules, fee distributions and protocol parameter changes. **Obligations of CAKE Holders:** There are no mandatory obligations imposed on CAKE purchasers beyond payment of applicable network transaction fees and compliance with PancakeSwap's Terms of Service. **Transferability and Trading:** Holders may transfer their CAKE tokens on-chain or trade them on supported exchanges at will. Ownership of CAKE carries with it the described access and

		governance rights, which pass automatically to the new holder upon transfer; the previous holder loses those rights once they no longer hold the token.
G.2	Exercise of Rights and obligations	Holders exercise their rights by connecting a compatible Web3 wallet to the PancakeSwap interface and selecting the relevant feature. To participate in governance, the holder locks CAKE to mint veCAKE via the “Vote” module and submits or votes on proposals. To earn rewards, the holder stakes CAKE or veCAKE in Syrup Pools, specifying amount and lock-up period. Lottery entry is executed by approving and purchasing tickets in the “Lottery” section. IFO participation requires approving CAKE and committing it to the chosen token sale. All actions incur standard BNB Chain transaction fees and are subject to any on-chain lock-up or minimum-holding conditions defined in the smart contracts.
G.3	Conditions for modifications of rights and obligations	The rights and obligations attached to CAKE 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 Pancake Swap 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	N/A
G.5	Issuer Retained Crypto-Assets	Unknown
G.6	Utility Token Classification	false
G.7	Key Features of Goods/Services of Utility Tokens	N/A
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	true
G.13	Supply Adjustment Mechanisms	Regular buy-back-and-burn programme and periodic emission-rate reductions aim to achieve net deflation.
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 CAKE 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	CAKE is implemented on the BNB Chain (BSC). BNB Chain is a public blockchain that is EVM-compatible and maintained by a set of validators under a Proof-of-Staked-Authority consensus.
H.2	Protocols and technical standards	The CAKE token is based on the BNB Chain protocol, which utilizes decentralized Distributed-Ledger Technology. This protocol provides the foundation for secure transactions and smart contracts. BEP20 Token Standard: The BEP20 standard is a technical protocol for issuing and managing tokens, ensuring that the CAKE token is compatible with most wallets, exchanges, and decentralized applications (DApps).
H.3	Technology Used	The CAKE token uses the existing BEP-20 fungible-token standard on the BNB Chain.
H.4	Consensus Mechanism	BNB Chain uses a Proof-of-Staked Authority (PoSA) mechanism, a hybrid of Delegated Proof of Stake and Proof of Authority, where a limited set of validators produce blocks based on BNB stake governance—achieving ~1,5-second block times for CAKE transactions.
H.5	Incentive Mechanisms and Applicable Fees	CAKE relies on the existing incentive mechanisms and fee structures of the BNB Chain.
H.6	Use of Distributed Ledger Technology	false
H.7	DLT Functionality Description	N/A
H.8	Audit	True
H.9	Audit outcome	Independent security audits of PancakeSwap smart contracts were conducted as follows: **BlockSec** audited veCAKE / Gauges (Nov 2023). Core PancakeSwap contracts, including veCAKE/Gauges, MasterChef V3, Exchange V3, Cross-chain Farming, StableSwap, Farm Booster, New CAKE

		Pool, MasterChef V2, Prediction V2, Lottery V2, Factory & Router, CAKE OFT, Aptos IFO, Aptos MasterChef, Aptos Syrup Pool and Aptos DEX—were audited by BlockSec, PeckShield, SlowMist, OtterSec, Zellic and Halborn. **BlockSec:** BlockSec reviewed the veCAKE/Gauges module (v1.0) in November 2023 and the Cross-chain Farming contracts (v1.0) in September 2022. Their reports noted a small number of medium- and low-severity issues—principally around access-control checks and state-update ordering—which were addressed by the PancakeSwap team prior to deployment. **PeckShield:** PeckShield audited multiple core components, including MasterChef V2 (Mar 2022), Prediction V2 (Aug 2021), Lottery V2 (Jul 2021), Farm Booster (Jul 2022), New CAKE Pool (Apr 2022), MasterChef V3 (Apr 2023) and Cross-chain Farming (Sep 2022). Across these reviews, PeckShield identified only medium- and low-severity findings related to input validation and arithmetic edge cases; the PancakeSwap developers implemented fixes for all reported issues. **SlowMist:** SlowMist conducted extensive audits on MasterChef V2 (Mar 2022), MasterChef V3 & Exchange V3 (Mar 2023), Cross-chain Farming (Sep 2022), CakePool Syrup Pools (Apr 2022), StableSwap (Aug 2022), Lottery V2 (Jun 2021), MOVE router (Oct 2022) and the Factory & Router suite (May 2021). The findings were limited to low- and medium-severity vulnerabilities—chiefly around unchecked external calls and gas-optimization opportunities—and all were remediated in subsequent releases. **OtterSec:** OtterSec assessed the Aptos-chain integrations—CAKE OFT bridge (Dec 2022), Aptos IFO, Aptos MasterChef and Aptos DEX modules—and reported only minor low-severity issues, such as event-emission inconsistencies and minor access controls. All recommended adjustments were implemented before mainnet launch. **Zellic:** Zellic's audit of the PancakeSwap Infinity Periphery (Jul–Aug 2024) surfaced two low-impact findings involving redundant code paths; these were cleaned up in a patch release.

		Halborn: Halborn reviewed the Aptos DEX implementation in December 2022 and found no high- or critical-severity issues—only a handful of low-severity suggestions around test coverage and logging, which were voluntarily addressed by the team.
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	PancakeSwap
S.4	Consensus Mechanism	PancakeSwap is present on the following networks: Aptos Coin, Arbitrum, Base, Binance Smart Chain, Ethereum, Linea, Zksync. Aptos utilizes a Proof-of-Stake approach combined with a BFT consensus protocol to ensure high throughput, low latency, and secure transaction processing. Core Components: - Parallel Execution: Transactions are processed concurrently using Block-STM, a parallel execution engine, enabling high performance and scalability. - Leader-Based BFT: A leader is selected among validators to propose blocks, while others validate and finalize transactions. - Dynamic Validator Rotation: Validators are rotated regularly, enhancing decentralization and preventing collusion. - Instant Finality: Transactions achieve finality once validated, ensuring that they are irreversible. Arbitrum is a Layer 2 solution on top of Ethereum that uses Optimistic Rollups to enhance scalability and reduce transaction costs. It assumes that transactions are valid by default and only verifies them if there's a challenge (optimistic). Core Components: - Sequencer: Orders transactions and creates batches for processing. - Bridge: Facilitates asset transfers between Arbitrum and Ethereum. - Fraud Proofs: Protect against invalid transactions through an interactive verification process. Verification Process:

		1. Transaction Submission: Users submit transactions to the Arbitrum Sequencer, which orders and batches them. 2. State Commitment: These batches are submitted to Ethereum with a state commitment. 3. Challenge Period: Validators have a specific period to challenge the state if they suspect fraud. 4. Dispute Resolution: If a challenge occurs, the dispute is resolved through an iterative process to identify the fraudulent transaction. The final operation is executed on Ethereum to determine the correct state. 5. Rollback and Penalties: If fraud is proven, the state is rolled back, and the dishonest party is penalized. Security and Efficiency: The combination of the Sequencer, bridge, and interactive fraud proofs ensures that the system remains secure and efficient. By minimizing on-chain data and leveraging off-chain computations, Arbitrum can provide high throughput and low fees. Base is a Layer-2 (L2) solution on Ethereum that was introduced by Coinbase and developed usingOptimism's OP Stack. L2 transactions do not have their own consensus mechanism and are only validated by the execution clients. The so-called sequencer regularly bundles stacks of L2 transactions and publishes them on the L1 network, i.e. Ethereum. Ethereum's consensus mechanism (Proof-of-stake) thus indirectly secures all L2 transactions as soon as they are written to L1. Binance Smart Chain (BSC) uses a hybrid consensus mechanism called Proof of Staked Authority (PoSA), which combines elements of Delegated Proof of Stake (DPoS) and Proof of Authority (PoA). This method ensures fast block times and low fees while maintaining a level of decentralization and security. Core Components: 1. Validators (so-called “Cabinet Members”): Validators on BSC are responsible for producing new blocks, validating transactions, and maintaining the network’s security. To become a validator, an entity must stake a significant amount of BNB (Binance Coin). Validators are selected through staking and voting by token holders. There are 21 active validators at any given time, rotating to ensure decentralization and security. 2. Delegators: Token holders who do not wish to run validator nodes can delegate their BNB tokens to validators. This delegation helps validators increase their stake and improves their chances of being selected to produce blocks. Delegators earn a share of the rewards that validators receive, incentivizing broad participation in network security.

		3. Candidates: Candidates are nodes that have staked the required amount of BNB and are in the pool waiting to become validators. They are essentially potential validators who are not currently active but can be elected to the validator set through community voting. Candidates play a crucial role in ensuring there is always a sufficient pool of nodes ready to take on validation tasks, thus maintaining network resilience and decentralization. Consensus Process. 4. Validator Selection: Validators are chosen based on the amount of BNB staked and votes received from delegators. The more BNB staked and votes received, the higher the chance of being selected to validate transactions and produce new blocks. The selection process involves both the current validators and the pool of candidates, ensuring a dynamic and secure rotation of nodes. 5. Block Production: The selected validators take turns producing blocks in a PoA-like manner, ensuring that blocks are generated quickly and efficiently. Validators validate transactions, add them to new blocks, and broadcast these blocks to the network. 6. Transaction Finality: BSC achieves fast block times of around 3 seconds and quick transaction finality. This is achieved through the efficient PoSA mechanism that allows validators to rapidly reach consensus. Security and Economic Incentives 7. Staking: Validators are required to stake a substantial amount of BNB, which acts as collateral to ensure their honest behavior. This staked amount can be slashed if validators act maliciously. Staking incentivizes validators to act in the network's best interest to avoid losing their staked BNB. 8. Delegation and Rewards: Delegators earn rewards proportional to their stake in validators. This incentivizes them to choose reliable validators and participate in the network's security. Validators and delegators share transaction fees as rewards, which provides continuous economic incentives to maintain network security and performance. 9. Transaction Fees: BSC employs low transaction fees, paid in BNB, making it cost-effective for users. These fees are collected by validators as part of their rewards, further incentivizing them to validate transactions accurately and efficiently. The crypto-asset's Proof-of-Stake (PoS) consensus mechanism, introduced with The Merge in 2022, replaces mining with validator staking. Validators must stake at least 32 ETH every block a validator is randomly chosen to propose the next block. Once proposed the other validators verify the blocks integrity. The network operates on a slot and epoch system, where a new block is proposed every 12 seconds, and finalization occurs after two epochs (~12.8 minutes) using Casper-FFG. The Beacon Chain coordinates validators, while

		the fork-choice rule (LMD-GHOST) ensures the chain follows the heaviest accumulated validator votes. Validators earn rewards for proposing and verifying blocks, but face slashing for malicious behavior or inactivity. PoS aims to improve energy efficiency, security, and scalability, with future upgrades like Proto-Danksharding enhancing transaction efficiency. Linea employs Zero-Knowledge Rollups (zk-Rollups) to ensure scalable, secure, and efficient transaction processing while maintaining full compatibility with the Ethereum ecosystem. Core Components: - Zero-Knowledge Rollups (zk-Rollups): Transactions are aggregated off-chain into batches, and a single zero-knowledge proof is submitted to the Ethereum mainnet, reducing on-chain congestion and improving scalability. - Type 2 zkEVM: Linea is fully compatible with the Ethereum Virtual Machine (EVM), enabling seamless integration with Ethereum-based smart contracts and dApps. - Proof Aggregation: The network employs proof aggregation to finalize multiple batches of transactions into a single zero-knowledge proof, ensuring secure and efficient finalization of Layer 2 activity on the Ethereum mainnet. zkSync operates as a Layer 2 scaling solution for Ethereum, leveraging zero-knowledge rollups (ZK- Rollups) to enable fast, cost-effective, and secure transactions. This consensus mechanism allows zkSync to offload transaction computation from Ethereum's Layer 1, ensuring scalability while maintaining Ethereum's base-layer security. Core Components: - Zero-Knowledge Rollups (ZK-Rollups): zkSync aggregates multiple transactions off-chain and processes them in batches. A cryptographic proof, called a validity proof, is generated for each batch and submitted to the Ethereum mainnet. This ensures that all transactions are valid and compliant with Ethereum's rules without processing them individually on Layer 1. - Validity Proofs: zkSync uses zk-SNARKs (Succinct Non-Interactive Arguments of Knowledge) for its validity proofs. These proofs provide mathematical guarantees that transactions within a batch are valid, eliminating the need for Ethereum nodes to re-execute off-chain transactions. - Sequencers:

		Transactions on zkSync are ordered and processed by sequencers, which bundle transactions into batches. Sequencers maintain network efficiency and provide fast confirmations. - Fraud Resistance: Unlike Optimistic Rollups, zkSync relies on validity proofs rather than fraud proofs, meaning that transactions are final and secure as soon as the validity proof is accepted by Ethereum. - Data Availability: All transaction data is stored on-chain, ensuring that the network remains decentralized and users can reconstruct the state of zkSync at any time.
S.5	Incentive Mechanisms and Applicable Fees	PancakeSwap is present on the following networks: Aptos Coin, Arbitrum, Base, Binance Smart Chain, Ethereum, Linea, Zksync. Incentive Mechanism: - Validator Rewards: Validators earn rewards in APT tokens for validating transactions and producing blocks. Rewards are distributed proportionally based on the stake of validators and their delegators. - Delegator Participation: APT token holders can delegate their tokens to validators, earning a share of the staking rewards without running their own nodes. - Slashing Mechanism: Validators face penalties, such as losing staked tokens, for malicious actions or prolonged inactivity, ensuring accountability and network security. Applicable Fees: - Transaction Fees: Users pay transaction fees in APT tokens for sending transactions and interacting with smart contracts. - Dynamic Fee Adjustment: Fees are dynamically adjusted based on network activity and resource usage, ensuring cost efficiency and preventing congestion. - Fee Distribution: Transaction fees are distributed among validators and delegators, providing an additional incentive for network participation. Arbitrum One, a Layer 2 scaling solution for Ethereum, employs several incentive mechanisms to ensure the security and integrity of transactions on its network. The key mechanisms include: 1. Validators and Sequencers: - Sequencers are responsible for ordering transactions and creating batches that are processed off-chain. They play a critical role in maintaining the efficiency and throughput of the network. - Validators monitor the sequencers' actions and ensure that transactions are processed correctly. Validators verify the state

transitions and ensure that no invalid transactions are included in the batches.

2. Fraud Proofs:
   - Assumption of Validity: Transactions processed off-chain are assumed to be valid. This allows for quick transaction finality and high throughput.
   - Challenge Period: There is a predefined period during which anyone can challenge the validity of a transaction by submitting a fraud proof. This mechanism acts as a deterrent against malicious behavior.
   - Dispute Resolution: If a challenge is raised, an interactive verification process is initiated to pinpoint the exact step where fraud occurred. If the challenge is valid, the fraudulent transaction is reverted, and the dishonest actor is penalized.
3. Economic Incentives:
   - Rewards for Honest Behavior: Participants in the network, such as validators and sequencers, are incentivized through rewards for performing their duties honestly and efficiently. These rewards come from transaction fees and potentially other protocol incentives.
   - Penalties for Malicious Behavior: Participants who engage in dishonest behavior or submit invalid transactions are penalized. This can include slashing of staked tokens or other forms of economic penalties, which serve to discourage malicious actions.

Fees on the Arbitrum One Blockchain

1. Transaction Fees:
   - Layer 2 Fees: Users pay fees for transactions processed on the Layer 2 network. These fees are typically lower than Ethereum mainnet fees due to the reduced computational load on the main chain.
   - Arbitrum Transaction Fee: A fee is charged for each transaction processed by the sequencer. This fee covers the cost of processing the transaction and ensuring its inclusion in a batch.
2. L1 Data Fees:

- Posting Batches to Ethereum: Periodically, the state updates from the Layer 2 transactions are posted to the Ethereum mainnet as calldata. This involves a fee, known as the L1 data fee, which accounts for the gas required to publish these state updates on Ethereum.
- Cost Sharing: Because transactions are batched, the fixed costs of posting state updates to Ethereum are spread across multiple transactions, making it more cost-effective for users.

		Base is a Layer-2 (L2) solution on Ethereum that uses optimistic rollups provided by the OP Stack on which it was developed. Transaction on base are bundled by a, so called, sequencer and the result is regularly submitted as an Layer-1 (L1) transactions. This way many L2 transactions get combined into a single L1 transaction. This lowers the average transaction cost per transaction, because many L2 transactions together fund the transaction cost for the single L1 transaction. This creates incentives to use base rather than the L1, i.e. Ethereum, itself. To get crypto-assets in and out of base, a special smart contract on Ethereum is used. Since there is no consensus mechanism on L2 an additional mechanism ensures that only existing funds can be withdrawn from L2. When a user wants to withdraw funds, that user needs to submit a withdrawal request on L1. If this request remains unchallenged for a period of time the funds can be withdrawn. During this time period any other user can submit a fault proof, which will start a dispute resolution process. This process is designed with economic incentives for correct behaviour. Binance Smart Chain (BSC) uses the Proof of Staked Authority (PoSA) consensus mechanism to ensure network security and incentivize participation from validators and delegators. Incentive Mechanisms 1. Validators: - Staking Rewards: Validators must stake a significant amount of BNB to participate in the consensus process. They earn rewards in the form of transaction fees and block rewards. - Selection Process: Validators are selected based on the amount of BNB staked and the votes received from delegators. The more BNB staked and votes received, the higher the chances of being selected to validate transactions and produce new blocks. 2. Delegators: - Delegated Staking: Token holders can delegate their BNB to validators. This delegation increases the validator's total stake and improves their chances of being selected to produce blocks. - Shared Rewards: Delegators earn a portion of the rewards that validators receive. This incentivizes token holders to participate in the network's security and decentralization by choosing reliable validators. 3. Candidates: Pool of Potential Validators: Candidates are nodes that have staked the required amount of BNB and are waiting to become active validators. They ensure that there is always a sufficient

		pool of nodes ready to take on validation tasks, maintaining network resilience. 4. Economic Security: - Slashing: Validators can be penalized for malicious behavior or failure to perform their duties. Penalties include slashing a portion of their staked tokens, ensuring that validators act in the best interest of the network. - Opportunity Cost: Staking requires validators and delegators to lock up their BNB tokens, providing an economic incentive to act honestly to avoid losing their staked assets. Fees on the Binance Smart Chain 1. Transaction Fees: - Low Fees: BSC is known for its low transaction fees compared to other blockchain networks. These fees are paid in BNB and are essential for maintaining network operations and compensating validators. - Dynamic Fee Structure: Transaction fees can vary based on network congestion and the complexity of the transactions. However, BSC ensures that fees remain significantly lower than those on the Ethereum mainnet. 2. Block Rewards: Incentivizing Validators: Validators earn block rewards in addition to transaction fees. These rewards are distributed to validators for their role in maintaining the network and processing transactions. 3. Cross-Chain Fees: Interoperability Costs: BSC supports cross-chain compatibility, allowing assets to be transferred between Binance Chain and Binance Smart Chain. These cross-chain operations incur minimal fees, facilitating seamless asset transfers and improving user experience. 4. Smart Contract Fees: Deploying and interacting with smart contracts on BSC involves paying fees based on the computational resources required. These fees are also paid in BNB and are designed to be cost-effective, encouraging developers to build on the BSC platform. The crypto-asset's PoS system secures transactions through validator incentives and economic penalties. Validators stake at least 32 ETH and earn rewards for proposing blocks, attesting to valid ones, and participating in sync committees. Rewards are paid in newly issued ETH and transaction fees.

		Under EIP-1559, transaction fees consist of a base fee, which is burned to reduce supply, and an optional priority fee (tip) paid to validators. Validators face slashing if they act maliciously and incur penalties for inactivity. This system aims to increase security by aligning incentives while making the crypto-asset's fee structure more predictable and deflationary during high network activity. Linea's incentive model aligns validator performance and network security with user needs for low-cost, efficient transaction processing. Incentive Mechanisms: Validator Rewards: Validators earn rewards from transaction fees for their role in processing transactions and submitting aggregated proofs to the Ethereum mainnet. Applicable Fees: - Transaction Fees: Users pay transaction fees in the network's native token. These fees cover the costs of executing transactions on the Layer 2 network and submitting proofs to the Ethereum mainnet. - Cost Efficiency: zk-Rollups significantly reduce transaction fees compared to Ethereum mainnet transactions by batching multiple transactions into a single proof, making Linea an economical solution for scalable dApps. zkSync incentivizes network participants through a streamlined fee structure and role-based rewards, designed to ensure security, scalability, and usability for both users and validators. Incentive Mechanism: - Validator Rewards: Validators, who generate validity proofs and secure the network, are compensated through transaction fees paid by users. Their role ensures that batches of transactions are processed efficiently and accurately. - Sequencer Incentives: Sequencers are responsible for bundling and ordering transactions off-chain. They earn a share of the transaction fees for maintaining network performance and fast processing times. - Ecosystem Growth Rewards: zkSync allocates resources to incentivize developers and projects building on its platform, fostering a robust ecosystem of dApps, DeFi protocols, and NFT marketplaces.

		Applicable Fees: - Transaction Fees: Users pay fees in Ether (ETH) for transactions on zkSync. These fees are significantly lower than Ethereum Layer 1 fees, as zkSync processes transactions off-chain and submits only aggregated proofs to the Ethereum mainnet. - Fee Model: Fees are dynamically calculated based on the complexity of transactions (e.g., token transfers, smart contract interactions) and the cost of submitting validity proofs to Ethereum. - Scalability Benefits: zkSync's efficient rollup architecture reduces gas fees for users while ensuring that validators and sequencers are appropriately compensated for their roles.
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	906.43657 kWh/a
S.9	Energy consumption sources and methodologies	The energy consumption of this asset is aggregated across multiple components: To determine the energy consumption of a token, the energy consumption of the network(s) aptos_coin, arbitrum, base, binance_smart_chain, ethereum, linea, zksync 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.