

SOC 2 Report Relevant to Trust Services Criteria for Security, Availability, and Confidentiality August 1, 2022 to December 31, 2022

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Section 1

Assertions of Management



Section 1 – Assertion of CoinDesk Indices, Inc.'s Management

We have prepared the accompanying description of CoinDesk Indices, Inc.'s system titled "CoinDesk Indices, Inc.'s Description of its Digital Currency Index Platform System" throughout the period August 1, 2022 to December 31, 2022 (description) based on the criteria for a description of a service organization's system in DC section 200, 2018 Description Criteria for a Description of a Service Organization's System in a SOC 2® Report (AICPA, Description Criteria) (description criteria). The description is intended to provide report users with information about the Digital Currency Index Platform system that may be useful when assessing the risks arising from interactions with CoinDesk Indices, Inc.'s system, particularly information about system controls that CoinDesk Indices, Inc. has designed, implemented and operated to provide reasonable assurance that its service commitments and system requirements were achieved based on the trust services criteria relevant to security, availability, and confidentiality (applicable trust services criteria) set forth in TSP section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality and Privacy (AICPA, Trust Services Criteria).

CoinDesk Indices, Inc. uses CoinDesk, Inc. to provide human resources services. CoinDesk Indices, Inc.'s description includes a description of CoinDesk, Inc.'s human resources services used by CoinDesk Indices, Inc. for user entities and business partners, including the controls of CoinDesk Indices, Inc. and the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. that are necessary for CoinDesk Indices, Inc. to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the application trust services criteria. CoinDesk, Inc.'s assertion is presented on page 5 in section 1.

CoinDesk Indices, Inc. uses TradeBlock, Corp. to provide backup system administration services. CoinDesk Indices, Inc.'s description includes a description of TradeBlock's backup system administration services used by CoinDesk Indices, Inc. to backup systems for user entities and business partners, including the controls of CoinDesk Indices, Inc. and the controls designed by CoinDesk Indices, Inc. and operated by TradeBlock Corp. that are necessary for CoinDesk Indices, Inc. to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the application trust services criteria. TradeBlock's assertion is presented on page 6 in section 1.

CoinDesk Indices, Inc. uses the following subservice organization: Amazon Web Services (AWS) for cloud hosting services. The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at CoinDesk Indices, Inc., to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the applicable trust services criteria. The description presents CoinDesk Indices, Inc.'s controls, the applicable trust services criteria, and the types of complementary subservice organization controls assumed in the design of CoinDesk Indices, Inc.'s controls. The description does not disclose the actual controls at the subservice organization.

The description indicates that complementary user entity controls that are suitably designed and operating effectively are necessary; along with controls at CoinDesk Indices, Inc., to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the applicable trust services criteria. The description presents CoinDesk Indices, Inc.'s controls, the applicable trust services criteria, and the complementary user entity controls assumed in the design of CoinDesk Indices, Inc.'s controls.

We confirm to the best of our knowledge and belief that



- a. the description presents CoinDesk Indices, Inc.'s System that was designed and implemented throughout the period August 1, 2022 to December 31, 2022, in accordance with the description criteria.
- b. the controls stated in the description, including the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. and TradeBlock, Corp., were suitably designed throughout the period August 1, 2022 to December 31, 2022, to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements would be achieved based on the applicable trust services criteria, if its controls operated effectively throughout the period, and if the subservice organization and user entities applied the complementary controls assumed in the design of CoinDesk Indices, Inc.'s controls through that period.
- c. the controls stated in the description, including the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. and TradeBlock, Corp., operated effectively throughout the period August 1, 2022 and December 31, 2022, to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements were achieved based on the applicable trust services criteria, if the complementary subservice organization controls and complementary user entity controls assumed in the design of CoinDesk Indices, Inc.'s controls operated effectively throughout that period.



Section 1: Assertion of CoinDesk, Inc.'s Management

CoinDesk, Inc. provides human resources services to CoinDesk Indices, Inc. The services provided by CoinDesk, Inc. are part of CoinDesk Indices, Inc.'s Digital Currency Index Platform system. We have prepared the portion of the accompanying description of CoinDesk Indices, Inc.'s Digital Currency Index Platform System titled "CoinDesk Indices, Inc.'s Digital Currency Index Platform System" throughout the period August 1, 2022 to December 31, 2022, (description) disclosing CoinDesk, Inc.'s human resources services provided to CoinDesk Indices, Inc. based on the criteria for a description of a service organization's system in DC section 200, 2018 Description Criteria for a Description of a Service Organization's System in a SOC 2® Report (AICPA, Description Criteria), (description criteria). The description is intended to provide report users with information about CoinDesk Indices, Inc.'s Digital Currency Index Platform system that may be useful, when assessing the risks arising from interactions with CoinDesk Indices, Inc.'s system, particularly information about system controls that CoinDesk Indices, Inc. designed, implemented and operated to provide reasonable assurance that is service commitments and system requirements were achieved based on the trust services criteria relevant to security, availability, and confidentiality (applicable trust services criteria) set forth in TSP section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria).

We confirm, to the best of our knowledge and belief, that

- a. The description presents CoinDesk, Inc.'s human resources services made available to CoinDesk Indices, Inc. throughout the period August 1, 2022 to December 31, 2022, in accordance with the description criteria.
- b. CoinDesk, Inc.'s controls stated in the description, which were designed by CoinDesk Indices, Inc., operated as described throughout the period August 1, 2022 to December 31, 2022, based on the applicable trust services criteria.

CoinDesk, Inc.



Section 1: Assertion of TradeBlock, Corp.'s Management

TradeBlock, Corp. provides backup system administration services to CoinDesk Indices, Inc. The services provided by TradeBlock, Corp. are part of CoinDesk Indices, Inc.'s Digital Currency Index Platform system. We have prepared the portion of the accompanying description of CoinDesk Indices, Inc.'s Digital Currency Index Platform system titled "CoinDesk Indices, Inc.'s Digital Currency Index Platform System" throughout the period August 1, 2022 to December 31, 2022, (description) disclosing TradeBlock, Corp.'s backup system administration services provided to CoinDesk Indices, Inc. based on the criteria for a description of a service organization's system in DC section 200, 2018 Description Criteria for a Description of a Service Organization's System in a SOC 2® Report (AICPA, Description Criteria), (description criteria). The description is intended to provide report users with information about CoinDesk Indices, Inc.'s Digital Currency Index Platform system that may be useful, when assessing the risks arising from interactions with CoinDesk Indices, Inc.'s system, particularly information about system controls that CoinDesk Indices, Inc. designed, implemented and operated to provide reasonable assurance that is service commitments and system requirements were achieved based on the trust services criteria relevant to security, availability, and confidentiality (applicable trust services criteria) set forth in TSP section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy (AICPA, Trust Services Criteria).

We confirm, to the best of our knowledge and belief, that

- c. The description presents TradeBlock, Corp.'s backup system administration services made available to CoinDesk Indices, Inc. throughout the period August 1, 2022 to December 31, 2022, in accordance with the description criteria.
- d. TradeBlock, Corp.'s controls stated in the description, which were designed by CoinDesk Indices, Inc., operated as described throughout the period August 1, 2022 to December 31, 2022, based on the applicable trust services criteria.

TradeBlock, Corp.

Section 2

Independent Service Auditor's Report

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Section 2 - Independent Service Auditor's Report

To: Management of CoinDesk Indices, Inc.

Scope

We have examined CoinDesk Indices, Inc.'s accompanying description of its Digital Currency Index Platform system, including human resources services provided services by and controls operated by CoinDesk, Inc. and backup system administration services provided by and controls operated by TradeBlock, Corp. titled "CoinDesk Indices, Inc.'s Description of its Digital Currency Index Platform system" throughout the period August 1, 2022 to December 31, 2022 (description) based on the criteria for a description of a service organization's system in DC section 200, 2018 Description Criteria for a Description of a Service Organization in a SOC 2® Report (AICPA, Description Criteria) (description criteria) and the suitability of the design and operating effectiveness of CoinDesk Indices, Inc.'s controls, including the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. and TradeBlock, Corp. stated in the description throughout the period August 1, 2022 to December 31, 2022, to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements were achieved based on the trust service criteria relevant to security, availability, and confidentiality (applicable trust services criteria) set forth in TSP section 100, 2017 Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality and Privacy (AICPA, Trust Services Criteria).

CoinDesk, Inc. is an independent subservice organization providing human resources services to CoinDesk Indices, Inc. The description includes those elements of the human resources services provided to CoinDesk Indices, Inc. and the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. that are necessary for CoinDesk Indices, Inc. to achieve its service commitments and system requirements based on the application trust services criteria.

TradeBlock, Corp. is an independent subservice organization providing backup system administration services to CoinDesk Indices, Inc. The description includes those elements of the backup system administration services provided to CoinDesk Indices, Inc. and the controls designed by CoinDesk Indices, Inc. and operated by TradeBlock, Corp. that are necessary for CoinDesk Indices, Inc. to achieve its service commitments and system requirements based on the application trust services criteria.

CoinDesk Indices, Inc. uses the following subservice organization: Amazon Web Services (AWS) for cloud hosting services. The description indicates that complementary subservice organization controls that are suitably designed and operating effectively are necessary, along with controls at CoinDesk Indices, Inc., to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the applicable trust services criteria. The description presents CoinDesk Indices, Inc.'s controls, the applicable trust services criteria, and the types of complementary subservice organization controls assumed in the design of CoinDesk Indices, Inc.'s controls. The description does not disclose the actual controls at the subservice organizations. Our examination did not include the services provided by the subservice organization, and we have not evaluated the suitability of the design or operating effectiveness of such complementary subservice organization controls.





The description indicates that complementary user entity controls that are suitably designed and operating effectively are necessary, along with controls at CoinDesk Indices, Inc., to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the applicable trust services criteria. The description presents CoinDesk Indices, Inc.'s controls, the applicable trust services criteria, and the complementary user entity controls assumed in the design of CoinDesk Indices, Inc.'s controls. Our examination did not include such complementary user entity controls and we have not evaluated the suitability of the design or operating effectiveness of such controls.

The information included in section 5, "Other Information Provided by CoinDesk Indices, Inc." is presented by CoinDesk Indices, Inc.'s management to provide additional information and is not part of the description. Information about CoinDesk Indices, Inc.'s response to control exceptions has not been subjected to the procedures applied in the examination of the description and the suitability of the design of controls, and operating effectiveness of the controls to achieve CoinDesk Indices, Inc.'s service commitments and system requirements based on the applicable trust services criteria.

Service Organization's Responsibilities

CoinDesk Indices, Inc. is responsible for its service commitments and system requirements and for designing, implementing and operating effective controls within the system to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements were achieved. Coindesk Indices, Inc. has provided the accompanying assertions titled "Assertion of Coindesk Indices Inc. Management" (assertions) about the description and the suitability of design and operating effectiveness of controls stated therein. CoinDesk Indices, Inc. is also responsible for preparing the description and assertion, including the completeness, accuracy, and method of presentation of the description and assertion; providing the services covered by the description; selecting the applicable trust services criteria and stating the related controls in the description; and identifying the risks that threaten the achievement of the service organization's service commitments and system requirements.

Subservice Organization's Responsibilities

CoinDesk, Inc. has provided the accompanying assertion titled "Assertion of CoinDesk, Inc. Management," (CoinDesk, Inc. Assertion) about the description and the controls stated therein. CoinDesk, Inc. is responsible for preparing the portion of the description related to the human resources services provided to CoinDesk Indices, Inc. and the CoinDesk, Inc. assertion, including the completeness, accuracy, and method of presentation of the description and assertion; providing the services covered by the description; and implementing, operating, and documenting controls designed by CoinDesk Indices, Inc., which enable CoinDesk Indices, Inc. to achieve its service commitments and system requirements.

TradeBlock, Corp. has provided the accompanying assertion titled "Assertion of TradeBlock, Corp. Management," (TradeBlock Assertion) about the description and the controls stated therein. TradeBlock, Corp. is responsible for preparing the portion of the description related to the backup system administration services provided to CoinDesk Indices, Inc. and the TradeBlock, Corp. assertion, including the completeness, accuracy, and method of presentation of the description and assertion; providing the services covered by the description; and implementing, operating, and documenting controls designed by CoinDesk Indices, Inc., which enable CoinDesk Indices, Inc. to achieve its service commitments and system requirements.

Service Auditor's Responsibilities

Our responsibility is to express an opinion on the description and on the suitability of design and operating effectiveness of controls stated in the description based on our examination. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public



Accountants. Those standards require that we plan and perform our examination to obtain reasonable assurance about whether, in all material respects, the description is presented in accordance with the description criteria and the controls stated therein were suitably designed and operating effectively to provide reasonable assurance that the service organization's service commitments and system requirements were achieved based on the applicable trust services criteria. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

An examination of the description of a service organization's system and the suitability of the design of and operating effectiveness of controls involves the following:

- Obtaining an understanding of the system and service organization's service commitments and system requirements
- Assessing the risks that the description is not presented in accordance with the description criteria and that controls were not suitably designed or did not operate effectively
- Performing procedures to obtain evidence about whether the description is presented in accordance with the description criteria
- Performing procedures to obtain evidence about whether controls stated in the description were suitably designed to provide reasonable assurance that the service organization achieved its service commitments and system requirements based on the applicable trust services criteria
- Testing the operating effectiveness of controls stated in the description to provide reasonable assurance that the service organization achieved its service commitments and system requirements based on the applicable trust services criteria
- Evaluating the overall presentation of the description

Our examination also included performing such other procedures as we considered necessary in the circumstances.

Inherent Limitations

The description is prepared to meet the common needs of a broad range of users and may not, therefore, include every aspect of the system that individual users may consider important to meet their informational needs.

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls.

Because of their nature, controls may not always operate effectively to provide reasonable assurance that the service organization's service commitments and system requirements are achieved based on the applicable trust services criteria. Also, the projection to the future of any conclusions about the suitability of the design and operating effectiveness of controls is subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with policies or procedures may deteriorate.

Description of Tests of Controls

The specific controls we tested and the nature, timing and results of those tests are presented in section 4.

Opinion

In our opinion, in all material respects



- a. the description presents CoinDesk Indices, Inc.'s Digital Currency Index Platform system that was designed and implemented through the period August 1, 2022 to December 31, 2022, in accordance with the description criteria.
- b. the controls stated in the description, including the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. and TradeBlock, Crop., were suitably designed throughout the period August 1, 2022 to December 31, 2022 to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements would be achieved based on the applicable trust services criteria, if its controls operated effectively throughout that period and if the subservice organization and user entities applied the complementary controls assumed in the design of CoinDesk Indices, Inc.'s controls throughout that period.
- c. the controls stated in the description, including the controls designed by CoinDesk Indices, Inc. and operated by CoinDesk, Inc. and TradeBlock, Corp., operated effectively throughout the period August 1, 2022 to December 31, 2022 to provide reasonable assurance that CoinDesk Indices, Inc.'s service commitments and system requirements were achieved based on the applicable trust services criteria if complementary subservice organization and complementary user entity controls assumed in the design of CoinDesk Indices, Inc.'s controls operated effectively throughout that period.

Restricted Use

This report, including the description of tests of controls and results thereof in section 4, is intended solely for the information and use of CoinDesk Indices, Inc., user entities of the CoinDesk Indices, Inc.'s Digital Currency Index Platform system during some or all of the period August 1, 2022 to December 31, 2022, business partners of CoinDesk Indices, Inc. subject to risks arising from interactions with the Digital Currency Index Platform system, practitioners providing services to such user entities and business partners, prospective user entities and business partners, and regulators who have sufficient knowledge and understanding of the following:

- The nature of the service provided by the service organization
- How the service organization's system interacts with user entities, business partners, subservice organizations, and other parties
- Internal control and its limitations
- Complementary user entity controls and complementary subservice organization controls and how
 those controls interact with the controls at the service organization to achieve the service
 organization's service commitments and system requirements
- User entity responsibilities and how they may affect the user entity's ability to effectively use the service organization's services
- The applicable trust services criteria
- The risks that may threaten the achievement of the service organization's service commitments and system requirements and how controls address those risks



This report is not intended to be, and should not be, used by anyone other than those specified parties

Mayu Hayman McCann, P.C.

Mayer Hoffman McCann, P.C.

Boston, Massachusetts

March 27, 2023

Section 3

CoinDesk Indices, Inc.'s Description of its Digital Currency Index Platform System

Section 3 – CoinDesk Indices, Inc.'s Description of its Digital Currency Index Platform System

Overview of Operations

Company Background

CoinDesk Indices is a provider of real-time indexes for the spot price of various digital currencies equipping firms with an effective price discovery mechanism crucial in navigating the volatile digital currency markets as well as multi digital asset indices, which are designed to measure the performance of a specific segment of the digital asset market as defined in the relevant index methodology.

In 2014, CoinDesk Indices launched with their flagship CoinDesk Bitcoin Price Index (XBX). Since then, financial institutions have been relying on the XBX and other CoinDesk Indices products to benchmark billions of dollars in assets under management and to price hundreds of millions in over-the-counter transactions, daily.

CoinDesk Indices was acquired and established in 2021 as an independent division of CoinDesk Inc., a trusted media platform for news and events for the next generation of investing and the future of money. With the acquisition, CoinDesk positioned itself to be a unified source for crypto media, events, research, pricing, and data. CoinDesk is an independent operating subsidiary of Digital Currency Group, which invests in cryptocurrencies and blockchain startups.

After a divestiture from CoinDesk Indices, TradeBlock, Corp. became a subsidiary of Digital Currency Group and related affiliate of CoinDesk (parent company of CoinDesk Indices) in 2022. In connection with a transition services arrangement between TradeBlock Corp. and CoinDesk Indices, Inc., TradeBlock Corp. provides back-up system administration services on an as-needed basis to CoinDesk Indices, Inc. following the spin-off of the relevant index administration and calculation business by TradeBlock Corp. to CoinDesk Indices, Inc.

The Digital Asset Classification Standard (DACS) was developed by CoinDesk Indices to provide a reliable, comprehensive, and standardized classification system for digital assets. Currently, the DACS includes the top 500 eligible digital assets by market capitalization and the DACS structure offers three levels of granularity across seven Sectors, 26 Industry Groups and 40 Industries.

While DACS is unique to digital assets, it will serve many of the same functions as classification systems used for traditional asset classes. Among other things, DACS provides the market with a transparent and standardized method to determine sector and industry exposure, facilitates portfolio attribution analysis, and will help pinpoint investment opportunities.

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Principal Service Commitments and System Requirements

CoinDesk Indices is committed to providing real-time indices and market data that is secure and available. The security approach revolves around the principle of "need to know" meaning that there is no access to information or systems that isn't explicitly allowed.

CoinDesk Indices establishes operational requirements that support the achievement of security, availability, and confidentiality commitments. Such requirements are committed in CoinDesk Indices' system policies, procedures, and client contracts. Information security and compliance policies define an organization-wide approach to how systems and data are protected. In addition to these policies, standard operating procedures have been documented on how to carry out specific processes required in the operation and development of CoinDesk Indices and market data.

Components of the System Used to provide the Service

Boundaries of the System

The scope of this SOC 2 is solely around the Digital Currency Index Platform system, the "System" that maintains CoinDesk Indices and market data as operated and managed by the team during the period under review. The scope does not include other CoinDesk, Inc. services and offerings.

Infrastructure

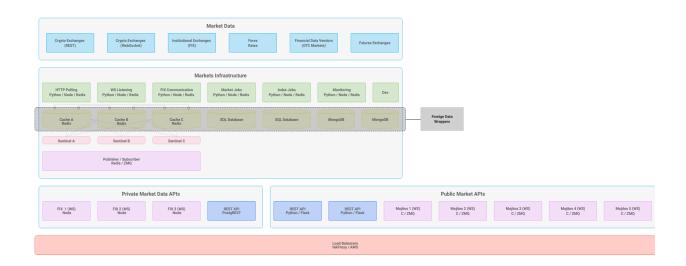
Supporting servers for market data are responsible for collecting trade data from exchanges and blockchain nodes, calculating index and reference rate values, building candles, sending data directly to client emails, publishing data to WebSocket, and archiving data.

Indices and market APIs (Application Programming Interface) provide programmatic access to normalized data from market venues and for CoinDesk Indices' proprietary indices. The API is designed for low-latency, high-throughput applications that require high availability.

The System is 100% hosted in AWS. The System functionality depends on the following AWS and ancillary services:

- Elastic Compute Cloud (EC2) Application hosting Market boxes
- Identity Access Management (IAM) Access control
- GitHub Development and version control
- Load Balancer Reverse proxy and traffic distributor
- Mojitos WebSocket
- MongoDB Database storage
- RabbitMQ Calculation logs
- Redis Database, cache, message broker
- Kafka Database, cache, message broker
- Relational Database Service (RDS) Postgre SQL database
- Simple Storage Service (S3) Digital asset/file storage
- Squid-proxy Proxy for exchange integration

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Software

CoinDesk Indices is supported by systems and software used for the delivery of indices and market data and services, which include:

- AWS Inspector Vulnerability Management
- Bamboo Continuous integration and code development
- BambooHR Human Resource documentation and personnel management
- Blissfully User provisioning and workflows
- Confluence Team collaboration and policy retention
- DataDog Logging and alerting
- GSuite Corporate productivity applications
- Jira Ticketing and change management
- Kubernetes Clustering and scheduling contactors
- Microsoft SharePoint File storage
- Monday.com Customer Relationship Management
- PagerDuty System alerting
- PipeDrive Client relationship management
- Sentry Application monitoring
- Slack Instant messaging application
- Sophos Intercept X Advanced Anti-malware protection and detection
- Terraform Infrastructure as code
- Viscosity Remote access and virtual private network (VPN)

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People

CoinDesk Indices personnel involved in the operation, success, and use of the system are:

• Executive Management

- President Responsible for general oversight of business operations and the culture of the organization.
- Head of Index Governance and Operations Responsible for day-to-day production of the indices and governance of new products or changes to existing products.
- Head of Engineering Responsible for development and day-to-day operations of The System
- o Product Owner Responsible for product development with regards to the System.

• Information Security Committee

O Provide guidance, oversight, and direction to CoinDesk Indices' teams as it relates to data governance, privacy, compliance, and information security initiatives undertaken by the organization. The Committee includes at least one member who is not involved in the performance of controls.

• Engineering Team

- Developers Writes and maintains code for the frontend and backend of the System, such as new features, patches, and bug fixes.
- Site Reliability Engineers Responsible for the infrastructure that hosts and supports the System. Supports information technology, security, and compliance responsibilities.
- Security Engineers Overseas and monitors the security and compliance of systems and assets utilized to support the System.

• Product Management Team

- o Researches and identifies opportunities to create new product functionality and indices.
- Responsible for collecting and organizing feedback and enhancement requests from current clients.

Marketing and Sales

 Responsible for revenue-generating activities. This includes managing digital marketing initiatives, the creation and maintenance of digital marketing assets and all sales & renewal activity.

Procedures

The Information Security Committee and supporting management personnel maintain and annually review the following documented CoinDesk Indices operating policies and procedures:

- Acceptable Use of Technology
- Business Continuity (BC) Policy and Plan
- Change Management Policy and Procedures
- Client Account Management Procedures
- Code of Conduct
- Confidentiality & Rights Agreement
- Cybersecurity Policy

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- Data Classification & Handling Policy
- Disaster Recovery (DR) Policy and Plan
- Employee Handbook
- Incident Response (IR) Plan
- Pandemic Policy
- Password Standards Policy
- Provisioning Procedures
- Remote Access Policy
- Risk Management Policy
- Vendor Management Policy

1. Physical Security

The System is hosted entirely on AWS so all physical security relating to the infrastructure is provided by Amazon.

2. Logical Security

Employee Authentication & Authorization

Authentication requirements (password configuration settings and multifactor authentication) to the System's backend environment are configured in accordance with CoinDesk Indices' Password Standards Policy. Employee access to the backend environment is restricted to only authorized personnel that require access to perform their job responsibilities.

CoinDesk Indices also deploys authentication requirements (password configuration settings and multifactor authentication) for software, tools, and other solutions used to support the operation of the System. In particular, authentication requirements to access client information, the source code repositories and deployment tools are configured in accordance with CoinDesk Indices' Password Standards Policy. Furthermore, access is restricted to authorized personnel that require access to work with the source code or migrate code to different environments.

Access Provisioning

New access to in-scope components must be approved by authorized Management, documented, and follow a predefined workflow. The requestor and reason for the new access is also documented within an Onboarding or Change of Access ticket. Evidence of approval or denial, who approved it and when, is retained within the request ticket.

On at least an annual basis, accounts that support the systems and software used for the delivery of indices and market data services are reviewed. If an account is determined to not be required, it is removed and documented in the dedicated ticket workflow.

Access Removal

Terminated employees' access to in-scope systems is removed in a timely and expedited manner per CoinDesk Indices' defined workflow. Access to systems, applications, and accounts are documented and retained through an employee's tenure at the organization. Upon termination, remote access to the System

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is removed. Depending on the type of access, the responsible party is assigned for removing access to that account from the terminated employee. Each of these accounts has a manager and backup listed. Depending on the type of account, this would involve a password change or removing the employee's user from the account. If required, user access to accounts that involve a password change and maintain being active beyond termination are documented.

Privileged Access

Administrative privileges to AWS and supporting systems are limited to only authorized and documented personnel. Access administrative activity, including but not limited to system changes, adding new assets, and adding new users in the production environment is logged and monitored.

On a quarterly basis, accounts with privileged accounts to in-scope AWS services and resources are reviewed by the Information Security Committee. If an account is determined to not be required, it is removed and documented in the dedicated ticket workflow.

Users with heightened system access, attend technical security training to ensure they are up to date on cyber vulnerabilities and threats.

3. Network Security

The Information Security Committee maintains an inventory of company IT assets, including AWS applications and resources. Management has documented network diagrams detailing AWS applications, data pathways and data participants. Diagrams are reviewed annually and updated as necessary.

Secured and encrypted connections are required for external devices connecting to client information, code repositories, and AWS environment and internal services. Information transmitted over public networks is encrypted during transit.

Network policy rules have been established for controlling traffic in and out for externally facing assets within AWS.

A key management system is utilized to create and manage encryption keys. These keys are created and managed within the AWS Key Management Service. Keys are rotated on an annual basis.

Monitoring and analytics for anomalies, potential security breaches, and adherence to company best practices is used to support the security and efficiency of the System. Identification of anomalies or issues are reviewed by the Engineering Team to validate the legitimacy. True anomalies and issues are documented, and remediation is tracked to resolution.

4. Change Management

Application Change Management

CoinDesk Indices has a formal systems development life cycle (SDLC) methodology that governs the development, implementation, and maintenance of information systems and related technology requirements.

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The Engineering Team employs an Agile project methodology, specifically Scrum, for production fixes and enhancements. Production fixes are done by dedicated developers. The development team is composed of Vice President of Engineering and backend engineers. Additionally, oversight is provided by executive management and the product owner. Scrum rituals are held using a bi-weekly Sprint cadence.

At the beginning of each Sprint, the Sprint Planning meeting is held. The attendees include all developers, the Scrum Master, and the Product Owner. The Product Owner explains each backlog item in detail, while the developers estimate the effort required to complete the item, which includes development, testing, and deployment to production. This backlog item is then moved into a Sprint. This is done for each backlog item until the average effort per sprint is exceeded.

The Sprint Review meeting is held at the end of each Sprint. During this meeting, engineering team members provide the demo of the system integration (SI) that he/she has worked on, and feedback is provided by others. Any follow-up action items are documented and added to the next sprint.

In the event of an identified emergency change, the lifecycle of the change will be executed with utmost urgency. There may be fewer people involved in the change management process review, and the change assessment may involve fewer steps, but any emergency change must still be authorized by the management team, even in cases where the change is not reviewed in advance. Emergency changes are recorded and retained in the change log.

Changes to the System are documented in the change log, authorized, tested, and approved prior to migration to production. Changes to system code are developed and tested in separate development and staging environments before implementation. The change log is handled by a project management software, Jira.

Infrastructure & Network Change Management

AWS Infrastructure changes are documented and tracked throughout the entirety of the change process. All changes to the AWS Infrastructure are recorded within weekly meetings held during the change lifecycle to discuss pending questions, blockers, and the progress of the change. All changes must be reviewed prior to implementation into the Production environment.

The above change process is applied to all servers and services that are critical to the Production environment's availability and functionality.

All changes impacting the security of ancillary systems that contain client information or support systems and software used for the delivery of indices and market data are tracked within a dedicated security change log and follow the standards within the Change Management Policy.

If it is decided that the change shall be tested, changes are made to an AWS virtual private cloud (VPC) development environment first and tested until the team is confident that the change can be pushed to the staging and finally production environments.

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5. Vulnerability Management

Anti-virus and endpoint vulnerability detection software is installed on all user endpoints. Nightly scans are performed to ensure no vulnerabilities exist, and virus definitions are updated daily.

Infrastructure as code is utilized for changes made to the production environment. Amazon Machine Images (AMI) are a parameter of CoinDesk Indices EC2 instances which are managed and configured via Terraform. In the event parameters are changed to an instance, an alert is generated and sent to the Information Security team.

Systems within AWS are defined and set-up with pre-configured Ansible playbooks. Dedicated playbooks include system security hardening standards which are applied across all systems.

A Log Management and Threat Analytic system ingests log data from AWS resources and services and compares the activity against third-party threat intelligence data. Suspicious activity is noted on daily summaries and real-time alerts sent to the Information Security team. Alerts are reviewed and addressed as soon as possible, as needed.

CoinDesk Indices performs quarterly vulnerability assessments on all running EC2 instances through the use of AWS and enterprise-identified tools. Results are reviewed by the Information Security Committee and prioritized for remediation. Any vulnerabilities with critical or severe severity level are prioritized and remediated within a defined period.

6. Incident Management

Once the CoinDesk Indices Incident Response Coordinator declares an incident, the Incident Response Plan is invoked which details the roles and responsibilities, process and decisions to be made going forward.

A standardized incident response form is made available to authorized employees and utilized for documenting information through the lifecycle of an incident. Incidents are categorized by severity and type of incident which could include but not limited to the following:

- System Interruption/Outage
- Programming Error
- Malicious Code
- Denial of Service
- Phishing/Social Engineering
- Unauthorized Access
- Loss of Data
- Third-party Incident
- Criminal Activity

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7. Data Management

Data in transit

All data transmitted externally over public networks to clients from the System is encrypted using Hypertext Transfer Protocol Secure (HTTPS) and Transport Layer Security (TLS) 1.2.

Data at rest

CoinDesk Indices' clients are not granted access to internal systems and do not have access to other client's data. Indices and market data are made available outbound from the System via API.

Amazon S3 Infrastructure as a Service (IaaS) is natively encrypted within AWS.

Data Destruction

Unless otherwise agreed upon, CoinDesk Indices will delete client data no longer than 30 days after a client has terminated their account. The execution of this task is documented and tracked in a change log system.

Standards have been documented for the disposal of confidential data and assets containing confidential data. Evidence of the disposal or destruction is documented and retained.

8. Backups and Recovery

Backup Strategy

Back-ups are scheduled and retained for all critical Production resources in accordance with procedures. All critical Production resources are backed up nightly, weekly, and monthly. Production backups are copied in two different AWS geographic regions for redundancy; US-West-2 and a disaster recovery vault in US-East-1. In the event a backup fails, an alert is sent to the Site Reliability Engineer team for investigation and remediation.

Testing is performed on a scheduled monthly basis to validate backups are reliable and data is recoverable. The test is documented and retained within a dedicated change management ticket.

CoinDesk Indices deploys critical AWS resources and services (databases, digital assets, and web servers) to multiple data centers in AWS' US-West-2 region (Oregon) physically secured by AWS to ensure physical redundancy.

Disaster Recovery Testing

CoinDesk Indices has a disaster recovery (DR) plan which it reviews on a periodic basis for completeness and accuracy. On an annual basis, CoinDesk Indices employees participate in a disaster recovery exercise which is designed to evaluate the efficiency of processes for recovering and restoring data and/or business systems. Changes to the DR plan are documented, recorded within a dedicated change management ticket, and tracked to resolution.

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9. Availability

System Availability

Baseline rate limits have been defined on CDI's load balancers to ensure traffic to the CDI services is managed and available for all authorized customers.

Indices and market data is hosted on three production servers (one primary and two replicas) and where possible, resources are deployed redundantly across multiple availability zones to ensure durability and redundancy.

System health and availability are monitored. Alarm criteria are established and managed by Site Reliability Engineers, and management. These include the reachability of the services hosted as well as underlying system metrics such as Central Processing Unit (CPU) usage, disk storage, and memory utilization. Triggered alarms are sent to Site Reliability Engineers for investigation and resolution.

Capacity and performance forecasting is performed on an ongoing basis to evaluate system demands. Resources are allocated where necessary. The change management process is initiated when system usage exceeds control tolerances. Tolerances are defined based on the resource requirements for each system component and set at a level to allow for changes to be made proactively. Alerts are generated when defined tolerances are met and/or exceeded.

10. Confidentiality

Internally, confidentiality requirements are communicated to employees through training and policies. Employees are required to attend annual security training, which includes topics related to protecting a client's content. Confidentiality requirements are included in the Data Classification & Handling Policy. Policies are reviewed and updated as needed, or at minimum annually by the Information Security Committee.

During the course of CoinDesk Indices system and software design, build, and test of product features, client data is not utilized. Client data is not required for the CoinDesk Indices software development life cycle. When content is required for the development or test of a service's software, engineering teams utilize mock or random data.

CoinDesk Indices implements controls to restrict and monitor access to resources that process or store client content. Access to client data is restricted to only employees with an authorized business need. In addition, the Confidentiality & Rights Agreement (CRA) binds an employee and subcontractor to confidentiality in the unlikely event they are exposed to client information.

Services and systems hosted and managed by CoinDesk Indices are designed to retain and protect a client's information for the duration of the client agreement period, and in some cases, up to 30 days beyond termination.

Additionally, CoinDesk Indices retains client content per a Master Licenses Agreement.

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Data

Client and Company data are protected through technical, administrative, and physical controls covered in the Procedures section of this report. Data maintained by CoinDesk Indices is defined into three categories, Confidential, Private, and Public. The production environment is designed to only maintain internal company-related proprietary information. Confidential client personally identifiable information (PII) is not utilized or retained within production systems and is limited to ancillary systems, such as the company's customer relationship management (CRM) tool.

Subservice Organizations

Amazon Web Services (AWS) provides infrastructure as a service (IaaS) solutions. Every layer of the System from development to hosting is hosted in AWS. That being the case, AWS is solely responsible for the physical security of the infrastructure the System is hosted on. Most of AWS's services offer some degree of redundancy and resiliency out of the box, but being able to integrate across servers and data centers allows the System to expand on that.

CoinDesk, Inc. provides human resources, marketing, and finance services, as the parent company of CoinDesk Indices. CoinDesk employees are restricted from having access to production systems that support indices and market data. If access to any ancillary systems is required, employees are provisioned with a CoinDesk Indices device and account. CoinDesk employees are required to sign a Confidentiality & Rights Agreement, the Acceptable Use of Technology Policy, and abide by processes set forth by CoinDesk Indices.

TradeBlock, Corp. is a subservice and sister company of CoinDesk Indices that provides backup system administration services within the production environment. Changes and activity within the AWS production environment made by TradeBlock are logged and monitored by the CoinDesk Indices security team.

Subservice Organizations Monitoring

AWS status is monitored using their public-facing Service Health Dashboard at https://status.aws.amazon.com/. The vendor, and associated SOC 2 report, is reviewed on an annual basis.

CoinDesk Indices periodically audits and investigates the systems managed by CoinDesk, Inc. to ensure access is provisioned correctly and system controls meet a defined standard.

Sprint reviews at the end of each sprint provides insight into what is done and what is left. Continuous testing of the application provides the quality of the application.

Control Environment

Governance

CoinDesk Indices has established an Employee Handbook and Code of Conduct which outlines the organization's commitment to integrity and ethical values and their expectations regarding employee conduct. All newly hired employees must read the Handbook, Code of Conduct, and provide a signed acknowledgement.

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Human Resources

Background checks are performed for employees who have access to corporate resources or customer data as a contingency of employment and to ensure there are no conflicts with CoinDesk Indices values. Further, all new CoinDesk Indices employees are required to sign a Confidentiality & Rights Agreement as well as sign the Acceptable Use of Technology Policy and data protection policies.

Performance reviews are conducted on an annual basis by the employee's supervisor and results are submitted to Human Resources. Employee performance and adherence with Corporate Values and Ethics goals are covered.

Roles and Responsibilities

Job descriptions are documented that outline roles and responsibilities for all active positions. Further, CoinDesk Indices has an organizational chart formally documenting the chain of command and authorities.

Risk Assessment

CoinDesk Indices' designated Information Security Committee member performs a risk assessment annually using an industry-standard risk management framework which includes:

- a. Evaluating the effect of regulatory, technological, and environmental changes on CoinDesk Indices system security.
- b. Involving appropriate levels of management.
- c. Analyzing risks associated with the threats.
- d. Identifying threats to operations, including security threats.
- e. Identifying threats to operations, including threats from vendors, business partners, and other parties.
- f. Considering changes that could significantly impact CoinDesk Indices system of internal control.
- g. Determining a risk mitigation strategy and remediation tracking mechanism.
- h. Communicating annual risk assessment results and risk mitigation strategy to the Information Security Committee.

New vendors and business partners are required to go through an information security assessment. Depending on the type of services and access to confidential information, an annual risk assessment is conducted by the Information Security Committee. Assessment results and approval are documented in CoinDesk Indices vendor management tool.

Risk Mitigation

CoinDesk Indices has a formal remediation tracking system to ensure IT & Security issues detected from internal processes or external audits/reviews are centrally recorded, responded to, and tracked to resolution.

Trust Services Criteria and Related Control Activities

Management selects, implements and manages control activities through Policies and Procedures. Refer to the above Procedures section for the Company's relevant control activities.

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Trust Services Criteria Not Applicable to the In-Scope System

CC6.4 is not applicable to the System as all aspects are hosted in the Amazon Web Services System and CoinDesk Indices personnel work remotely. As such the below criteria was not assessed:

CC6.4: The entity restricts physical access to facilities and protected information assets (for example, data center facilities, back-up media storage, and other sensitive locations) to authorized personnel to meet the entity's objectives.

Information and Communication

Internal Communications

Internal communications to employees and staff are managed through two different channels, Slack and Confluence. Updates impacting the System and associated applications are provided via predefined Slack channels. In addition, policies, procedures, and other company resources are made available to employees and staff within a dedicated Confluence page.

External Communications

Defined standards have been established for communicating incidents, failures, concerns, and other matters with external parties. In the event of an incident, system failure, or control change that affects external clients or stakeholders' communication is sent out to explain the problem and when they can expect a resolution. Further, Master License Agreements are established with external parties to provide the responsibilities, boundaries, confidentiality, and service levels to set expectations.

Monitoring Activities

Ongoing Monitoring

An inventory of key security controls implemented is formally maintained. On an annual basis, the Information Security Committee and control owners review, approve and if needed, modify the control wording. Controls are reviewed throughout the year in accordance with a defined internal audit schedule that is approved by the Information Security Committee. The audit program is broken down into quarterly audits with dedicated testing requirements. Findings noted via the audit cycle are documented and tracked to resolution.

All employees are required to participate in an annual and monthly Security and Privacy training. Additionally, employees and contractors are required to review and acknowledge corporate policies and procedures upon hire and on an annual basis.

The Security and Compliance team and Site Reliability Engineers are automatically alerted anytime deployment to production is performed. If deployment activity was not expected, they investigate the change to determine it was authorized.

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Complementary Subservice Organization Controls

The Company relies on following services and complementary controls at subservice organization as part of its controls in meeting the following trust services criteria:

TSP Ref #	Applicable Subservice Organization	Complementary Subservice Organization Controls
CC6.1, CC6.4, CC7.1, CC7.2, CC8.1, A1.1, A1.2	AWS	AWS is responsible for controls related to host infrastructure and physical security of its data centers. This area satisfies logical access, physical access, and changes to infrastructure.
CC6.1-CC6.3	TradeBlock, Corp.	TradeBlock is responsible for logical access controls related access to CDI's production environment.
CC1.1, CC1.4, CC1.5	CoinDesk, Inc.	CoinDesk, Inc. is responsible for control environment controls related to the human resources functions.

Section 4

Trust Services Category, Criteria, Related Controls and Tests of Controls

Section 4 - Trust Services Category, Criteria, Related Controls and Tests of Controls

TESTS OF OPERATING EFFECTIVENESS

Our tests of the operational effectiveness of controls were designed to cover a representative number of transactions throughout the period of August 1, 2022 to December 31, 2022, for each of the controls listed in this section, which are designed to meet the applicable trust services criteria. In selecting particular tests for the operational effectiveness of controls, we considered (a) the nature of the items being tested, (b) the types of available evidential matter, (c) the nature of the audit objectives to be achieved, (d) the assessed level of control risk, and (e) the expected efficiency and effectiveness of the test.

Test	Description	
Inquiry Made inquiries of appropriate personnel and corroborated responses with management.		
Observation	Observed application or existence of specific controls.	
Inspection Inspected documents and reports indicating performance of the control.		

PROCEDURES FOR ASSESSING COMPLETENESS & ACCURACY OF INFORMATION PROVIDED BY THE ENTITY (IPE)

For tests of controls requiring the use of IPE (e.g., controls requiring system-generated populations for sample based testing), we perform a combination of the following procedures where possible based on the nature of the IPE to address the completeness, accuracy, and data integrity of the data or reports used: (1) inspect the source of the IPE, (2) inspect the query, script, or parameters used to generate the IPE, (3) tie data between the IPE and the source, and/or (4) inspect the IPE for anomalous gaps in sequence or timing to determine the data is complete, accurate, and maintains its integrity. In addition to the above procedures, for tests of controls requiring management's use of IPE in the execution of the controls (e.g., periodic reviews of user access listings), we inspect management's procedures to assess the validity of the IPE source and the completeness, accuracy, and integrity of the data or reports.

TSP Ref #	Trust Services Criteria	Management Control Activity Reference		
	SECURITY (COMMON CRITERIA)			
CC1.1 - Control Environment	COSO Principle 1: The entity demonstrates a commitment to integrity and ethical values.	CDI-1.2, CDI-1.5		
CC1.2 - Control Environment	COSO Principle 2: The board of directors demonstrates independence from management and exercises oversight of the development and performance of internal control.	CDI-1.2, CDI-1.3		
CC1.3 - Control Environment	COSO Principle 3: Management establishes, with board oversight, structures, reporting lines, and appropriate authorities and responsibilities in the pursuit of objectives.	CDI-1.1, CDI-1.2 CDI-1.3, CDI-1.4		
CC1.4 - Control Environment	COSO Principle 4: The entity demonstrates a commitment to attract, develop, and retain competent individuals in alignment with objectives.	CDI-1.5, CDI-1.7, CDI-1.8		
CC1.5 - Control Environment	COSO Principle 5: The entity holds individuals accountable for their internal control responsibilities in the pursuit of objectives.	CDI-1.2, CDI-1.7		
CC2.1 - Communication and Information	COSO Principle 13: The entity obtains or generates and uses relevant, quality information to support the functioning of internal control.	CDI-1.3, CDI-1.6		
CC2.2 - Communication and Information	COSO Principle 14: The entity internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of internal control.	CDI-1.1, CDI-1.2, CDI-1.5, CDI-1.6		
CC2.3 - Communication and Information	COSO Principle 15: The entity communicates with external parties regarding matters affecting the functioning of internal control.	CDI-1.12, CDI-1.13		
CC3.1 - Risk Assessment - Operations Objectives	COSO Principle 6: The entity specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.	CDI-1.1, CDI-1.2, CDI-1.3, CDI-1.5, CDI 1.6, CDI-1.9, CDI-1.10, CDI-1.13		

TSP Ref #	Trust Services Criteria	Management Control Activity Reference
CC3.2 - Risk Assessment	COSO Principle 7: The entity identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.	CDI-1.2, CDI-1.8, CDI-1.9, CDI-1.10, CDI-1.11, CDI-3.2, CDI-3.5, CDI-3.7, CDI-3.8, CDI-6.2.
CC3.3 - Fraud Risk Assessment	COSO Principle 8: The entity considers the potential for fraud in assessing risks to the achievement of objectives.	CDI-1.2, CDI-1.5, CDI-1.8, CDI-1.9, CDI-1.10
CC3.4 - Assessing Changes in Risk	COSO Principle 9: The entity identifies and assesses changes that could significantly impact the system of internal control.	CDI-1.2, CDI-1.9, CDI- 1.10, CDI-1.11, CDI-1.13, CDI-3.2, CDI-6.5
CC4.1 - Monitoring Activities - Periodic Evaluations	COSO Principle 16: The entity selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.	CDI-1.9, CDI-3.2
CC4.2 - Monitoring Activities - Exception Monitoring	COSO Principle 17: The entity evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate.	CDI-1.9, CDI-3.2
CC5.1 - Control Activities - Risk Mitigation	COSO Principle 10: The entity selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.	CDI -1.2, CDI-1.3, CDI-1.5, CDI-1.9, CDI- 1.10
CC5.2 - Control Activities - IT General Controls	COSO Principle 11: The entity also selects and develops general control activities over technology to support the achievement of objectives.	CDI-1.3, CDI-1.5
CC5.3 - Control Activities - Polices / Procedures	COSO Principle 12: The entity deploys control activities through policies that establish what is expected and in procedures that put policies into action.	CDI- 1.2, CDI-1.3, CDI-1.4, CDI-1.5, CDI-1.9, CDI-1.12
CC6.1 - Logical and Physical Access Controls	The entity implements logical access security software, infrastructure, and architectures over protected information assets to protect them from security events to meet the entity's objectives.	CDI-2.3, CDI-2.4, CDI-2.6, CDI-3.4, CDI-5.5

TSP Ref #	Trust Services Criteria	Management Control Activity Reference
CC6.2 - Logical and Physical Access Controls - User Provisioning	Prior to issuing system credentials and granting system access, the entity registers and authorizes new internal and external users whose access is administered by the entity. For those users whose access is administered by the entity, user system credentials are removed when user access is no longer authorized.	CDI-2.1, CDI-2.2, CDI-2.4, CDI-2.5, CDI 2.6
CC6.3 - Logical and Physical Access Controls - User Provisioning	The entity authorizes, modifies, or removes access to data, software, functions, and other protected information assets based on roles, responsibilities, or the system design and changes, giving consideration to the concepts of least privilege and segregation of duties, to meet the entity's objectives.	CDI-2.1, CDI-2.2, CDI-2.4, CDI-2.5, CDI-2.6
CC6.4 - Logical and Physical Access Controls - Physical Access	The entity restricts physical access to facilities and protected information assets (for example, data center facilities, back-up media storage, and other sensitive locations) to authorized personnel to meet the entity's objectives.	All information systems are hosted by third parties and those third parties are responsible for physical access to the data center facilities
CC6.5 - Logical and Physical Access Controls - Data Destruction	The entity discontinues logical and physical protections over physical assets only after the ability to read or recover data and software from those assets has been diminished and is no longer required to meet the entity's objectives.	CDI-1.3, CDI-2.2, CDI-7.1 CDI-7.2
CC6.6 - Logical and Physical Access Controls - User Authentication	The entity implements logical access security measures to protect against threats from sources outside its system boundaries.	CDI-2.4, CDI-3.1
CC6.7 - Logical and Physical Access Controls - Data In- Transit	The entity restricts the transmission, movement, and removal of information to authorized internal and external users and processes, and protects it during transmission, movement, or removal to meet the entity's objectives.	CDI-2.1, CDI-2.2, CDI-3.1, CDI-3.3, CDI -3.6, CDI-4.2
CC6.8 - Logical and Physical Access Controls - Unauthorized / Malicious Software	The entity implements controls to prevent or detect and act upon the introduction of unauthorized or malicious software to meet the entity's objectives.	CDI-3.2, CDI-3.5, CDI-3.7, CDI – 5.4

TSP Ref #	Trust Services Criteria	Management Control Activity Reference
CC7.1 - System Operations - Configuration Standards	To meet its objectives, the entity uses detection and monitoring procedures to identify (1) changes to configurations that result in the introduction of new vulnerabilities, and (2) susceptibilities to newly discovered vulnerabilities.	CDI-3.2, CDI-3.3, CDI-3.5, CDI-5.4
CC7.2 - System Operations - Security Events	The entity monitors system components and the operation of those components for anomalies that are indicative of malicious acts, natural disasters, and errors affecting the entity's ability to meet its objectives; anomalies are analyzed to determine whether they represent security events.	CDI-1.3, CDI-3.5
CC7.3 - System Operations - Security Incidents	The entity evaluates security events to determine whether they could or have resulted in a failure of the entity to meet its objectives (security incidents) and, if so, takes actions to prevent or address such failures.	CDI-3.5, CDI-3.8
CC7.4 - System Operations - Incident Response	The entity responds to identified security incidents by executing a defined incident response program to understand, contain, remediate, and communicate security incidents, as appropriate.	CDI-3.8, CDI-1.12, CDI-1.13, CDI-3.8
CC7.5 - System Operations - Incident Recovery	The entity identifies, develops, and implements activities to recover from identified security incidents.	CDI-1.13, CDI-3.8, CDI-6.4
CC8.1 - Change Management	The entity authorizes, designs, develops or acquires, configures, documents, tests, approves, and implements changes to infrastructure, data, software, and procedures to meet its objectives.	CDI-5.1, CDI-5.2, CDI-5.3, CDI-5.4, CDI-5.5
CC9.1 - Risk Mitigation	The entity identifies, selects, and develops risk mitigation activities for risks arising from potential business disruptions.	CDI-1.11, CDI-1.13
CC9.2 - Third Party Risk Management	The entity assesses and manages risks associated with vendors and business partners.	CDI-1.11, CDI-1.13

TSP Ref #	Trust Services Criteria	Management Control Activity Reference		
	AVAILABILITY			
A1.1 - Data Capacity Planning / Monitoring	The entity maintains, monitors, and evaluates current processing capacity and use of system components (infrastructure, data, and software) to manage capacity demand and to enable the implementation of additional capacity to help meet its objectives.	CDI-4.1, CDI-6.2		
A1.2 - Environmental Control / Back-ups	The entity authorizes, designs, develops or acquires, implements, operates, approves, maintains, and monitors environmental protections, software, data back-up processes, and recovery infrastructure to meet its objectives.	CDI-6.1, CDI-6.3		
A1.3 - Data Recovery	The entity tests recovery plan procedures supporting system recovery to meet its objectives.	CDI-6.4, CDI-6.5		
	CONFIDENTIALITY			
C1.1 - Identify / Maintain Confidential Information	The entity identifies and maintains confidential information to meet the entity's objectives related to confidentiality.	CDI-1.3, CDI-1.6, CDI-1.13, CDI-7.1		
C1.2 - Data Disposal	The entity disposes of confidential information to meet the entity's objectives related to confidentiality.	CDI-1.3, CDI-1.5, CDI-1.8, CDI-2.1, CDI-7.1, CDI-7.2		

Service Organization Control Activities:

Below represents the key control activities identified by CoinDesk Indices to meet the Security, Availability and Confidentiality Trust Services Criteria, and the related Auditor testing procedures and results.

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
1.1 CoinDesk Indices has defined structures, reporting lines with assigned responsibilities to appropriately meet requirements relevant to security, availability, and confidentiality.	Inspected the CDI organizational chart and a sample of employee job descriptions to determine that CoinDesk Indices has defined structures, reporting lines with assigned responsibilities to appropriately meet requirements relevant to security, availability, and confidentiality.	No Exceptions Noted
1.2 CoinDesk Indices has an Information Security Committee that exercises oversight of the development and performance of internal controls. The Committee includes at least one member who is not involved in the performance of controls.	Inspected the Information Security Committee Charter and a sample of committee meeting minutes to determine that CoinDesk Indices has an Information Security Committee that exercises oversight of the development and performance of internal controls. Inspected the listing of members of the Information Security Committee charter and CDI Organizational chart to determine that the Committee includes at least one member who is not involved in the performance of controls.	No Exceptions Noted
1.3 CoinDesk Indices maintains documented policies and procedures that provide oversight and guidance as it relates to Information Technology and Security within the organization.	Inspected Corporate IT and Security policies and procedures to determine that CoinDesk Indices maintains documented policies and procedures that provide oversight and guidance as it relates to Information Technology and Security within the organization.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
1.4 Corporate policies are reviewed and approved on an annual basis by the Information Security Committee (ISC)	Inspected the ISC approval on policies and procedures to determine that Corporate policies are reviewed and approved on an annual basis by the Information Security Committee (ISC).	The operating effectiveness of the control related to the annual Corporate policies review could not be tested because the review occurs outside of the audit period.
	For a sample of new employees and contractors, inspected their initial sign off of corporate policies and procedures to determine employees and contractors are required to review and acknowledge corporate policies and procedures upon hire.	
1.5 Employees and contractors are required to review and acknowledge corporate policies and procedures upon hire and on an annual basis. Policies and procedures are made available to all employees across the organizations.	For a sample of existing employees and contractors, inspected their annual sign off of corporate policies and procedures to determine employees and contractors are required to review and acknowledge corporate policies and procedures on an annual basis.	No Exceptions Noted
	Observed CDI's confluence page to determine that policies and procedures are made available to all employees across the organizations.	
1.6 CoinDesk Indices conducts periodic training to educate and promote security awareness and requirements that are in alignment with corporate policies.	For a sample of security awareness events, inspected the content and audience to determine that CoinDesk Indices conducts periodic training to educate and promote security awareness and requirements that are in alignment with corporate policies.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
1.7 CoinDesk Indices performs an annual employee evaluation of staffing and assignments. Employees receive feedback from management on areas of strength and growth opportunities.	For a sample of employees, inspected their completed annual employee evaluation and sign off from their supervisor to determine that CoinDesk Indices performs an annual employee evaluation of staffing and assignments and employees receive feedback from management on areas of strength and growth opportunities.	No Exceptions Noted
1.8 CoinDesk Indices Employees who have access to corporate resources or customer data will have a background check performed according to the corporate standards.	For a sample of new employees, inspected their completed background check to determine CoinDesk Indices Employees who have access to corporate resources or customer data will have a background check performed according to the corporate standards.	No Exceptions Noted
1.9 CoinDesk Indices maintains a formal audit program that includes internal and external assessments which validate the implementation and operating effectiveness of corporate and IT controls.	Inspected the approved the most recent audit plan to determine that CoinDesk Indices maintains a formal audit program that includes internal and external assessments which validate the implementation and operating effectiveness of corporate and IT controls.	No Exceptions Noted
1.10 CoinDesk Indices maintains a documented risk management program to consider the impact of internal and external factors to the organization.	Inspected the most recent risk assessment results and communication to ISC to determine that CoinDesk Indices maintains a documented risk management program to consider the impact of internal and external factors to the organization.	The operating effectiveness of the control related to the annual risk assessment could not be tested because the assessment occurs outside of the audit period.

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
1.11 CoinDesk Indices assesses third-party vendor risks prior to entering into an agreement and on an annual basis for critical or high risk vendors.	For a sample of new critical or high risk third-party vendors, inspected the completed risk review form and executed contract to determine CoinDesk Indices assesses third-party vendor risks prior to entering into an agreement for critical or high risk vendors. For a sample of existing critical or high risk third-party vendors, inspected the completed risk review form to determine CoinDesk Indices assesses third-party vendor risks on an annual basis for critical or high risk vendors.	No Exceptions Noted
1.12 CoinDesk Indices has established standards for communicating incidents, failures, concerns, and other matters with internal and external parties.	Inspected the Incident Response plan to determine that CoinDesk Indices has established standards for communicating incidents, failures, concerns, and other matters with internal and external parties.	No Exceptions Noted
1.13 Master License Agreements are established with external parties to provide the responsibilities, boundaries, confidentiality, and service levels to set expectations.	For a sample of new external parties, inspected their documented responsibilities and service levels in a template Master License agreement to determine that Master License Agreements are established with external parties to provide the responsibilities, boundaries, confidentiality, and service levels to set expectations.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
2.1 Prior to issuing system credentials and granting system access, CoinDesk Indices documents and authorizes new users whose access is administered.	Inspected the CDI Provisioning Procedures to determine that prior to issuing system credentials and granting system access, CoinDesk Indices documents and authorizes new users whose access is administered. For a sample of new employees, inspected documented authorization to determine that prior to issuing system credentials and granting system access, CoinDesk Indices documents and authorizes new users whose access is administered.	No Exceptions Noted
2.2 User system credentials are revoked in a timely manner upon notification of termination.	Inspected the CDI Provisioning Procedures to determine that user system credentials are revoked in a timely manner upon notification of termination. For a sample of terminated employees, inspected termination documentation and the user's system account status to determine that user system credentials are revoked in a timely manner upon notification of termination.	No Exceptions Noted
2.3 Password configuration settings are managed in compliance with the Password Standards Policy.	Inspected AWS management console and corporate applications password complexity requirements and Password Standards policy to determine that password configuration settings are managed in compliance with the Password Standards Policy.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
2.4 Multi-factor authentication is enforced for corporate applications and remotely accessing Amazon Web Services.	Inspected the multi-factor authentication settings for AWS management console and corporate applications to determine that multi-factor authentication is enforced for corporate applications and remotely accessing Amazon Web Services.	No Exceptions Noted
2.5 Users access privileges are reviewed semi- by the Information Security Committee (ISC).	Inspected the most recent user access review to determine that users access privileges are reviewed semi-annually by the Information Security Committee (ISC).	The semi-annual user access review was not reviewed by the ISC during the audit period
2.6 Administrative privileges to systems are limited to only appropriate and documented personnel.	Inspected user access listing for in-scope systems to determine that administrative privileges to systems are limited to only appropriate and documented personnel.	No Exceptions Noted
3.1 Network policy rules are configured for externally facing assets to only allow specific services to specific destinations and all other services are not permitted.	Inspected the production firewall's network policy rules to determine that they are configured for externally facing assets to only allow specific services to specific destinations and all other services are not permitted.	No Exceptions Noted
3.2 Vulnerability assessments are conducted on a quarterly basis to identify security related issues or misconfigurations. Issues identified are reviewed by CoinDesk Indices personnel and tracked to resolution based on their assigned risk rating.	Inspected the vulnerability scanning tool's schedule and targeted systems to determine that vulnerability assessments are conducted on a quarterly basis to identify security related issues or misconfigurations. Issues d by CoinDesk Indices personnel and	

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
3.3 CoinDesk Indices maintains documented security standards for endpoints and systems that support the CoinDesk Indices products.	Inspected the endpoint protection polices applied to endpoints to determine that security standards are defined for endpoints. For a sample of employees, inspected their laptop's endpoint security settings to determine that the endpoint is protected by the endpoint protection solution. For a sample of production servers, inspected the server's configurations to determine that server	For 1 out of 5 sampled employees, their device did not have endpoint protection installed
3.4 Cryptographic keys are created and managed within AWS Key Management Service. Keys are rotated on an annual basis.	Inspected CDI's AWS Key Management Service configurations to determine that cryptographic keys are created and managed within AWS Key Management Service and that keys are rotated on an annually basis.	No Exceptions Noted
3.5 System logs are collected and analyzed by the Security team on a biweekly basis for possible or actual attempts to breach the network.	For a sample of two weeks segments, inspected the completed log review documentation to determine that system logs are collected and analyzed by the Security team on a biweekly basis for possible or actual attempts to breach the network.	No Exceptions Noted
3.6 A secured connection is utilized for external devices connecting to the AWS cloud environment.	Inspected VPN configurations to determine that a secured connection is utilized for external devices connecting to the AWS environment. Observed a user connect to the AWS cloud environment to determine that a secured connection is utilized for external devices.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
3.7 Anti-virus and malware protection is enforced on user workstations that connect to CoinDesk Indices assets. The software performs a complete scan on a daily basis.	Inspected the anti-virus and malware protection technical policies and configurations to determine that anti-virus and malware protection is enforced on user workstations and the software performs a complete scan on a daily basis. For a sample of employees that connect to CoinDesk indices assets, inspected the anti-virus and malware protection software management console to determine that the employee's laptop is managed by the tool.	For 1 out of 4 sampled employees, their device did not have anti-virus and malware protection enabled
3.8 Incidents are logged within a ticketing system, assigned a rating, and tracked to resolution.	For a sample of incidents, inspected documentation and tracking to determine that incidents are logged within a ticketing system, assigned a rating, and tracked to resolution.	No Exceptions Noted
4.1 Baseline rate limits have been defined on load balancers.	Inspected the load balancer configuration file to determine that baseline rate limits have been defined on load balancers.	No Exceptions Noted
4.2 CoinDesk Indices employs a combination of TLS and HTTP (HTTPS) for the security of data transferred between CoinDesk Indices systems and client computers.	Inspected the security protocol configurations for the websocket connector client to determine that CoinDesk Indices employs a combination of TLS and HTTP (HTTPS) for the security of data transferred between CoinDesk Indices systems and client computers.	No Exceptions Noted
5.1 CoinDesk Indices has a documented and approved change management policy that govern changes made to the production environment.	Inspected the approved change management procedure to determine that CoinDesk Indices has documented and approved change management standards that govern changes made to the production environment.	No Exceptions Noted
5.2 Details related to a standard change are documented and retained.	For a sample of standard changes, inspected the change to determine that details related to a standard change are documented and retained.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
5.3 Standard changes to the production environment are tested according to defined standards prior to migration.	For a sample of standard changes, inspected evidence of testing and the Change Management Policy to determine that standard changes to the production environment are tested according to defined standards prior to migration.	No Exceptions Noted
5.4 Standard changes are reviewed and approved prior to migration to the production environment.	For a sample of standard changes, inspected evidence of review and approval to determine that standard changes are reviewed and approved prior to migration to the production environment.	No Exceptions Noted
5.5 CoinDesk Indices maintains separate production and development environments.	Inspected network configurations to determine that CoinDesk Indices maintains separate production and development environments.	No Exceptions Noted
6.1 Backups of critical AWS CoinDesk Indices systems are maintained and monitored for successful replication across multiple devices.	Inspected the automated backup schedule to determine that backups of critical CoinDesk Indices systems are maintained and replicated across multiple devices. For a sample of failed backups, inspected monitoring alerts, backup statuses and/or investigation tickets to determine that backup failures are monitored.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
6.2 An enterprise monitoring system continuously monitors systems for capacity and usage of production systems. Defined tolerances are established and managed through CDI's change management process. Triggered alerts are monitored, managed and resolved by the operations team.	For a sample of production systems, inspected the established monitoring alert thresholds to determine that defined thresholds are established and an enterprise monitoring system continuously monitors systems for capacity and usage of production systems. Inspected the change management ticketing system to determine that changes to defined tolerances are managed through CDI's change management process. For a sample of triggered alerts, inspected the alert documentation to determine triggered alerts are monitored, managed and resolved by the operations team.	No Exceptions Noted
6.3 Critical system components are replicated across multiple Availability Zones.	For a sample of critical system components, inspected its' AWS replication configurations to determine critical system components are replicated across multiple Availability Zones.	No Exceptions Noted
6.4 Data backup restoration is validated and tested on a monthly basis.	For a sample of months, inspected completed documentation for monthly data backup restoration tests to determine that data backup restoration is validated and tested on a monthly basis.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
6.5 Business Continuity and Disaster Recovery plans are documented and tested on an annual basis in accordance with CoinDesk Indices' system availability standards.	Inspected the Business Continuity and Disaster Recovery plans to determine that they are documented. Inspected the completed annual Business Continuity and Disaster Recovery test and results to determine that Business Continuity and Disaster Recovery plans are tested on an annual basis in accordance with CoinDesk Indices' system availability standards.	No Exceptions Noted
7.1 Data is stored based on confidentiality requirements and access to that data follows defined user provisioning procedures.	Inspected CoinDesk Indices Data Classification Policy to determine that data is stored based on confidentiality requirements and access to that data follows defined user provisioning procedures. For a sample of new employees, inspected documented authorization to determine that prior to issuing system credentials and granting system access, CoinDesk Indices documents and authorizes new users whose access is administered.	No Exceptions Noted

CoinDesk Indices, Inc. Controls	Test Procedures Performed by MHM	Results of Tests
7.2 Standards have been documented for the disposal of confidential data and assets containing confidential data. Evidence of the disposal or destruction is documented and retained. For example, the disposal of the disposal or destruction is documented and retained. For example, the disposal of the disposal of the disposal or destruction is documented and retained.	Inspected the Data Classification Policy and the Data Retention policy to determine that standards have been documented for the disposal of confidential data and assets containing confidential data. Observed the existence of decommissioned equipment being stored in a secured locked room to determine that decommissioned equipment is stored in a secured locked room where only appropriate personnel have access to the room. For a sample of events that require the destruction of confidential data and assets, inspected documentation to determine that evidence of the disposal or destruction is documented and	No Exceptions Noted

Section 5

Other Information Provided by CoinDesk Indices, Inc.

Section 5 – Other Information Provided by CoinDesk Indices, Inc.

The information in section 5 is presented by management of CoinDesk Indices, Inc. to respond to identified exceptions and is not a part of CoinDesk Indices, Inc.'s description of its Digital Currency Index Platform system during the period August 1, 2022 to December 31, 2022. Management's responses to identified exceptions has not been subjected to the procedures applied in the examination and, accordingly, we express no opinion on it. However, we noted that information in section 5 is materially consistent with CoinDesk Indices, Inc.'s description of its Digital Currency Index Platform system.

CoinDesk Indices, Inc. Control #	CoinDesk Indices, Inc. Internal Control	Results of Test	Management Response
CDI-2.5	Users access privileges are reviewed semi- annually by the Information Security Committee (ISC).	The semi-annual user access review was not reviewed by the ISC during the audit period.	CoinDesk Indices Management has accepted and noted that the user access review was not confirmed during the audit period by the Information Security Committee (ISC), which met in early January 2023 after the end of the audit period. CoinDesk Indices 2023 internal audit plan includes a scheduled semi-annual user access review of defined applications and systems which will be presented, reviewed, and approved by the ISC in Q1 of 2023.
CDI-3.3	CoinDesk Indices maintains documented security standards for endpoints and systems that support the CoinDesk Indices products.	For 1 out of 5 sampled employees, their device did not have endpoint protection installed.	CoinDesk Indices Management has accepted and noted that 1 out of 5 employees sampled did not have the endpoint protection installed on their assigned laptop. The CoinDesk Indices 2023 internal audit plan includes a scheduled review of company-owned laptops to ensure devices have the endpoint protection installed and are appropriately configured. Identified exceptions from internal or external audits will be remediated and tracked to completion.

CoinDesk Indices, Inc. Control #	CoinDesk Indices, Inc. Internal Control	Results of Test	Management Response
CDI-3.7	Anti-virus and malware protection is enforced on user workstations that connect to CoinDesk Indices assets. The software performs a complete scan on a daily basis.	For 1 out of 4 sampled employees, their device did not have anti-virus and malware protection enabled.	CoinDesk Indices Management has accepted and noted that 1 out of 5 employees sampled did not have the antivirus and malware protection enabled on their assigned laptop. The CoinDesk Indices 2023 audit plan includes a scheduled review of company-owned laptops to ensure devices anti-virus and malware protection are enabled and are appropriately configured. Identified exceptions from internal or external audits will be remediated and tracked to completion.