#### NSE Indices Limited ("NSE Indices") Management Statement of Adherence with International Organization of Securities Commissions ("IOSCO") Principles for Financial Benchmarks

#### **Notice**

This financial benchmark report dated 30<sup>th</sup> September 2022 ("Report") has been prepared for the sole use and benefit of NSE Indices Ltd. ("NSE Indices") pursuant to an engagement letter entered into between Deloitte Haskins & Sells LLP ("DHS") and NSE Indices.

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(vi) It was not prepared for providing any services to any third party. The description of the relevant activities on the control processes defined in relation to governance, quality and accountability activities as date 30<sup>th</sup> September 2022 and thus DHS's assurance report is based on historical information. Any projection of such information or DHS's opinion thereon to future periods is subject to the risk that changes may occur after the Report is issued and the description of controls may no longer accurately portray the control processes.

For these reasons, such projection of information to future periods would be inappropriate;

(vii) DHS will be entitled to the benefit of and to enforce these terms; and

(viii) These terms and any dispute with DHS arising from them, whether contractual or noncontractual, are subject to Indian laws and the exclusive jurisdiction of courts in Mumbai, India.

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## **1.About NSE Indices Limited**

NSE Indices Limited (formerly known as India Index Services & Products Limited), or NSE Indices, is a subsidiary of National Stock Exchange (NSE) of India and provides a variety of indices and index related services for the capital markets. NSEI owns and manages a portfolio of over 300 indices under the NIFTY brand of NSE, including NIFTY 50. NIFTY indices are used as benchmarks for products traded on NSE.

NSE Indices equity Indices comprises broad-based benchmark indices, sectoral indices, strategy indices, thematic indices and customized indices. NSE Indices also maintains fixed income indices based on Government of India securities, corporate bonds, money market instruments and hybrid indices. Many investment products based on NSE Indices have been developed within India and abroad. These include index-based derivatives traded on NSE, Singapore Exchange Ltd. (SGX), Chicago Mercantile Exchange Inc. (CME), Osaka Exchange Inc. (OSE), Taiwan Futures Exchange (TAIFEX) and a number of index funds and exchange traded funds. The flagship 'NIFTY 50' index is widely tracked and traded as the benchmark for Indian Capital Markets.

#### **Products & Services**

NSE Indices offers a wide range of products and services which are key support tools for the equity markets. NSE Indices provide reliable, accurate and valuable data on indices and index related services to cater to the needs of various segments of users. NSE Indices specialty is indices based on Indian equity markets, which may be used for benchmarking, trading or research. Use of NSE Indices data or name or indices requires a license or subscription.

#### Financial Products on NSE Indices

NSE Indices maintains, develops, compiles and disseminates entire range of equity indices. Indices offered by NSE Indices are utilized by various equity market participants such as fund managers, corporates, brokers etc. for tracking the markets, understanding the performance of a company/portfolio vis-a-vis the market, trading derivative products and also for development of index-based funds by mutual funds.

#### Data subscription

NSE Indices provides index data on a periodic basis on subscription basis. Data includes Index values, index constituents etc.

#### Customized Indices

NSE Indices also undertakes development & maintenance of customized indices for clients for tracking the performance of the client portfolio vis-à-vis objectively defined benchmarks, or for benchmarking NAV performance to customized indices.

2. Management's Statement of Adherence to IOSCO Compliance



## MANAGEMENT REPORT ON COMPLIANCE

January 9, 2023

We, as members of management of NSE Indices Limited, (the Company) are responsible for complying with the specified requirements of Principles for Financial Benchmarks issued by the International Organization of Securities Commission (IOSCO) (the "Criteria"), as of September 30, 2022.

We also are responsible for establishing and maintaining effective internal control over compliance with the requirements of the Criteria. We have performed an evaluation of the Company's compliance with the specified requirements of the Criteria, including those described below, as of September 30, 2022. Based on this evaluation, we assert that as of September 30, 2022, the Company complied with the following specified requirements of the Criteria.

List of compliance requirements (Principles for Financial Benchmarks):

- Principle 1: Overall Responsibility of the Administrator
- Principle 2: Oversight of Third Parties
- Principle 3: Conflicts of Interest for Administrators
- Principle 4: Control Framework for Administrators
- Principle 5: Internal Oversight
- Principle 6: Benchmark Design
- Principle 7: Data Sufficiency
- Principle 8: Hierarchy of Data Inputs
- Principle 9: Transparency of Benchmark Determinations
- Principle 10: Periodic Review
- Principle 11: Content of the Methodology
- Principle 12: Changes in the Methodology
- Principle 13: Transition
- Principle 14: Submitter Code of Conduct
- Principle 15: Internal Controls over Data Collection
- Principle 16: Complaints Procedures
- Principle 17: Audits
- Principle 18: Audit Trail
- Principle 19: Co-operation with Regulatory Authorities

In this report, the Company sets out a description of how the underlying controls address each of the Principles for Financial Benchmarks (IOSCO Principles), operated as of September 30, 2022, and we confirm that:

- (a) The report fairly describes such underlying controls which were in place as of September 30, 2022; and
- (b) The procedures are suitably designed such that the intent of the applicable IOSCO Principles is complied with.

Mukesh Agarwal Managing Director



## Deloitte Haskins & Sells LLP

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# 3. Independent Chartered Accountant's Limited Assurance Report

### TO THE BOARD OF DIRECTORS OF NSE INDICES LIMITED

We have reviewed NSE Indices Ltd. ("NSE Indices") response to the principles for Financial Benchmarks published by the International Organization of Securities Commissions ("IOSCO Principles") described in the accompanying statement of NSE Indices assessment described under "Principles and Statements" in Section 4 of this report as on September 30<sup>th</sup>, 2022.

#### **NSE Indices' Responsibilities**

NSE Indices' management is responsible for ensuring that the Company designs, implements and monitors compliance with policies and procedures that adhere with the IOSCO Principles. NSE Indices has provided the accompanying statement of its assessment titled "Management's Statement of Adherence to IOSCO", set out in Section 2 and supported by detailed responses described under "Principles and Statements" in Section 4 of this report duly initialled by us for identification purpose only.

#### **Independent Chartered Accountant's Responsibilities**

Our responsibility is to undertake a limited assurance engagement and review the responses provided by NSE Indices on its assessment described under "Principles and Statements" in Section 4 of this report as on September 30<sup>th</sup>, 2022 in accordance with the IOSCO Principles. We report to you whether, based on the results of our work (which is further described in Section 4 of this report) that NSE Indices' responses in Section 4 is free of material misstatement. We conducted our review in accordance with International Standard on Assurance Engagements (ISAE) 3000 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information", issued by the International Auditing and Assurance Standards Board. The Standard requires such limited assurance engagements, to obtain appropriate evidence as we consider sufficient to enable us to obtain moderate assurance as to whether Principles and Statements is free of material misstatement, basis our adopted procedures, and the responses as provided under principles and Statements in relation to governance, quality and accountability activities placed in operation for NSE Indices' as on September 30th, 2022, set out in Section 4 of this report. Our review is limited to inquiries of NSE Indices' personnel and review of procedures applied for IOSCO Principles and thus provides less assurance than an audit. We have not performed an audit and, accordingly, we do not express an audit opinion. Our procedures, described under Section 4, included examination of evidence, on a test basis to assess NSE Indices' Principles and Statements responses to the IOSCO principles. Our procedures were not sufficient to enable us to conclude on the design effectiveness or operation of policies or controls in place to address the Principles and, accordingly, we do not express an opinion thereon.

#### **Inherent Limitations**

Because of their nature and inherent limitations, controls and control procedure may not always operate effectively to meet the IOSCO Principles criteria. Also, the projection to the future of any evaluation of the fairness of the presentation of the Description, or conclusions about the suitability of the design or operating effectiveness of the controls and control procedure described therein to meet the IOSCO Principles criteria are subject to the risk that controls and control procedure may become ineffective or fail.

#### **Restriction of Use**

Our report has been prepared to enable NSE Indices to meet the requirements of adherence with the IOSCO Principles. Our report is intended solely for the information use of the Board of Directors and the Management of NSE Indices and is to be read in conjunction with the Notice issued at the beginning of this Report.

For Deloitte Haskins & Sells LLP

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Partner

## **4.Principles and Statements**

Principle 1: Overall Responsibility of the Administrator

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

IOSCO Principle #1:

The Administrator should retain primary responsibility for all aspects of the Benchmark determination process. For example, this includes:

a) Development: The definition of the Benchmark and Benchmark Methodology;

b) Determination and Dissemination: Accurate and timely compilation and publication and distribution of the Benchmark;

c) Operation: Ensuring appropriate transparency over significant decisions affecting the compilation of the Benchmark and any related determination process, including contingency measures in the event of absence of or insufficient inputs, market stress or disruption, failure of critical infrastructure, or other relevant factors; and

d) Governance: Establishing credible and transparent governance, oversight and accountability procedures for the Benchmark determination process, including an identifiable oversight function accountable for the development, issuance and operation of the Benchmark.

NSE Indices Response	Test Performed by DELOITTE	<b>Results of Tests</b>
Response-1a: NSE Indices Limited ("NSE Indices") is accountable for all the primary facets of the benchmark determination process, including development, determination, dissemination, operations and governance. All the details of our methodology are transparently published on the NSE indices website (www.nseindia.com and www.niftyindices.com). Response-1b: NSE Indices have appointed independent Indices committees - Index Advisory Committee (IAC), Index Maintenance Sub-Committee (IMSC) and Index Oversight Committee (IOC). While the IAC provides guidance on macro problems pertinent to indices, the IMSC makes decisions regarding the replacement of stocks and other areas of index administration and the IOC oversights the administration of NSE Indices, overseeing the processes, policies, team competence, conflicts management etc. Additionally, quarterly independent audits of the index administration are conducted to ensure the standard stated protocols are followed.	<ol> <li>For a sample index, the methodology document was reviewed, and the following observations were noted:</li> <li>The methodology document provided evidence of the benchmark definition and the benchmark determination technique</li> <li>NSE Indices is primarily in charge of the maintenance of the methodology document alongside retaining the responsibility of the document being publicly available on the NSE Indices website.</li> </ol>	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	publicly accessible containing index methodology, characteristics, sector representation, statistics, and fundamentals.	
	2) We reviewed the organizational structure of NSE Indices and verified that the function that oversees the benchmark determination procedure. Additionally, we examined the roles and accountability of the IAC, IMSC and IOC committees, of which IOC were elementally involved in the oversight function.	
	We noted that the aforementioned committees' of IAC and IMSC's tasks and duties included formulating regulations and policies for equity and fixed income indices, overseeing indices, development, issuing and operation of indices, and approving modifications to benchmark methodology.	
	3) The organizational structure is well-organized, with lines of responsibility divided between the various functions and with no overlap.	
	4) Board approved DOA (Delegation of Authority Matrix) has been verified.	
	5) For a sample period, we inspected the Internal Audit reports, and found no significant discrepancies.	
	6) The new index methodology's SOPs have been verified. Evidence for Minutes of the meeting for the sample index/sample change, approval notes for any modifications to the index methodology, changes/updates to the index, or any other change were demonstrated to us in person on site.	

#### **Principle 2: Oversight of Third Parties**

#### **IOSCO Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests**

IOSCO Principle #2:

Where activities relating to the Benchmark determination process are undertaken by third parties - for example collection of inputs, publication or where a third-party acts as Calculation Agent - the Administrator should maintain appropriate oversight of such third parties. The Administrator (and its oversight function) should consider adopting policies and procedures that:

a) Clearly define and substantiate through appropriate written arrangements the roles and obligations of third parties who participate in the Benchmark determination process, as well as the standards the Administrator expects these third parties to comply with;

b) Monitor third parties' compliance with the standards set out by the Administrator;

c) Make Available to Stakeholders and any relevant Regulatory Authority the identity and roles of third parties who participate in the Benchmark determination process; and

d) Take reasonable steps, including contingency plans, to avoid undue operational risk related to the participation of third parties in the Benchmark determination process.

This Principle does not apply in relation to a third party from whom an Administrator sources data if that third party is a Regulated Market or Exchange.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
Response-2: All the indices at NSE Indices are independently calculated and maintained by the company's full-time staff personnel. The sourcing of data related to prices and corporate actions is done from NSE, a licensed and regulated stock exchange in India. In addition, NSE Indices sources data from its group company, NSE Data & Analytics Ltd., as well as other third-party data aggregators (government sponsored agencies/IOSCO compliant entities) for the computation of fixed income indices. The real time calculation of indices is done by NSE itself, with whom NSE Indices have a written agreement. Real time indices are made available through the NSE's trading platform, website as well as third party aggregators that have been approved by NSE Indices. Further, information on company's fundamentals, list of Shariah compliant stocks, Environmental, Social, and Governance (ESG) score, etc. is sourced from third-party aggregators through written agreements, which define the roles and obligations of each third party and the type of data disseminated by them. These agreements are approved by authorized personnel following a detailed quality assurance process (as dictated in accordance with DOA matrix).	<ul> <li>2) We inspected and obtained evidence for the Business Continuity Plans and noted the measures in the contingency operating guidelines for the seamless dissemination and calculation of the index values and underlying data were documented in the plans.</li> <li>3) For a representative third-party data aggregator, a written agreement with NSE Indices was inspected and validated to ensure that it was approved by the authorized personnel in line with the DOA matrix.</li> </ul>	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
The computation and maintenance of the index are not done by the aggregators. Wherever applicable, NSE Indices has controls to cross-validate data obtained from third party data providers. To ensure seamless calculation and dissemination of the index values and underlying data, NSE Indices has Business Continuity Plans in place.	<ul> <li>4) Procedures pertaining to checks over data inputs provided by third party data aggregators were inspected.</li> <li>5) Obtained a confirmation from NSE Indices that none of its index operation-related activities are outsourced.</li> </ul>	
	6) Obtained a confirmation that a list of alternate suppliers of data/services is in place who would be able to support the business requirements for NSE Indices in case, any of their existing data providers are not able to provide the same.	

IOSCO Principle #3:

To protect the integrity and independence of Benchmark determinations, Administrators should document, implement and enforce policies and procedures for the identification, disclosure, management, mitigation or avoidance of conflicts of interest.

Administrators should review and update their policies and procedures as appropriate.

Administrators should disclose any material conflicts of interest to their users and any relevant Regulatory Authority, if any.

The framework should be appropriately tailored to the level of existing or potential conflicts of interest identified and the risks that the Benchmark poses and should seek to ensure:

a) Existing or potential conflicts of interest do not inappropriately influence Benchmark determination;

b) Personal interests and connections or business connections do not compromise the Administrator's performance of its functions;

c) Segregation of reporting lines within the Administrator, where appropriate, to clearly define responsibilities and prevent unnecessary or undisclosed conflicts of interest or the perception of such conflicts;

d) Adequate supervision and sign-off by authorized or qualified employees prior to releasing Benchmark determination;

e) The confidentiality of data, information and other inputs submitted to, received by or produced by the Administrator, subject to the disclosure obligations of the Administrator;

f) Effective procedures to control the exchange of information between staff engaged in activities involving a risk of conflicts of interest or between staff and third parties, where that information may reasonably affect any Benchmark determinations; and

g) Adequate remuneration policies that ensure all staff who participate in the Benchmark determination are not directly or indirectly rewarded or incentivized by the levels of the Benchmark.

An Administrator's conflict of interest framework should seek to mitigate existing or potential conflicts created by its ownership structure or control, or due to other interests the Administrator's staff or wider group may have in relation to Benchmark determinations. To this end, the framework should:

- a) Include measures to avoid, mitigate or disclose conflicts of interest that may exist between its Benchmark determination business (including all staff who perform or otherwise participate in Benchmark production responsibilities), and any other business of the Administrator or any of its affiliates; and
- b) Provide that an Administrator discloses conflicts of interest arising from the ownership structure or the control of the Administrator to its Stakeholders and any relevant Regulatory Authority in a timely manner.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
Response-3: NSE Indices, a group company of the NSE (regulated stock exchange), is a separate legal entity and is responsible for the independent development, calculation, and maintenance of more than 300 indices. NSE Indices steers clear of operations with the other NSE group entities, and it also has written agreements for each business transaction it conducts with NSE and its related entities. All the indices at NSE Indices are developed by following a structured	1) Obtained and inspected the Code of Ethics policy posted on the NSE Indices internal portal and observed that a structural framework was present for identifying, disclosing, managing, mitigating, and avoiding any conflicts of interest as well as addressing the risks connected to them.	No deviations noted.
operating procedure that includes market engagement, research, and sufficient documentation to safeguard the independence and integrity of benchmark determination process. Additionally, all NSE Indices are examined using a set of pre-defined objective selection criterion.	2) For sample workers, responsible for working on valuations, we verified on NSE's portal that the employee has provided a declaration on code of ethics.	
NSE Indices for the purpose of identification, disclosure, management, mitigation, and avoidance of potential conflicts of interest and for the denomination of the potential risks they pose have established a defined Code of Ethics policy.	3) Organization structure of NSE Indices was inspected and it was noted that the roles, responsibilities, and reporting lines were clearly defined. Further, inspected roles and responsibilities of the business functions to avoid conflicts of interest	
Business functions like index operations and business development teams are clearly demarcated from one another. To avoid any conflicts of interest, each team operates independently. To ensure that there are no direct or indirect influences on the process of determining benchmarks, the roles and accountabilities of the various business	and also reviewed the roles and accountabilities of NSE Indices' business functions and noted the demarcation to address conflicts of interest.	
functions of NSE Indices comprises of highly skilled and experienced	4) For a sample date, Conflicts of Interest Register was inspected for the various conflicts of interest raised and the same was approved by Managing Director of NSE Indices and the NSE Index	
individuals as they possess a good understanding of the financial market. Prior to the benchmark's release, multiple levels of supervision and approval are put in place to protect its integrity and quality. In	Maintenance Sub-Committee.         5) Induction training deck was reviewed for new	
addition, each employee who is involved in the benchmark determination process, is subject to declarations of code of ethics.	service personnel, and noted the topics covered in compliance trainings such as information security, business continuity awareness, code of ethics	
Compensation of staff personnel is not dependent, either directly or indirectly, with the level of Benchmark.	declarations.	
Initiatives related to awareness about Information Security, Business Continuity and Code of Ethics are conducted periodically at a group level.	6) For a sample index/sample change, inspected the methodology document, minutes of the meeting of committees and approval notes to verify that the modification to the index methodology has been	
As on September 30th, 2022, a conflict of interest register has been maintained listing down all the possible situations of conflicts and the same has been approved by Managing Director of NSE Indices.	accepted and is in line with the DOA matrix, approved by committee members and the updations were released in the sample index.	

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	7) For a sample employees, inspected the Key Responsibility Areas (KRAs) on the NSE Indices internal portal who are in charge of maintaining benchmark determination to see if they have submitted a code of ethics declaration.	
	<ul> <li>8) From a management representation from the HR department, incentive program was verified, where employees participating in benchmark determination are not incentivized directly or indirectly by performance of the benchmark and its mechanism.</li> <li>9) Prerequisite compliance trainings for current staff performance has been incented for the semalad</li> </ul>	
	personnel has been inspected for the sampled employees and the topics that it covers.	

IOSCO Principle #4:

An Administrator should implement an appropriate control framework for the process of determining and distributing the Benchmark. The control framework should be appropriately tailored to the materiality of the potential or existing conflicts of interest identified, the extent of the use of discretion in the Benchmark setting process and to the nature of Benchmark inputs and outputs. The control framework should be documented and available to relevant Regulatory Authorities, if any. A summary of its main features should be Published or Made Available to Stakeholders.

This control framework should be reviewed periodically and updated as appropriate. The framework should address the following areas:

a) Conflicts of interest in line with Principle 3 on conflicts of interests;

b) Integrity and quality of Benchmark determination:

i.Arrangements to ensure that the quality and integrity of Benchmarks is maintained, in line with principles 6 to 15 on the quality of the Benchmark and Methodology;

ii.Arrangements to promote the integrity of Benchmark inputs, including adequate due diligence on input sources;

iii. Arrangements to ensure accountability and complaints mechanisms are effective, in line with principles 16 to 19; and

iv. Providing robust infrastructure, policies and procedures for the management of risk, including operational risk.

c) Whistleblowing mechanism: Administrators should establish an effective whistleblowing mechanism to facilitate early awareness of any potential misconduct or irregularities that may arise. This mechanism should allow for external reporting of such cases where appropriate.

d) Expertise:

i.Ensuring Benchmark determinations are made by personnel who possess the relevant levels of expertise, with a process for periodic review of their competence; and

ii.Staff training, including ethics and conflicts of interest training, and continuity and succession planning for personnel.

Where a Benchmark is based on Submissions: Administrators should promote the integrity of inputs by:

a) Ensuring as far as possible that the Submitters comprise an appropriately representative group of participants taking into consideration the underlying Interest measured by the Benchmark;

b) Employing a system of appropriate measures so that, to the extent possible, Submitters comply with the Submission guidelines, as defined in the Submitter Code of Conduct and the Administrators' applicable quality and integrity standards for Submission;

c) Specifying how frequently Submissions should be made and specifying that inputs or Submissions should be made for every Benchmark determination; and

d) Establishing and employing measures to effectively monitor and scrutinize inputs or Submissions. This should include pre-compilation or prepublication monitoring to identify and avoid errors in inputs or Submissions, as well as ex-post analysis of trends and outliers.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-4a: NSE Indices has a number of controls in place to manage conflicts of interest and to ensure integrity of the index construction and maintenance.	1) For item (a), please refer Tests Performed for Principle 3.	No deviations noted.
For response to item (a), please refer NSE Indices Self-Assessment for Principle 3.	2) For item (b) (i), please refer to Tests Performed for Principles 6 to 15.	
For response to item (b) (i), please refer NSE Indices Self-Assessment for Principals 6 to 15.	3) For item (b) (ii), please refer to Tests Performed for Principle 2.	
For response to item (b) (ii), please refer NSE Indices Self-Assessment for Principals 2.	4) For response to item (b) (iii), please refer to Tests Performed for Principles 16 to 19.	
For response to item (b) (iii), please refer NSE Indices Self-Assessment for Principals 16 to 19.	5) For item (b) (iv), inspected the "Cyber Security and Cyber Resilience policy" and noted the details on data confidentiality, classification of data, prevention of data leaking, and other pertinent measures.	
SA-4b: For response to item (c), please refer to the "Whistle blowing policy" established by NSE Indices.	<ul><li>6) For item (c), we inspected the "Whistle blowing policy" and noted the following:</li></ul>	
SA-4c: For item (d) (i), NSE Indices has skilled and competent employee members with in-depth understanding of the financial market. Prior to the benchmark's release, many levels of supervision	• The policy covered guidance to whistle blowing procedures and mechanisms.	
and approval are put in place to protect its integrity and quality. SA-4d: For item (d) (ii), Employees of NSE Indices who are responsible for the benchmark determination and maintenance process are provided product related training for skill development on a periodic basis. Further, continuity and succession planning for business and key personnel is carried out at an organizational level on a periodic basis. SA-4e: NSE Indices does not compute indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants does not categorize as submissions.	<ul> <li>Information about the NSE Indices' external reporting mechanism can be found on the official NSE Indices website (https://www.nseindia.com/regulations/exchange-disclosures-details-of-vigil-mechanism).</li> <li>The mechanism for external reporting is also made available through email at <u>indices@nse.co.in</u>.</li> <li>7) For item (d) (ii), noted the in-place succession plans for key personnel involved in the benchmark determination process by speaking with the Managing Director, NSE Indices.</li> </ul>	

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	8) For a sample staff personnel responsible for performing benchmark determination, inspected the KRAs on the NSE Indices' internal portal, and noted the initial, mid-year, and yearly performance reviews were conducted and signed off by respective reporting managers.	
	9) Inspected the employee training plan and noted the following trainings content:	
	• Periodic trainings on functional subjects covering benchmark determination process, statistics, econometrics & simulation, advanced excel and product trainings.	
	• Information Security.	
	• Business Continuity Awareness.	
	• Code of Ethics.	
	10) Obtained a confirmation that NSE Indices does not publish indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants, which are not categorized as data submitters and their inputs are not classified as submissions.	

#### **Principle 5: Internal Oversight**

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

#### IOSCO Principle #5:

Administrators should establish an oversight function to review and provide challenge on all aspects of the Benchmark determination process. This should include consideration of the features and intended, expected or known usage of the Benchmark and the materiality of existing or potential conflicts of interest identified.

The oversight function should be carried out either by a separate committee, or other appropriate governance arrangements. The oversight function and its composition should be appropriate to provide effective scrutiny of the Administrator. Such oversight function could consider groups of Benchmarks by type or asset class, provided that it otherwise complies with this Principle.

An Administrator should develop and maintain robust procedures regarding its oversight function, which should be documented and available to relevant Regulatory Authorities, if any. The main features of the procedures should be Made Available to Stakeholders. These procedures should include:

a) The terms of reference of the oversight function;

b) Criteria to select members of the oversight function;

c) The summary details of membership of any committee or arrangement charged with the oversight function, along with any declarations of conflicts of interest and processes for election, nomination or removal and replacement of committee members.

The responsibilities of the oversight function include:

- a) Oversight of the Benchmark design:
  - i.Periodic review of the definition of the Benchmark and its Methodology;
  - ii.Taking measures to remain informed about issues and risks to the Benchmark, as well as commissioning external reviews of the Benchmark (as appropriate);
- iii. Overseeing any changes to the Benchmark Methodology, including assessing whether the Methodology continues to appropriately measure the underlying Interest, reviewing proposed and implemented changes to the Methodology, and authorising or requesting the Administrator to undertake a consultation with Stakeholders were known or its Subscribers on such changes as per Principle 12; and
- iv. Reviewing and approving procedures for termination of the Benchmark, including guidelines that set out how the Administrator should consult with Stakeholders about such cessation.
- b) Oversight of the integrity of Benchmark determination and control framework:
- i.Overseeing the management and operation of the Benchmark, including activities related to Benchmark determination undertaken by a third party; ii.Considering the results of internal and external audits, and following up on the implementation of remedial actions highlighted in the results of these audits; and
- iii.Overseeing any exercise of Expert Judgment by the Administrator and ensuring Published Methodologies have been followed.

Where conflicts of interests may arise in the Administrator due to its ownership structures or controlling interests, or due to other activities conducted by any entity owning or controlling the Administrator or by the Administrator or any of its affiliates: the Administrator should establish an independent oversight function which includes a balanced representation of a range of Stakeholders where known, Subscribers and Submitters, which is chosen to counterbalance the relevant conflict of interest. Where a Benchmark is based on Submissions: the oversight function should provide suitable oversight and challenge of the Submissions by: a) Overseeing and challenging the scrutiny and monitoring of inputs or Submissions by the Administrator. This could include regular discussions of inputs

or Submission patterns, defining parameters against which inputs or Submissions can be analysed, or querying the role of the Administrator in challenging or sampling unusual inputs or Submissions;

b) Overseeing the Code of Conduct for Submitters;

c) Establishing effective arrangements to address breaches of the Code of Conduct for Submitters; and

d) Establishing measures to detect potential anomalous or suspicious Submissions and in case of suspicious activities, to report them, as well as any misconduct by Submitters of which it becomes aware to the relevant Regulatory Authorities, if any.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-5: The IAC and IOC was set up by the NSE Indices board to develop policies governing equities and fixed income indices and to examine and challenge all the elements of benchmark determination and index computing processes. Neither IAC nor IOC takes part in the periodic evaluation of indices. In addition, with the IAC and IOC, the IMSC has also been established by the Board and is in charge for the periodic evaluation of equity and fixed income indices to ensure guidelines set by the respective index authorities are met. The industry experts are present on each of these committees. Committees function independently to each other as no two members are part of the same committee except for the exchange representative(s), who coordinate between the IAC, the IOC and the IMSC and do not represent more than one committee. Representatives from the financial sector, including those from asset management firms, insurance providers, and rating agencies, are included on the committees. Each committee's terms of reference are specified and authorized by the Board. The names of the committee members are made available to the public on the website in order to ensure transparency. NSE Indices does not compute indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants does not categorize as submissions.	<ol> <li>We obtained the organizational structure of NSE Indices and confirmed that there is a function that oversees and reviews the entire benchmark determination process. Additionally, we examined the duties and accountabilities of the following committees, involved in the oversight process:</li> <li>IAC - Provides feedback and advice pertaining to benchmark determination process to NSE</li> <li>IMSC - Oversee operational guidelines for benchmark determination, approval of index reviews and approve any exceptions.</li> <li>IOC - Oversight of processes, policies, team competence, conflicts management and administration of NSE indices.</li> <li>Inspected the aforementioned committees' tasks and responsibilities which included formulation of regulations for stock and fixed income indices, overseeing of indices, issuing and operating of indices, and approving modifications to benchmark methodologies.</li> <li>Obtained the evidence that the DOA matrix was approved and authorized by the NSE Indices Board.</li> </ol>	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	3) We inspected terms of references of each committee and noted that they were approved by the Board.	
	4) We obtained a confirmation from NSE Indices that the constitution of each committee is in accordance with the Board's approval. We further verified that the information regarding committee members was publicly made available on the NSE Indices website.	
	<ul> <li>5) For a sample index, we inspected the benchmark methodology document, minutes of the meeting of committees and approval notes and cited the subsequent:</li> <li>The approved methodology was consistently applied to the system.</li> <li>NSE Indices reviewed the index methodology (for a sample month), and the IMSC reviewed the index constitution.</li> <li>As part of a checker activity, the data inputs were reconciled with the source data.</li> <li>Re-performance of automated comparison between the real-time and end-of-day equity indices for each day to look for discrepancies.</li> <li>The Operations team of NSE Indices triggered and monitored the end-of-day index computation and production for its completion</li> <li>End-of-day indices were sent out automatically via email through restricted access levels or via SFTP and/or secure HTTPS protocol on the website (as applicable)</li> </ul>	
	6) Obtained a confirmation that NSE Indices does not publish indices based on submissions as data inputs taken from regulated entities/exchanges/government entities/market participants are not categorized as data submitters and hence, their inputs are not classified as submissions.	

#### **Principle 6: Benchmark Design**

#### **IOSCO Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests**

IOSCO Principle #6:

The design of the Benchmark should seek to achieve, and result in an accurate and reliable representation of the economic realities of the Interest it seeks to measure and eliminate factors that might result in a distortion of the price, rate, index or value of the Benchmark.

Benchmark design should take into account the following generic non-exclusive features, and other factors should be considered, as appropriate to the particular Interest:

a) Adequacy of the sample used to represent the Interest;

b) Size and liquidity of the relevant market (for example whether there is sufficient trading to provide observable, transparent pricing);

c) Relative size of the underlying market in relation to the volume of trading in the market that references the Benchmark;

d) The distribution of trading among Market Participants (market concentration);

e) Market dynamics (e.g., to ensure that the Benchmark reflects changes to the assets underpinning a Benchmark).

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-6: A two-fold approach for Index designing is followed at NSE Indices. First and foremost, it is the outcome of an internal evaluation of the possible interest and benefit of market participants. Secondly, it is based on the feedback from the market that NSE Indices gathers through ongoing communication with market players.	• For a sample of indices, we examined the methodology document, minutes of meeting of the respective committees, and approval notes and noted the following:	No deviations noted.
Benchmarks are designed by retaining target theme in mind and are screened for diverse factors, including the target market's size, liquidity, concentration, and dynamics as well as the underlying market universe's suitability for the topic. As a result, NSE Indices' benchmarks aim to attain and produce a trustworthy depiction of the underlying index theme.	<ul> <li>The sample index was developed in accordance with a well-defined "process map" (a framework for the product development process) and the index methodology document.</li> <li>The following key information was defined in the index methodology document: <ul> <li>Market sample considered</li> <li>Computational methodology which includes taking into account the size, liquidity, concentration, and dynamics of the target market.</li> <li>Data sources used</li> <li>Instructions for dissemination (based on market feedback from participants)</li> <li>Rebalancing rules and frequency</li> <li>Procedure for dealing with error reports</li> </ul> </li> </ul>	

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	<ul> <li>o Frequency of internal reviews         <ul> <li>o Circumstances where NSE Indices would consult stakeholders</li> <li>o Limitations of benchmark</li> </ul> </li> <li>The methodology was reviewed and approved by the authorized personnel at NSE Indices in line with</li> </ul>	
	the DOA matrix.	

#### Principle 7: Data Sufficiency

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

#### IOSCO Principle #7:

The data used to construct a Benchmark determination should be sufficient to accurately and reliably represent the Interest measured by the Benchmark and should:

a) Be based on prices, rates, indices or values that have been formed by the competitive forces of supply and demand in order to provide confidence that the price discovery system is reliable; and

b) Be anchored by observable transactions entered into at arm's length between buyers and sellers in the market for the Interest the Benchmark measures in order for it to function as a credible indicator of prices, rates, indices or values.

This Principle requires that a Benchmark be based upon (i.e., anchored in) an active market having observable Bona Fide, Arms-Length Transactions. This does not mean that every individual Benchmark determination must be constructed solely of transaction data. Provided that an active market exists, conditions in the market on any given day might require the Administrator to rely on different forms of data tied to observable market data as an adjunct or supplement to transactions. Depending upon the Administrator's Methodology, this could result in an individual Benchmark determination being based predominantly, or exclusively, on bids and offers or extrapolations from prior transactions. This is further clarified in Principle 8.

Provided that subparagraphs (a) and (b) above are met, Principle 7 does not preclude Benchmark Administrators from using executable bids or offers as a means to construct Benchmarks where anchored in an observable market consisting of Bona Fide, Arms-Length transactions.

This Principle also recognizes that various indices may be designed to measure or reflect the performance of a rule-based investment strategy, the volatility or behaviour of an index or market or other aspects of an active market. Principle 7 does not preclude the use of non-transactional data for such indices that are not designed to represent transactions and where the nature of the index is such that non-transactional data is used to reflect what the index is designed to measure. For example, certain volatility indices, which are designed to measure the expected volatility of an index of securities transactions, rely on non-transactional data, but the data is derived from and thus "anchored" in an actual functioning securities or options market.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-7: The sourcing of market data by NSE Indices is leveraged through third party data aggregators with which it has written arrangements and controls in place. Additionally, data on prices, corporate actions, etc. is sourced by NSE Indices through NSE (a regulated stock exchange in India). Furthermore, data for the computation of fixed income indices is sourced from NSE Data & Analytics Ltd. (a group entity) and other third-party data providers (government sponsored agencies/IOSCO compliant organizations). For the cross validation and verification of data sourced from third-part data providers, NSE Indices has various controls in place (wherever applicable).	1) For a sample third-party data provider, we inspected the written arrangement it has with NSE Indices and evidenced that it captured the information about the sourcing of data for real-time index computation.	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	3) For a sampled index, the benchmark methodology document, minutes of the meeting of the committees, and approval notes were examined and made the following notes:	
	• We obtained the evidence that the approved benchmark methodology was applied to the system consistently.	
	• NSE Indices reviewed the index methodology (for a sample month), and the IMSC reviewed the index constitution.	
	• As part of the checker activity, the data inputs were reconciled with the source data	
	• The Operations team of NSE Indices triggered and monitored the end-of-day index computation and production for its completion	
	• End-of-day indices were sent out automatically via email through restricted access levels or via SFTP and/or secure HTTPS protocol on the website (as applicable)	

#### **Principle 8: Hierarchy of Data Inputs**

#### **IOSCO Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests**

IOSCO Principle #8:

An Administrator should establish and Publish or Make Available clear guidelines regarding the hierarchy of data inputs and exercise of Expert Judgment used for the determination of Benchmarks. In general, the hierarchy of data inputs should include:

a) Where a Benchmark is dependent upon Submissions, the Submitters' own concluded arms-length transactions in the underlying interest or related markets;

b) Reported or observed concluded Arm's-length Transactions in the underlying interest;

c) Reported or observed concluded Arm's-length Transactions in related markets;

d) Firm (executable) bids and offers; and

e) Other market information or Expert Judgments.

Provided that the Data Sufficiency Principle is met (i.e., an active market exists), this Principle is not intended to restrict an Administrator's flexibility to use inputs consistent with the Administrator's approach to ensuring the quality, integrity, continuity and reliability of its Benchmark determinations, as set out in the Administrator's Methodology. The Administrator should retain flexibility to use the inputs it believes are appropriate under its Methodology to ensure the quality and integrity of its Benchmark. For example, certain Administrators may decide to rely upon Expert Judgment in an active albeit low liquidity market, when transactions may not be consistently available each day. IOSCO also recognizes that there might be circumstances (e.g., a low liquidity market) when a confirmed bid or offer might carry more meaning than an outlier transaction. Under these circumstances, non-transactional data such as bids and offers and extrapolations from prior transactions might predominate in a given Benchmark determination.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-8a: The sourcing of market data by NSE Indices is leveraged through third party data aggregators with which it has written arrangements and controls in place. Additionally, data on prices, corporate actions, etc. is sourced by NSE Indices through NSE (a regulated stock exchange in India). Furthermore, data for the computation of fixed income indices is sourced from NSE Data & Analytics Ltd. (a group entity) and other third-party data providers (government sponsored agencies/IOSCO compliant organizations). For the cross validation and verification of data sourced from third-part data providers, NSE Indices has various controls in place (wherever applicable).	<ul> <li>inspected the written agreement and noted that the third-party data aggregator was a regulated exchange/ government sponsored agency/ IOSCO compliant organization.</li> <li>2) Obtained a confirmation that NSE Indices does not publish indices based on submissions since any data inputs taken from regulated</li> </ul>	No deviations noted.

#### IOSCO Principle #9:

The Administrator should describe and publish with each Benchmark determination, to the extent reasonable without delaying an Administrator publication deadline:

a) A concise explanation, sufficient to facilitate a Stakeholder's or Market Authority's ability to understand how the determination was developed, including, at a minimum, the size and liquidity of the market being assessed (meaning the number and volume of transactions submitted), the range and average volume and range and average of price, and indicative percentages of each type of market data that have been considered in a Benchmark determination; terms referring to the pricing Methodology should be included (i.e., transaction-based, spread-based or interpolated/extrapolated); b) A concise explanation of the extent to which and the basis upon which Expert Judgment if any, was used in establishing a Benchmark determination.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-9: The benchmark determination procedure (documented within its index methodology documents) is transparently published by NSE Indices on the website. The document sets forth the framework methodology for computation of indices, selection criteria for indices, target market's size, liquidity, concentration and dynamics. The document also entails details regarding the data used (along with its sources) for index calculation. Market participants are informed of changes to the index methodology (along with the rationale, wherever applicable) via a press statement well before the effective date of the proposed changes.	<ol> <li>For a sample of indices, inspected the methodology document, minutes of meeting of the respective committees, and approval notes and noted the following:</li> <li>The methodology was reviewed and approved by the authorized personnel at NSE Indices in line with the DOA matrix.</li> </ol>	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	<ul> <li>Rebalancing rules and frequency</li> <li>Procedure for dealing with error reports</li> <li>Frequency of internal reviews</li> <li>Circumstances where NSE Indices would consult stakeholders</li> <li>Limitations of benchmark</li> </ul>	
	2) For the sampled indices, inspected the NSE Indices website and noted that the methodology document was publicly available.	
	3) Further, for a sample index/change, we examined the press release statement and noted that the changes in index methodology along with the rationale was announced publicly, prior to the effective date of proposed changes.	

#### IOSCO Principle #10:

The Administrator should periodically review the conditions in the underlying Interest that the Benchmark measures to determine whether the Interest has undergone structural changes that might require changes to the design of the Methodology. The Administrator also should periodically review whether the Interest has diminished or is non-functioning such that it can no longer function as the basis for a credible Benchmark.

The Administrator should Publish or Make Available a summary of such reviews where material revisions have been made to a Benchmark, including the rationale for the revisions.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-10: As per the set periodicity applicable for each index, the Index Maintenance Sub-Committee (IMSC) evaluates the composition of all indices maintained by NSE Indices. The periodicity can be monthly, quarterly, semi-annually or annually. In addition to the periodic assessment, modifications to the index's composition are also made when needed in response to corporate events like mergers, demergers, delistings, etc. Modifications to index composition (along with the rationale, wherever applicable) is communicated via a press statement well before the effective date of the proposed changes. Additionally, updated fixed income index portfolios are available on the website. Furthermore, a calendar for index reconstitution is published on the NSE Indices website at the start of each calendar year. Review of index methodologies was carried out during the year and the modifications to the same were communicated via a press statement on the NSE Indices website.	<ol> <li>For a sample index, inspected the minutes of meeting of the respective committees, and approval notes and noted the following:</li> <li>For a sample month, we inspected the meeting minutes and we obtained the evidence that the IMSC had reviewed the index's composition and recorded its findings in the index's factsheet . Additionally, we observed that the index factsheet was accessible on the NSE Indices website</li> <li>The NSE Indices product team carried out an annual review of the index methodology</li> </ol>	No deviations noted.

IOSCO Principle #11:

The Administrator should document and Publish or Make Available the Methodology used to make Benchmark determinations. The Administrator should provide the rationale for adopting a particular Methodology. The Published Methodology should provide sufficient detail to allow Stakeholders to understand how the Benchmark is derived and to assess its representativeness, its relevance to particular stakeholders, and its appropriateness as a reference for financial instruments.

At a minimum, the Methodology should contain:

a) Definitions of key terms;

b) All criteria and procedures used to develop the Benchmark, including input selection, the mix of inputs used to derive the Benchmark, the guidelines that control the exercise of Expert Judgment by the Administrator, priority given to certain data types, minimum data needed to determine a Benchmark, and any models or extrapolation methods;

c) Procedures and practices designed to promote consistency in the exercise of Expert Judgment between Benchmark determinations;

d) The procedures which govern Benchmark determination in periods of market stress or disruption, or periods where data sources may be absent (e.g., theoretical estimation models);

e) The procedures for dealing with error reports, including when a revision of a Benchmark would be applicable;

f) Information regarding the frequency for internal reviews and approvals of the Methodology. Where applicable, the Published Methodologies should also include information regarding the procedures and frequency for external review of the Methodology;

g) The circumstances and procedures under which the Administrator will consult with Stakeholders, as appropriate; and

h) The identification of potential limitations of a Benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs.

Where a Benchmark is based on Submissions, the additional Principle also applies:

The Administrator should clearly establish criteria for including and excluding Submitters. The criteria should consider any issues arising from the location of the Submitter, if in a different jurisdiction to the Administrator. These criteria should be available to any relevant Regulatory Authorities, if any, and Published or Made Available to Stakeholders. Any provisions related to changes in composition, including notice periods should be made clear.

#### Principle 12: Changes to the Methodology

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

#### IOSCO Principle #12:

An Administrator should Publish or Make Available the rationale of any proposed material changes in its Methodology, and procedures for making such changes. These procedures should clearly define what constitutes a material change, and the method and timing for consulting or notifying Subscribers (and other Stakeholders where appropriate, taking into account the breadth and depth of the Benchmark's use) of changes.

Those procedures should be consistent with the overriding objective that an Administrator must ensure the continued integrity of its Benchmark determinations. When changes are proposed, the Administrator should specify exactly what these changes entail and when they are intended to apply.

The Administrator should specify how changes to the Methodology will be scrutinized, by the oversight function.

The Administrator should develop Stakeholder consultation procedures in relation to changes to the Methodology that are deemed material by the oversight function, and that are appropriate and proportionate to the breadth and depth of the Benchmark's use and the nature of the Stakeholders. Procedures should:

a) Provide advance notice and a clear timeframe that gives Stakeholders sufficient opportunity to analyze and comment on the impact of such proposed material changes, having regard to the Administrator's assessment of the overall circumstances; and

b) Provide for Stakeholders' summary comments, and the Administrator's summary response to those comments, to be made accessible to all Stakeholders after any given consultation period, except where the commenter has requested confidentiality.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-12: The index methodology is reviewed by NSE Indices on an ongoing basis through internal research, monitoring of global trends and interaction with market participants. The reviews are conducted in accordance with a documented internal process map. The suggested modifications in the index methodology are deliberated	1) For a sample index/change, we examined the press release statement and observed that the changes in index methodology along with the rationale was announced publicly, prior to the effective date of proposed changes.	No deviations noted.
before concluding a final decision. The same is approved by the authorized staff personnel in line with the DOA matrix. Market participants are informed of the changes to the index methodology (and the justification, as applicable) via a press statement well before the effective date of the proposed changes. Relevant documents as per the changes to the index methodology (detailing index computation technique), are simultaneously updated and are published on the NSE Indices website for the easy reference of market participants.	• The methodology document contained the	
Review of index methodologies was carried out during the year and the modifications to the same were communicated via a press statement on the NSE Indices website.	justification for adopting a specific methodology in relevance to the suitability of the underlying market's theme target and overall applicability to market stakeholders.	

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	The documents included key information such as: <ul> <li>Market sample considered</li> <li>Computational methodology (including criteria and size and liquidity of the target market)</li> <li>Data sources used</li> <li>Instructions for dissemination (based on market feedback from participants)</li> <li>Rebalancing rules and frequency</li> <li>Procedure for dealing with error reports</li> <li>Frequency of internal reviews</li> <li>Circumstances where NSE Indices would consult stakeholders</li> <li>Limitations of benchmark</li> </ul>	
	<ul> <li>3) Evidence for Minutes of the meeting for the sample index/sample change, approval notes for any modifications to the index methodology, changes/updates to the index, or any other change that was demonstrated to us in person on site.</li> <li>4) For the sampled indices, inspected the NSE Indices website and noted that the methodology document was publicly available.</li> </ul>	

#### **Principle 13: Transition**

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

IOSCO Principle #13:

Administrators should have clear written policies and procedures, to address the need for possible cessation of a Benchmark, due to market structure change, product definition change, or any other condition which makes the Benchmark no longer representative of its intended Interest. These policies and procedures should be proportionate to the estimated breadth and depth of contracts and financial instruments that reference a Benchmark and the economic and financial stability impact that might result from the cessation of the Benchmark. The Administrator should take into account the views of Stakeholders and any relevant Regulatory and National Authorities in determining what policies and procedures are appropriate for a particular Benchmark.

These written policies and procedures should be Published or Made Available to all Stakeholders.

Administrators should encourage Subscribers and other Stakeholders who have financial instruments that reference a Benchmark to take steps to make sure that:

a) Contracts or other financial instruments that reference a Benchmark, have robust fallback provisions in the event of material changes to, or cessation of, the referenced Benchmark; and

b) Stakeholders are aware of the possibility that various factors, including external factors beyond the control of the Administrator, might necessitate material changes to a Benchmark.

Administrators' written policies and procedures to address the possibility of Benchmark cessation could include the following factors, if determined to be reasonable and appropriate by the Administrator:

a) Criteria to guide the selection of a credible, alternative Benchmark such as, but not limited to, criteria that seek to match to the extent practicable the existing Benchmark's characteristics (e.g., credit quality, maturities and liquidity of the alternative market), differentials between Benchmarks, the extent to which an alternative Benchmark meets the asset/liability needs of Stakeholders, whether the revised Benchmark is investable, the availability of transparent transaction data, the impact on Stakeholders and impact of existing legislation;

b) The practicality of maintaining parallel Benchmarks (e.g., where feasible, maintain the existing Benchmark for a defined period of time to permit existing contracts and financial instruments to mature and publish a new Benchmark) in order to accommodate an orderly transition to a new Benchmark;c) The procedures that the Administrator would follow in the event that a suitable alternative cannot be identified;

d) In the case of a Benchmark or a tenor of a Benchmark that will be discontinued completely, the policy defining the period of time in which the Benchmark will continue to be produced in order to permit existing contracts to migrate to an alternative Benchmark if necessary; and

e) The process by which the Administrator will engage Stakeholders and relevant Market and National Authorities, as appropriate, in the process for selecting and moving towards an alternative Benchmark, including the timeframe for any such action commensurate with the tenors of the financial instruments referencing the Benchmarks and the adequacy of notice that will be provided to Stakeholders.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
<ul> <li>SA-13: The Cessation of Indices is a rare occurrence, therefore NSE Indices would evaluate the implications of its decision on the discontinuation of the index on market participants, in case of cessation of any of its indices. "Guidelines for Cessation of Indices" have been established by NSE Indices based on which the review of a proposed cessation is carried out.</li> <li>The cessation guidelines entails information regarding the identification of an alternative benchmark, maintenance of a required time period before transitioning to a new benchmark, framework to be followed in case of no identification of an alternate benchmark and stakeholders' consultation before cessation.</li> <li>The review for proposed cessation may broadly include market research, client interactions to determine whether this index is necessary in relation to any outstanding products tied to the index, whether an alternative index needs to be provided, etc. Prior communication is provided to the market participants before the discontinuation of an index by NSE Indices.</li> <li>As on Sep 30, 2022, none of the indices calculated by NSE Indices were discontinued in the past one year.</li> </ul>	Indices" and noted the following: • The guidelines detailed the framework procedures followed by NSE Indices in the occurrence of cessation of a benchmark. Guidelines entails information regarding the identification of an alternative benchmark, maintenance of a required time period before transitioning to a new benchmark, framework to be followed in case of no identification of an alternate benchmark and stakeholders' consultation before cessation	No deviations noted.

IOSCO Principle #14:

Where a Benchmark is based on Submissions, the following additional Principle also applies:

The Administrator should develop guidelines for Submitters("Submitter Code of Conduct"), which should be available to any relevant Regulatory Authorities, if any and Published or Made Available to Stakeholders.

The Administrator should only use inputs or Submissions from entities which adhere to the Submitter Code of Conduct and the Administrator should appropriately monitor and record adherence from Submitters. The Administrator should require Submitters to confirm adherence to the Submitter Code of Conduct annually and whenever a change to the Submitter Code of Conduct has occurred.

The Administrator's oversight function should be responsible for the continuing review and oversight of the Submitter Code of Conduct. The Submitter Code of Conduct should address:

a) The selection of inputs;

b) Who may submit data and information to the Administrator;

c) Quality control procedures to verify the identity of a Submitter and any employee(s) of a Submitter who report(s) data or information and the authorization of such person(s) to report market data on behalf of a Submitter;

- d) Criteria applied to employees of a Submitter who are permitted to submit data or information to an Administrator on behalf of a Submitter;
- e) Policies to discourage the interim withdrawal of Submitters from surveys or Panels;

f) Policies to encourage Submitters to submit all relevant data; and

g) The Submitters' internal systems and controls, which should include:

i. Procedures for submitting inputs, including Methodologies to determine the type of eligible inputs, in line with the Administrator's Methodologies;

ii. Procedures to detect and evaluate suspicious inputs or transactions, including inter-group transactions, and to ensure the Bona Fide nature of such inputs, where appropriate;

- iii. Policies guiding and detailing the use of Expert Judgment, including documentation requirements;
- iv. Record keeping policies;
- v. Pre-Submission validation of inputs, and procedures for multiple reviews by senior staff to check inputs;
- vi. Training, including training with respect to any relevant regulation (covering Benchmark regulation or any market abuse regime);
- vii. Suspicious Submission reporting;
- viii. Roles and responsibilities of key personnel and accountability lines;
- ix. Internal sign off procedures by management for submitting inputs;
- x. Whistle blowing policies (in line with Principle 4); and

xi. Conflicts of interest procedures and policies, including prohibitions on the Submission of data from Front Office Functions unless the Administrator is satisfied that there are adequate internal oversight and verification procedures for Front Office Function Submissions of data to an Administrator (including safeguards and supervision to address possible conflicts of interests as per paragraphs (v) and (ix) above), the physical separation of employees and reporting lines where appropriate, the consideration of how to identify, disclose, manage, mitigate and avoid existing or potential incentives to manipulate or otherwise influence data inputs (whether or not in order to influence the Benchmark levels), including, without limitation, through appropriate remuneration policies and by effectively addressing conflicts of interest which may exist between the Submitter's Submission activities (including all staff who perform or otherwise participate in Benchmark Submission responsibilities), and any other business of the Submitter or of any of its affiliates or any of their respective clients or customers.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-14: The benchmark determination procedure (documented within its index methodology documents) is transparently published by NSE Indices on the website. The document sets forth the framework methodology for computation of indices, selection criteria for indices, target market's size, liquidity, concentration and dynamics. The document also entails details regarding the data used (along with its sources) for index calculation. NSE Indices does not compute indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants does not categorize as submissions.	inputs taken from regulated entities/exchanges/government entities/market participants are not categorized as data submitters and their inputs are not classified as submissions.	No deviations noted.

#### IOSCO Principle #15:

When an Administrator collects data from any external source the Administrator should ensure that there are appropriate internal controls over its data collection and transmission processes. These controls should address the process for selecting the source, collecting the data and protecting the integrity and confidentiality of the data. Where Administrators receive data from employees of the Front Office Function, the Administrator should seek corroborating data from other sources.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-15: The sourcing of data on prices, corporate actions, shareholding patterns etc., for NSE Indices is done by NSE, a licensed and regulated stock exchange in India. Additionally, data including company fundamentals, MIBOR rate, Transactions in the overnight triparty Repo Dealing and Settlement (TREPS), foreign currency exchange rate, prices of fixed income securities, list of Shariah compliant stocks, etc., is sourced through third party data providers as they are not involved in the index calculation or maintenance. For the cross validation and verification of data sourced from third-part data providers, NSE Indices has various controls in place (wherever applicable).	<ol> <li>For a sample third-party data provider, we examined the written arrangement it has with NSE Indices and evidenced that it captured the information about the sourcing of data for real-time index computation.</li> <li>For a sampled index, inspected the benchmark methodology document, minutes of the meeting of the committees, and approval notes and noted the following:         <ul> <li>We obtained the evidence that the approved benchmark methodology was applied to the system consistently.</li> <li>NSE Indices reviewed the index methodology (for a sample month), and the IMSC reviewed the index constitution.</li> <li>As part of the checker activity, the data inputs were reconciled with the source data</li> <li>The Operations team of NSE Indices triggered and monitored the end-of-day index computation and production for its completion</li> <li>End-of-day indices were sent out automatically via email through restricted access levels or via SFTP and/or secure HTTPS protocol on the website (as applicable)</li> </ul> </li> </ol>	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	3) Obtained a confirmation that a list of alternate suppliers of data/services is in place who would be able to support the business requirements for NSE Indices in case, any of their existing data providers are not able to provide the same.	

#### **Principle 16: Complaints Procedure**

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

IOSCO Principle #16:

The Administrator should establish and Publish or Make Available a written complaints procedures policy, by which Stakeholders may submit complaints including concerning whether a specific Benchmark determination is representative of the underlying Interest it seeks to measure, applications of the Methodology in relation to a specific Benchmark determination(s) and other Administrator decisions in relation to a Benchmark determination.

The complaints procedures policy should:

a) Permit complaints to be submitted through a user-friendly complaints process such as an electronic Submission process;

b) Contain procedures for receiving and investigating a complaint made about the Administrator's Benchmark determination process on a timely and fair basis by personnel who are independent of any personnel who may be or may have been involved in the subject of the complaint, advising the complainant and other relevant parties of the outcome of its investigation within a reasonable period and retaining all records concerning complaints; c) Contain a process for escalating complaints, as appropriate, to the Administrator's governance body; and

d) Require all documents relating to a complaint, including those submitted by the complainant as well as the Administrator's own record, to be retained for a minimum of five years, subject to applicable national legal or regulatory requirements.

Disputes about a Benchmarking determination, which are not formal complaints, should be resolved by the Administrator by reference to its standard appropriate procedures. If a complaint results in a change in a Benchmark determination, that should be Published or Made Available to Subscribers and Published or Made Available to Stakeholders as soon as possible as set out in the Methodology.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
<ul> <li>For item (a), we inspected the NSE Indices website and discovered an official email address (indices@nse.co.in) where inquiries, feedback, and complaints could be directed.</li> <li>We inspected the "Guidelines on Grievance Redressal" maintained by NSE Indices and noted the following:</li> <li>For item (b), policy detailed procedure for receiving, inquiring, and advising the complainant and other pertinent parties of the complaint's outcome, along with the timelines of the resolution. The policy also contained details of the staff personnel at NSE Indices who would be assigned complaints (primarily based on the categorization) for investigation and assessment.</li> </ul>	For item (a), we inspected the NSE Indices website and discovered an official email address (indices@nse.co.in) where inquiries, feedback, and complaints could be directed. We inspected the "Guidelines on Grievance Redressal" maintained by NSE Indices and noted the following: • For item (b), policy detailed procedure for receiving, inquiring, and advising the complainant and other pertinent parties of the complaint's outcome, along with the timelines of the resolution. The policy also contained details of the staff personnel at NSE Indices who would be assigned complaints (primarily based on the categorization) for investigation and assessment.	No deviations noted.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
	<ul> <li>For item (c), policy included a categorization of complaints based on severity, along with points of contacts in case of escalations.</li> <li>For item (d), the policy detailed that documentation related to complaints and records of approval notes were to be maintained for a period of at least five years.</li> <li>Obtained a confirmation from NSE Indices that as on September 30th , 2022, there were no complaints in the last one year.</li> </ul>	

IOSCO Principle #17:

The Administrator should appoint an independent internal or external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated criteria and with the Principles. The frequency of audits should be proportionate to the size and complexity of the Administrator's operations.

Where appropriate to the level of existing or potential conflicts of interest identified by the Administrator (except for Benchmarks that are otherwise regulated or supervised by a National Authority other than a relevant Regulatory Authority), an Administrator should appoint an independent external auditor with appropriate experience and capability to periodically review and report on the Administrator's adherence to its stated Methodology. The frequency of audits should be proportionate to the size and complexity of the Administrator's Benchmark operations and the breadth and depth of Benchmark use by Stakeholders.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
<ul> <li>SA-17: The NSE Indices board currently mandates that such an evaluation be conducted once every two years. In addition, NSE Indices voluntarily performs recurrent internal audits to examine the methodology used to determine the benchmarks and the operational procedures related to index operations and index maintenance adopted by its business functions. The audit reports are presented to the Board.</li> <li>As on September 30th, 2022, there were no conflicts of interest raised during the last one year.</li> </ul>	and noted that it covered compliance checks related to the operational activities carried out by various functions in index operations and maintenance process. Further, inspected the internal audit report and poted that there were no instances of noncompliance	No deviations noted.

#### Principle 18: Audit Trail

#### **IOSCO Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests**

#### IOSCO Principle #18:

Written records should be retained by the Administrator for five years, subject to applicable national legal or regulatory requirements on:

a) All market data, Submissions and any other data and information sources relied upon for Benchmark determination;

b) The exercise of Expert Judgment made by the Administrator in reaching a Benchmark determination;

c) Other changes in or deviations from standard procedures and Methodologies, including those made during periods of market stress or disruption;

d) The identity of each person involved in producing a Benchmark determination; and

e) Any queries and responses relating to data inputs.

If these records are held by a Regulated Market or Exchange the Administrator may rely on these records for compliance with this Principle, subject to appropriate written record sharing agreements.

When a Benchmark is based on Submissions, the following additional Principle also applies: Submitters should retain records for five years subject to applicable national legal or regulatory requirements on:

a) The procedures and Methodologies governing the Submission of inputs;

b) The identity of any other person who submitted or otherwise generated any of the data or information provided to the Administrator;

c) Names and roles of individuals responsible for Submission and Submission oversight;

d) Relevant communications between submitting parties;

e) Any interaction with the Administrator;

f) Any queries received regarding data or information provided to the Administrator;

g) Declaration of any conflicts of interests and aggregate exposures to Benchmark related instruments;

h) Exposures of individual traders/desks to Benchmark related instruments in order to facilitate audits and investigations; and

i) Findings of external/internal audits, when available, related to Benchmark Submission remedial actions and progress in implementing them.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-18: For a minimum of five years, NSE Indices archives written records of approval notes, board and committees' minutes of the meeting, and information pertaining to the assessment of indices and index methodology (which is as per the requirements set out by the regulatory authorities). The sourcing of market data by NSE Indices is leveraged through third party data aggregators with which it has written arrangements and controls in place. However, the relevant third parties are in charge of maintaining this data and the records that are associated to it. Further, NSE Indices does not compute indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants does not categorize as submissions.	<ol> <li>For a sample index, we inspected the system and noted the following:</li> <li>Current data (such as minutes of meeting of the board and committees, approval notes, index methodology documents, press release related to change in index methodology etc.) was stored on the system.</li> <li>Erstwhile data (such as minutes of meeting of the board and committees, approval notes, index methodology documents, press release related to change in index methodology, etc.) was maintained physically or in the system for a period of at least five years.</li> <li>For a sample third-party data provider, we examined the written arrangement it has with NSE Indices and evidenced that it captured the information about the sourcing of data for real- time index computation.</li> <li>Additionally, NSE Indices confirmed that the relevant third-party data providers (who own their respective data) were in charge of maintaining the market data.</li> <li>Obtained a confirmation that NSE Indices does not publish indices based on submissions since any data inputs taken from regulated entities/exchanges/government entities/market participants are not categorized as data submitters and their inputs are not classified as submissions.</li> </ol>	No deviations noted.

#### **Principle 19: Cooperation with Regulatory Authorities**

#### **IOSCO** Principles, NSE Indices Self-Assessment, Test Performed by DELOITTE, and Results of Tests

#### IOSCO Principle #19:

Relevant documents, Audit Trails and other documents subject to these Principles shall be made readily available by the relevant parties to the relevant Regulatory Authorities in carrying out their regulatory or supervisory duties and handed over promptly upon request.

NSE Indices Response	Test Performed by DELOITTE	Results of Tests
SA-19: In order for the regulatory authorities to carry out their regulatory and/or supervisory responsibilities within the applicable legal framework, NSE Indices cooperates with the regulatory authorities and upon request provides pertinent information (such as documents and audit trails) that may be available with NSE Indices. The system and/or website have easy access to documents and audit trails.	For a sample week, we inspected the email correspondence with the Securities and Exchange Board of India (SEBI) and obtained the evidence that NSE Indices provided weekly index data to SEBI in accordance with their needs. Additionally, NSE Indices confirmed that it cooperates with regulatory authorities as needed by giving them the pertinent information (such as documentation and audit trails).	No deviations noted.
	We inspected the SOP and the framework procedure for handling inquiries from external or internal authorities, and the timelines for responses from NSE Indices for the same.	
	For a sample index, we inspected the system and noted that data (such as minutes of meeting of the board and committees and approval notes) was stored within the same.	
	For the sampled indices, inspected the NSE Indices website and noted that the methodology document was publicly available.	