REPORT ON COMPLIANCE WITH THE IOSCO PRINCIPLES FOR FINANCIAL BENCHMARKS AND THE EUROPEAN BENCHMARK REGULATION (EU 2016/1011) FOR THE PERIOD FROM 1 JANUARY TO 31 DECEMBER 2020
Notice: Access to assurance report with respect to the Statement of Compliance with the IOSCO Principles for Financial Benchmarks and the EU Benchmark Regulation of STOXX Ltd, prepared by PwC.

This PDF file (the “Document”) consists of the independent practitioner’s assurance report (the “Assurance Report”), prepared by PricewaterhouseCoopers AG, Switzerland, (“PwC”) in accordance with International Standard on Assurance Engagements 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” (ISAE 3000 (revised)) and dated 2 March 2022, and of the Statement of Compliance of STOXX Ltd (the “Company”) with the Principles for Financial Benchmarks published by the International Organisation of Securities Commissions (IOSCO) in July 2013 and Regulation (EU) 2016/1011 of 8 June 2016 (including corresponding regulatory and implementing technical standards (RTS/ITS) as well as delegated acts (DA) on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (collectively referred to as “Benchmark Regulation”) for the period from 1 January 2020 to 31 December 2020 (the “Report”).

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7. You will indemnify and hold harmless PricewaterhouseCoopers AG, its partners and other employees from any claim and costs related to claims occasioned thereby by any party which arises as a result of, or is connected with, their obtaining Information from you.

8. This agreement sets out the entire agreement between you and PwC in relation to your access to the Information. It replaces all prior agreements or understandings (if any) between you and PwC in that regard.

9. This agreement shall be governed by and construed exclusively in accordance with Swiss law. The court of competent jurisdiction in Zurich shall have exclusive jurisdiction for any disputes arising out of or in connection with this agreement unless any obligatory legal provision confers exclusive jurisdiction on any other court.
Introduction


The objective of the IOSCO Principles for Financial Benchmarks ("IOSCO Principles") is to create an overarching regulatory framework for benchmarks used in global financial markets. The internationally valid guidelines focus on the methodology, transparency and overall quality of benchmarks as well as the overall governance arrangements and accountability for index providers and other relevant bodies.

In 2019, STOXX implemented compliance with Regulation (EU) 2016/1011 of 8 June 2016 (including corresponding regulatory and implementing technical standards (RTS/ITS) as well as delegated acts (DA) on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (collectively referred to as “Benchmark Regulation”). On 31 July 2019, STOXX obtained recognition by the German Federal Financial Supervisory Authority (“BaFin”) as a third-country administrator in accordance with Art. 32 of the Benchmark Regulation.

STOXX administers STOXX-branded indices as well as DAX-branded indices and Omnient branded indices.

STOXX ensures the administration of the STOXX-administered indices in compliance with the recommendations and in line with the principle of proportionality outlined in the IOSCO principles as well as relevant provisions of the Benchmark Regulation.

STOXX has engaged PwC to conduct an independent examination of STOXX's compliance with IOSCO Principles as well as with selected provisions of the Benchmark Regulation, as applicable, for the period from 1 January to 31 December 2020.

The presented IOSCO Principles/Benchmark Regulation compliance report includes STOXX's responses to individual IOSCO Principles as well as STOXX's responses to the provisions of the Benchmark Regulation and the outcome of PwC’s audit. It is structured as follows:

> Section 1 contains an overview provided by STOXX of its organization, company history, business and description of major families of index products related to STOXX-administered indices.

> Section 2 sets out the independent auditor's report issued by PwC.

> Section 3 sets out the management's statement of compliance with the IOSCO Principles and the Benchmark Regulation.

> Section 4.1 includes responses by STOXX to individual IOSCO Principles and the procedures performed by PwC.

> Section 4.2 includes response by STOXX to selected provisions of the Benchmark Regulation and the procedures performed by PwC.
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1. STOXX Organization and Business

1.1. Overview of Business and Operations

1.1.1. Company History

STOXX Ltd. (“STOXX”) is an established and leading global index provider with its headquarters in Zug, Switzerland. The launch of the first STOXX® indices in 1998, including the EURO STOXX 50® Index, marked the beginning of a unique success story based on the company’s neutrality and independence. Since then, STOXX has been at the forefront of market developments and has continuously expanded its portfolio of innovative indices.

The STOXX product portfolio includes a wide variety of index concepts. The offering encompasses a broad range of asset classes such as equity, fixed income as well as volatility. Within the equity space, STOXX covers companies being listed on more than 60 exchanges globally. Derived indices range from total market to blue chip indices and from smart beta to thematics and sustainability indices. The historical development and key milestones of STOXX are outlined on the next page.

STOXX is currently calculating a global, comprehensive family of about 13,000 strictly rules-based and transparent indices. It is best known for the leading European equity indices EURO STOXX 50®, STOXX® Europe 600, DAX, MDAX, TecDAX and SDAX and continuously extends its offering by introducing ESG related indices. STOXX indices are licensed to more than 500 companies, including the world’s largest financial products issuers, capital owners and asset managers.

On 31 July 2019, STOXX obtained recognition by the German Federal Financial Supervisory Authority (BaFin) as a third-country administrator in accordance with Art. 32 of the EU Benchmark Regulation. STOXX and the indices administered by STOXX have been included in the ESMA Benchmarks register under Art. 36 of the Benchmark Regulation.

On 21 August 2019, Deutsche Börse AG transferred the administration of the DAX-branded indices to STOXX.

Since September 2019, STOXX is owned by Qontigo GmbH (“Qontigo”). Qontigo was founded in 2019 through the combination of Axioma, Inc., DAX and STOXX. Qontigo is part of Deutsche Börse Group, headquartered in Eschborn, Germany, with key locations in New York, London, Zug and Hong Kong.

About Qontigo

Qontigo is a leading global provider of innovative index, analytics and risk solutions that optimize investment impact. As the shift toward sustainable investing accelerates, Qontigo enables its clients – financial-products issuers, asset owners and asset managers – to deliver sophisticated and targeted solutions at scale to meet the increasingly demanding and unique sustainability goals of investors worldwide.

Qontigo’s solutions are enhanced by both our collaborative, customer-centric culture, which allows us to create tailored solutions for our clients, and our open architecture and modern technology that efficiently integrate with our clients’ processes.

www.qontigo.com
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<th>Timeline</th>
<th>Milestones</th>
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<tr>
<td>November 2020</td>
<td>Launch of EURO STOXX ESG &amp; DAX 50 ESG Futures &amp; Options on Eurex</td>
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<tr>
<td>June 2020</td>
<td>Launch of EU-Compliant Climate Benchmark Indices</td>
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<tr>
<td>May 2020</td>
<td>STOXX introduces the STOXX ESG-X Factor Index Suite including 36 indices covering 6 factors and 6 equity universes. The entire STOXX ESG-X Index Suite now encompasses over 70 indices.</td>
</tr>
<tr>
<td>March 2020</td>
<td>STOXX launched the DAX® 50 ESG, the new benchmark for German sustainable equity investments.</td>
</tr>
<tr>
<td>January 2020</td>
<td>STOXX launches the STOXX Factor Index Suite encompassing 42 indices covering 6 factors and 7 equity universes.</td>
</tr>
<tr>
<td>October 2019</td>
<td>STOXX extends Thematic suite with two new indices: EURO iSTOXX® Ocean Care 40 and STOXX® Global Next Generation Telecoms.</td>
</tr>
<tr>
<td>October 2019</td>
<td>Eurex launches options on the STOXX® Europe 600 ESG-X Index and STOXX® Europe ESG Leaders Select 30 EUR Index, the first contracts of their kind, as well as futures contracts on the latter.</td>
</tr>
<tr>
<td>September 2019</td>
<td>STOXX becomes part of Qontigo.</td>
</tr>
<tr>
<td>August 2019</td>
<td>Deutsche Börse AG has transferred its index administrator role (as defined under the Benchmark Regulation) in relation to the Deutsche Börse AG's indices (DAX, eb.rexx, etc.) to STOXX.</td>
</tr>
<tr>
<td>July 2019</td>
<td>STOXX has acquired recognition by the German Federal Financial Supervisory Authority (BaFin) as a thirdcountry benchmark administrator.</td>
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<tr>
<td>May 2019</td>
<td>STOXX launches 42 new ESG-X indices, including an ESG-X version of the flagship EURO STOXX 50®.</td>
</tr>
<tr>
<td>April 2019</td>
<td>STOXX launches the EURO STOXX 50 ESG, an ESG version of its flagship index EURO STOXX 50®.</td>
</tr>
<tr>
<td>February 2019</td>
<td>STOXX's thematic index offering now covers even more megatrends: Housing Construction, Industry 4.0, Millennials, Sharing Economy, Silver Economy, Smart Cities and Smart Factory.</td>
</tr>
<tr>
<td>February 2019</td>
<td>Derivatives exchange Eurex introduces the first ESG futures on three STOXX benchmarks.</td>
</tr>
<tr>
<td>November 2018</td>
<td>STOXX launches the STOXX® Europe 600 ESG-X Index: a key benchmark with standardized ESG exclusions that reflects responsible-investing policies.</td>
</tr>
<tr>
<td>July/August 2018</td>
<td>STOXX expands its thematics suite with indices covering blockchain, fintech and B.R.AI.N. (biotechnology, robotics, AI and nanotechnology).</td>
</tr>
<tr>
<td>July 2018</td>
<td>DAX celebrates 30 years.</td>
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<tr>
<td>May 2018</td>
<td>Deutsche Börse AG decides rule changes for MDAX, SDAX and TecDAX indices becoming effective 24 September 2018.</td>
</tr>
<tr>
<td>May 2018</td>
<td>STOXX launches the EURO STOXX® Multi Premia® Index, combining seven proven risk premia using a methodology based on academic research.</td>
</tr>
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<td>April 2018</td>
<td>STOXX launches a range of LDI bond indices, tailored to the needs of UK defined benefit pension schemes.</td>
</tr>
<tr>
<td>January 2018</td>
<td>STOXX launches the first-ever index tracking AI innovators that selects its constituents based on an AI algorithm.</td>
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<tr>
<td>January 2017</td>
<td>STOXX introduces iSTOXX Europe Single &amp; Multi Factor Market Neutral Indices.</td>
</tr>
<tr>
<td>May 2016</td>
<td>STOXX introduces multi-asset indices blending equity and fixed income.</td>
</tr>
<tr>
<td>April 2016</td>
<td>STOXX launches the unique EURO STOXX 50 Corporate Bond Index.</td>
</tr>
<tr>
<td>February 2016</td>
<td>STOXX launches a comprehensive family of low-carbon indices.</td>
</tr>
<tr>
<td>October 2015</td>
<td>STOXX extends its smart-beta offering by introducing the STOXX Select and STOXX Diversification Select families.</td>
</tr>
<tr>
<td>July 2015</td>
<td>Deutsche Börse AG acquires SIX Swiss Exchange AG's share in STOXX and becomes the sole owner of STOXX.</td>
</tr>
<tr>
<td>September 2013</td>
<td>STOXX launches first dividend index for ASEAN region.</td>
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<tr>
<td>Timeline</td>
<td>Milestones</td>
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<tr>
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<tr>
<td>April 2013</td>
<td>STOXX launches the GC Pooling index family in cooperation with Eurex.</td>
</tr>
<tr>
<td>May 2012</td>
<td>STOXX launches Minimum Variance indices.</td>
</tr>
<tr>
<td>March 2012</td>
<td>STOXX introduces a market classification model and indices for emerging markets.</td>
</tr>
<tr>
<td>April 2011</td>
<td>STOXX launches the STOXX Global ESG Leaders Index family, an innovative series of environmental, social, governance (ESG) indices.</td>
</tr>
<tr>
<td>November 2010</td>
<td>STOXX extends its equity index offering, adding indices for global regions and emerging markets.</td>
</tr>
<tr>
<td>July 2010</td>
<td>STOXX becomes the marketing agent for Deutsche Börse AG and SIX Swiss Exchange AG indices, amongst them the DAX and SMI indices.</td>
</tr>
<tr>
<td>December 2009</td>
<td>Deutsche Börse AG and SIX Swiss Exchange AG become sole shareholders of STOXX after Dow Jones &amp; Co. exits the joint venture.</td>
</tr>
<tr>
<td>April 2006</td>
<td>The new DAXglobal® index family for international markets are calculated for the first time.</td>
</tr>
<tr>
<td>April 2005</td>
<td>VSTOXX is introduced as the first index to track volatility in the eurozone.</td>
</tr>
<tr>
<td>March 2003</td>
<td>The TecDAX® index, which tracks the performance of the 30 largest technology shares below the DAX, is launched on 23 March.</td>
</tr>
<tr>
<td>October 2001</td>
<td>STOXX launches its first sustainability indices.</td>
</tr>
<tr>
<td>February 2001</td>
<td>Deutsche Börse AG becomes a listed company.</td>
</tr>
<tr>
<td>2000</td>
<td>STOXX is the first index provider to implement free-float market capitalization in all of its indices.</td>
</tr>
<tr>
<td>June 1999</td>
<td>SDAX® is introduced on June 21, 1999. The index charts the development of companies next in line after those listed on the MDAX, the so-called small caps.</td>
</tr>
<tr>
<td>1998</td>
<td>The first STOXX indices are launched.</td>
</tr>
<tr>
<td>1997</td>
<td>STOXX Ltd. is founded.</td>
</tr>
<tr>
<td>January 1996</td>
<td>MDAX® the index for medium-sized companies, is launched on January 19, 1996.</td>
</tr>
<tr>
<td>1992</td>
<td>Frankfurter Wertpapierbörse AG changed its name to Deutsche Börse AG.</td>
</tr>
<tr>
<td>1988</td>
<td>DAX®, the benchmark index for German blue chips, is calculated and published for the first time at the beginning of the month.</td>
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1.1.2. Business and Corporate Structure

Corporate Structure

Board of Directors

Dr. Holger Wohlenberg
Chairman

Nico Kicillof
Member

Susanne Brandenberger
Member

Management Board

Stephan Flägel
Head of Product –
General Manager

Dr. Michael Hyzik
Head of Governance,
Risk and Compliance

Inderpal Gujral
Head of Operations

Daniel Zimmermann
Head of Engineering

Samuel Caddy
Head of Finance
STOXX is headquartered in Zug, Switzerland, and operates offices in Frankfurt (Eschborn), London, New York, Paris and Hong Kong.

STOXX consists of the following teams, which report into the Management Board:

1. Product
2. Operations
3. Engineering
4. Governance, Risk and Compliance
5. Finance

Their functions include the following:

1) Product
   > Research
   > Product Development
   > Product Management
   > Market and Business Intelligence
   > Sales
   > Marketing & Communications

2) Operations
   > Index Operations
   > Costumer Support
   > Controls & Projects

3) Engineering
   > IT Architecture
   > Application Development
   > Controls & IT Compliance
   > Test & Quality
   > eBusiness

4) Governance, Risk and Compliance
   > Governance
   > Compliance
   > Risk Management
   > Information Security
   > Legal

5) Finance
   > Finance
   > Tax
   > HR
   > Project Management
1.1.3. Description of major families of index products related to STOXX-administered indices

**Flagship**

**Benchmark**
STOXX indices cover and track the performance of global and regional markets. They are separated into fixed-component benchmark indices and variable-component indices.

**Blue Chip**
STOXX blue-chip indices are available for global and regional markets. They are also available for individual countries.

**Size**
STOXX Size indices provide a representation of large-, mid- and small-cap stocks for global and various regional markets.

Industry/Supersector/Sector/Subsector
STOXX Supersector indices are available for global and regional markets. For these indices, companies are categorized according to their primary source of revenue based on Industry Classification Benchmark (ICB) nomenclature. There are four levels of classification: Industry, Supersector, Sector, Subsector.

STOXX Sector indices are available for global and regional markets. For these indices, companies are categorized according to their primary source of revenue based on ICB nomenclature.

**Factor & Strategy**

**Dividend**
STOXX offers two families of dividend indices with different methodologies catering to different client needs:

STOXX Select Dividend indices: these indices include the highest dividend-yielding stocks relative to their home markets and are available for global and regional markets. Companies are selected and weighted solely on the basis of historical dividend payments.

STOXX Maximum Dividend indices: these indices aim to maximize the dividend yield of the index portfolio on a short-term basis and are available for global and regional markets. They represent companies with the highest expected dividend yield, based on three-month dividend forecasts. Components are weighted according to their expected liquidity-adjusted dividend yield.

**Optimized**
STOXX Optimized indices offer investors a tool to invest in STOXX indices with a higher degree of liquidity. Stocks for these indices are selected by taking into account equity turnover. Components are weighted based on market cap and component-specific liquidity scaling factors to enhance the overall liquidity of the index.

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1 In August 2019 STOXX took over the index administrator role (as defined under the Benchmark Regulation) in relation to the Deutsche Börse AG’s indices (DAX, eb.rexx, etc.).
The STOXX Optimized Country indices are designed to track the performance of companies in selected countries by focusing on a high degree of liquidity. Hence, components are selected according to their free-float market cap and liquidity. Two versions are available: the STOXX Optimized Country Local indices represent companies resident in the respective country and traded on their local stock exchange. The STOXX Optimized Country DR indices represent depository receipts of companies resident in the respective country but traded on one of the following exchanges: LSE, NYSE or NASDAQ.

**Minimum Variance**
STOXX Minimum Variance indices are designed to minimize risk by reducing the volatility of the underlying index. STOXX offers two versions – constrained and unconstrained – for global and regional markets and various countries. The constrained version optimizes the benchmark index with respect to volatility, offering investors an improvement over the benchmark. The unconstrained version provides a strategy index that is minimized for volatility but is not restricted to follow a specific benchmark too closely.

**Risk-Based**
STOXX offers many indices to mitigate risk for global and regional markets and for several countries. These include the STOXX Risk Control, the STOXX Equal Risk and the STOXX Low Risk Weighted index families.

**Style**
STOXX offers different style concepts, classifying companies by growth and value characteristics. These indices are available for global and regional markets and various countries.

**Leveraged/Short**
STOXX Leveraged indices replicate a leveraged investment strategy based on the relevant underlying STOXX index using static leverage factors. STOXX short indices replicate a short investment strategy on the underlying STOXX index. Both are available for global and regional markets and various countries.

**Select & Diversification Select**
The STOXX Select indices set the focus on stocks characterized by low volatility and high dividend yield.

The STOXX Diversification Select indices add a low correlation twist to the STOXX Select indices.

**Theme**

**Thematic**
STOXX has developed a family of indices focusing on sectors which are believed to profit from long-term structural trends driven by social, economic and environmental changes. We offer 20+ thematic indices that track market forces arising from broad megatrends. Amongst others the following topics are covered: Automation & Robotics, Ageing Population, Digitalization and Breakthrough Healthcare.

**Infrastructure**
STOXX Infrastructure indices provide investors enhanced and diversified access to the global infrastructure sector by tracking the performance of infrastructure companies as well as suppliers.

**ESG, Sustainability & Carbon Emissions**
The STOXX ESG and STOXX Sustainability index families provide access to companies that are leaders in terms of environmental (E), social (S) and governance (G) criteria. They are available for global and regional markets. In 2019 STOXX launched the EURO STOXX 50 ESG index, an ESG version of the EURO STOXX 50 ESG, as well as 42 ESG-X versions of STOXX blue-chip and benchmark indices.
The Carbon Emissions based indices, like the STOXX Low Carbon indices and other STOXX indices, provide exposure to companies depending on their emissions profile and are available for global and regional markets.

Other Themes
STOXX also offers other theme indices that cover IPOs, the rare earths sector and emerging markets-exposed strategies.

Fixed Income & Multi-Asset
EURO STOXX 50® Corporate Bond index
The EURO STOXX 50® Corporate Bond indices track the performance of the Euro-denominated, investment grade corporate bonds of the EURO STOXX 50® constituents. The bond issuers represent the high-credit, blue-chip companies of the Eurozone.

The main index, representing the entire universe linked to the EURO STOXX 50®, is flanked by its sector, maturity and rating variants.

Multi-Asset indices
The Multi-Asset indices offer a combined exposure to the equity and fixed income asset classes by blending the EURO STOXX 50® and the EURO STOXX 50® Corporate Bond indices. Depending on the indices, the mix can be in fixed proportion or driven by a momentum signal.

Other
Calculation Products
With Dividend Points (DVP), STOXX provides additional data linked to STOXX indices as an underlying for derivative products. Dividend Points provides pure dividend data of the respective indices and increases investors' ability to focus on fundamentals that determine equity values. The indices track gross cumulative cash dividends (i.e., the sum of the individual cash dividends) that are announced and paid by constituents of the respective indices during the annual period.

The EURO STOXX 50® Distribution Points index is developed on a concept similar to the DVP indices but includes the returns from all distributions to shareholders of the EURO STOXX 50® index components, hence it is not limited to cash dividends.

Funding Rates
The STOXX GC Pooling index family is based on the Eurex Repo GC Pooling Market and offers a transparent, rules-based independent alternative to unsecured interbank benchmarks such as LIBOR and EURIBOR/EONIA.

The indices represent secured euro lending transactions and binding quotations that take place on the Eurex Repo GC Pooling Market. The STOXX GC Pooling index family covers the full money market curve. Each index is available in three versions: volume-weighted average rate indices, current rate indices and total volume indices.

Hedged
STOXX Hedged indices measure the performance of an underlying index while also eliminating foreign currency fluctuations. The indices combine performance of the underlying STOXX index with a hypothetical, rolling investment into one-month foreign exchange forward contracts. The indices are available both with monthly and daily readjustment frequency. Index values of the hedged indices are available only to license holders.
DAX

A Equity Indices:
A.1 Standard equity indices with focus on the German market (e.g. DAX, MDAX, SDAX, TecDAX, RX Reit)
A.2 Standard equity indices with focus on international markets (e.g. DAXglobal)
A.3 Strategy indices with focus on the German market
A.4 Strategy indices with focus on international markets
A.5 Stand-alone indices

B Volatility Indices:
B.1 VDAX indices

C Bond Indices:
C.1 eb.rexx® Bond Indices
C.2 EUROGOV® Bond Indices
C.3 REX® Bond Indices

Ad (A.1) The rules of standard equity indices are defined in the “Guide to the DAX Equity Indices”. The index
family includes selection indices such as the DAX, MDAX, SDAX and TecDAX as well as broad market indices
representing entire transparency standards within Deutsche Börse Group (e.g. Prime All Share or Scale).
All indices are based on securities listed on Frankfurter Wertpapierbörse in the prime Standard, the General
Standard or the Scale Segment. The Real Estate indices of Deutsche Börse AG (RX REIT Indices) are covered
in a separate index guide “Guide to the RX Real Estate Indices”.

Ad (A.2) The rules of standard equity indices with focus on international equity markets are defined
in the “Guide to the DAXglobal Indices”. Indices such as the DAXglobal Asia, the DBIX India Index
or the DAXglobal BRIC Index hereby cover securities listed on international stock exchanges in New York,
London, or Hong Kong.

Ad (A.3) The rules of strategy indices with focus on the German market are defined in the “Guide
to the Strategy Indices”. Indices include strategies with a broad range of targets.

The DAXplus Maximum Dividend index, for example, aims at selecting/weighting securities in such a way
that the dividend yield of the index is maximised.

DAX Risk Control Indices, to name another example, rebalance between stocks and the cash market
in such a way that an ex-ante defined level of volatility is maintained.

Ad (A.4) The rules of strategy indices with focus on international markets are defined in the “Guide
to the International Strategy Indices”. The strategies in this family are largely similar to those strategy
indices that have a focus on the German market.

Ad (A.5) The rules of selected indices that do not fall into the above categories are covered in separate
guide books. These are: the GEX (German Entrepreneurial Index) and the ÖkoDAX.

Ad (B.1) The rules for the volatility indices are defined in the “Guide to the VDAX Volatility indices”. The primary
index, the VDAX-NEW, described in the rulebook aims at depicting the volatility implied in the DAX index.
This is achieved through notional investments in a basket of options based on the DAX index.

Ad (C.1) The rules to the eb.rexx Indices are defined in the “Guide to the eb.rexx Index Family”. This family of indices reflects the market of fixed-income securities denominated in Euro. Indices currently available include the eb.rexx Government Germany, the eb.rexx Money Market and the eb.rexx Jumbo Pfandbriefe indices.
Ad (C.2) The rules to the EUROGOV Indices are defined in the “Guide to the Deutsche Börse EUROGOV® Indices”. The EUROGOV index family reflects the market for fixed income bonds denominated in Euros, through the use of market data from Tradeweb.

Ad (C.3) The rules to the REX Indices are defined in the “Guide to the REX Indices”. The REX® index is calculated using government bonds which are traded on the German bond market, comprising all Federal government bonds (‘Bundesanleihen’), Federal debt obligations (‘Bundesobligationen’), and Treasury notes (‘Bundesschatzanweisungen’) with a fixed coupon and remaining term between six months and 10.5 years, issued by the Federal Republic of Germany, the German Unity Fund as well as the former Treuhandanstalt privatisation agency.
2. Independent Auditor’s Report

To the Board of Directors of
STOXX Ltd.
Theilerstrasse 1A
6300 Zug

STOXX Ltd.: Assurance report with respect to the Statement of Compliance with the IOSCO Principles for Financial Benchmarks and the EU Benchmark Regulation

We have performed an examination of the accompanying Statement of Compliance of STOXX Ltd. (“STOXX”) with the Principles for Financial Benchmarks of the International Organisation of Securities Commissions (IOSCO) and selected provisions of Regulation (EU) 2016/1011 (including corresponding regulatory and implementing technical standards (RTS/ITS) as well as delegated acts (DA)) on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (“Benchmark Regulation” or “BMR”) that complement the provisions of the IOSCO Principles for Financial Benchmarks (“the IOSCO/BMR Compliance Statement”), in relation to the STOXX-administered indexes throughout the period from 1 January 2020 to 31 December 2020 for the purpose of expressing a reasonable assurance opinion whether the IOSCO/BMR Compliance Statement of STOXX is fairly stated, in all material respects.

Responsibilities of STOXX

STOXX is responsible for designing, implementing and monitoring the policies, procedures and processes that achieve compliance with the IOSCO Principles for Financial Benchmarks and the Benchmark Regulation as well as for preparing the Management’s Statement of Compliance with the above Principles/Regulation set out in Section 3, and the responses to the individual IOSCO Principles and BMR provisions set out in Sections 4.1 and 4.2.

Independent auditor’s responsibilities and scope of work

Our responsibility is to express a reasonable assurance opinion on STOXX’ IOSCO/BMR Compliance Statement whether it is fairly stated, in all material respects. We conducted our engagement in accordance with International Standard on Assurance Engagements 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” (ISAE 3000 (revised)).

Our examination included those procedures we considered necessary in the circumstances to obtain reasonable, but not absolute, assurance about whether the IOSCO/BMR Compliance Statement of STOXX, incl. the responses to the individual IOSCO Principles for Financial Benchmarks and to the Benchmark Regulation set out in Sections 4.1 and 4.2 throughout the period from 1 January 2020 to 31 December 2020, is fairly stated, in all material respects. Our examination included obtaining through observation, inspection, representation, inquiry and examination, on a sample basis, of the evidence supporting the assertions necessary for rendering our opinion. Our procedures are described in Sections 4.1 and 4.2.

In addition, we have obtained a written representation from the management of STOXX in relation to the IOSCO/BMR Compliance Statement and confirming that all important and relevant information has been provided to us.

Our engagement did not include an examination of adherence to the index methodology and/or rulebooks of any individual indexes administered by STOXX.

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PricewaterhouseCoopers Ltd is a member of a global network of companies that are legally independent of one another.
Our independence and quality control
We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentially and professional behaviour. We apply International Standard on Quality Control 1 and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Inherent limitations
Our examination procedures are subject to inherent limitations and, accordingly, errors or irregularities may occur and not be detected. Such procedures cannot guarantee protection against fraudulent collusion or misrepresentation especially on the part of those holding positions of authority or trust, and our work was not specifically designed to detect fraud, deliberate misstatement or criminal acts. Furthermore, our opinion is based on historical information and the projection of any information or conclusions to any future periods is inappropriate. The IOSCO/BMR Compliance Statement of STOXX and our assurance report cannot in any way serve as a substitute for enquiries or other procedures that third parties would or should undertake and judgements they should make for the purpose of satisfying themselves regarding any matters of interest to them.

Conclusion
In our opinion, based on the results of our procedures and the assertions provided by STOXX in the Management’s Statement of Compliance in Section 3, the IOSCO/BMR Compliance Statement of STOXX for the period from 1 January 2020 to 31 December 2020, including the responses to the individual IOSCO Principles for Financial Benchmarks and to the Benchmark Regulation set out in Sections 4.1 and 4.2, is fairly stated, in all material respects.

Use of our report
This report is intended for the use of STOXX. It may also be provided, in full only and accompanied by the IOSCO/BMR Compliance Statement of STOXX to which it relates, to the existing and prospective index administration customers of STOXX and to the relevant regulatory authorities, without giving rise to any liability or duty on our part to such parties. Our report should not be distributed to or used by other parties, and we do not, in giving our opinion, accept or assume responsibility or liability for any other purpose or to any other parties to whom our report may be shown or into whose hands it may come.

PricewaterhouseCoopers AG

Dimitri Senik
Pascal Philippi
Zurich, 2 March 2022
3. Management’s Statement of Compliance

As Directors of STOXX, we are responsible for ensuring that STOXX complies with

- the Principles for Financial Benchmarks published by the International Organization of Securities Commissions (IOSCO) in July 2013, and

- Regulation (EU) 2016/1011 of 8 June 2016 (including corresponding regulatory and implementing technical standards (RTS/ITS) as well as delegated acts (DA) on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (collectively referred to as Benchmark Regulation).

This includes responsibility for designing, implementing and monitoring compliance with policies and procedures that achieve compliance with the IOSCO Principles and Benchmark Regulation. We are also responsible for preparing a statement of compliance with the IOSCO Principles and the Benchmark Regulation, including our responses to the individual IOSCO Principles as well as selected articles of the Benchmark Regulation, which is free of misstatement, whether due to fraud or error. It also includes selecting the criteria against which to measure the fair assertion of the statement of compliance.

We confirm that STOXX has designed and implemented specific activities to comply with the IOSCO Principles and the Benchmark Regulation for all STOXX-administered indices.

We have evaluated the effectiveness of STOXX’s governance and processes regarding the International Standard on Assurance Engagements 3000 “Assurance Engagements other than Audits or Reviews of Historical Information” (ISAE 3000 (revised)) and the IOSCO Principles and the Benchmark Regulation.

We have prepared the accompanying description Section 4.1 to set out the details of STOXX’s compliance with the IOSCO Principles (Section 4.1) and the Benchmark Regulation (Section 4.2), together with the related activities in operation throughout the period from 1 January 2020 to 31 December 2020 with respect to the IOSCO Principles and with respect to the Benchmark Regulation. Furthermore, if implementation of compliance with the IOSCO Principles or Benchmark Regulation in any way deviates from the recommendations of the IOSCO Principles or Benchmark Regulation, we have explained why we believe STOXX meets the objectives and functions of the IOSCO Principles or Benchmark Regulation, including the extent to which STOXX relies on the principle of proportionality set forth in the IOSCO Principles.
We confirm that to the best of our knowledge and belief the accompanying description in Sections 4.1 and 4.2 are fairly stated in that it presents the activities undertaken by STOXX to achieve compliance with the IOSCO Principles and the Benchmark Regulation. The criteria we used in making this assertion were that the accompanying description:

(a) Presents how STOXX’s policies and processes with respect to its compliance with the IOSCO Principles and the Benchmark Regulation were designed, implemented and operating effectively throughout the period from 1 January 2020 to 31 December 2020 with respect to the IOSCO Principles and with respect to the Benchmark Regulation.

(b) Does not omit or distort information relevant to the scope of STOXX’s policies and processes being described throughout the period from 1 January 2020 to 31 December 2020 with respect to the IOSCO Principles and with respect to the Benchmark Regulation, while acknowledging that the description is prepared to meet the common needs of a broad range of users and may not therefore include every aspect of STOXX’s policies and processes that individual users may consider important in their own particular environment and circumstances.

Axel Lomholt
General Manager
Zug, 2 March 2022

Dr. Michael Hyzik
Managing Director, Governance, Risk & Compliance
4. Individual Principles/Articles and Responses

4.1. STOXX’s Statement of Compliance with the IOSCO Principles for Financial Benchmarks: Individual Principles and Responses

The information presented in Sections 4.1 and 4.2 below sets out the response of STOXX in terms of how it meets the objectives and functions of the IOSCO Principles for Financial Benchmarks (Section 4.1) as well as the Benchmark Regulation (Section 4.2). The accompanying “Procedures performed by PwC” summarizes the work performed by PwC to validate that the relevant processes and procedures described in STOXX’s response are fairly stated and were effectively performed in the period under examination. This section supports PwC assurance report and STOXX’ management statement as documented in Sections II and III of the report.

As part of the examination of STOXX’s responses, PwC has performed a variety of tests. PwC’s procedures included assessing the risks that the IOSCO/Benchmark Regulation Compliance Statement of STOXX is not fairly presented and that the described activities were not suitably designed and implemented, as well as testing the operating performance of those activities that PwC consider necessary to provide reasonable assurance that the IOSCO and Benchmark Regulation Compliance Statement of STOXX, including the responses to the individual IOSCO Principles and the Benchmark Regulation, set out in Sections 4.1 and 4.2, is fairly stated, in all material respects and that STOXX’s policies and processes with respect to its compliance with the IOSCO Principles and the Benchmark Regulation were designed, and implemented and operating effectively throughout the period from 1 January 2020 to 31 December 2020.

PwC’s procedures also included a validation of the accuracy and consistency of the cross-references established between the IOSCO Principles for Financial Benchmarks (Section 4.1) and the Benchmark Regulation (Section 4.2).

PwC tests included the following procedures, to the extent considered necessary:

> Review of STOXX’s organizational structure (including segregation of functional responsibilities, policy statements, procedures manuals and personnel policies);
> Discussions and enquiry with management and other personnel of STOXX;
> Review of index rulebooks
> Review of contracts with relevant third-party providers;
> Observation of STOXX’s personnel in the performance of their assigned procedures;
> Walk-through of selected processes and controls; and
> Inspection of the evidence of the performed activities and controls.

PwC tests of the operating performance of specific processes and procedures were designed to cover a representative number of cases and occurrences throughout the period from 1 January 2020 to 31 December 2020, for each of the relevant responses listed in Sections 4.1 and 4.2. The types of tests included the following procedures performed on a sample basis and where applicable.
Inquiry

Inquiries seeking relevant information or representation from STOXX's personnel were performed to obtain, among other things:

> Knowledge and additional information regarding the processes and procedures; and
> Corroborating evidence of the performed processes, procedures and activities.

As inquiries were performed for substantially all activities, this test was not mentioned individually for each item listed in these sections.

Inspection

Inspected documents and records indicating performance of the processes, procedures and activities. This included, among other things:

> Inspection of operational reports that age or quantify relevant items and cases to assess whether the relevant items are properly monitored, controlled and resolved on a timely basis;
> Review of source documentation and authorizations, including system processing flows and audit trail, to test propriety of cases processed;
> Examining documents or records for evidence of performance such as the existence of initials or signatures; and
> Inspection of STOXX's systems documentation, such as operations manuals and job descriptions.

Observation

Observed the application or existence of specific activities as represented.

Reperformance

Reperformed the activity to test the accuracy of its operation. This included, among other things:

> Obtaining evidence of the arithmetical accuracy and correct processing of cases by either recomputing STOXX's application computation or performing independent calculations; and
> Reperforming the matching of various system records by independently matching the same records and comparing reconciling items to STOXX prepared reports.

In case the above-mentioned tests result in a finding that is considered a deviation with respect to the relevant IOSCO Principle/BMR Article or STOXX's response, it is reported under the corresponding procedure as an exception. If the identified exception in terms of its materiality is deemed not to significantly impair compliance with the relevant IOSCO Principle/BMR Article or validity of the corresponding STOXX's response, the exception does not lead to a modified conclusion in the auditor's report.
4.1.1. Principle 1: Overall Responsibility of the Administrator

**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.

**STOXX's Response**

STOXX assumes primary responsibility for all stages of index administration for all STOXX-administered indices, such as:

> Definition, maintenance and communication of the index methodologies and any changes in methodologies
> Compilation, publication and distribution of indices
> Ensuring appropriate transparency over discretionary decisions affecting the compilation of indices and the related determination process
> Establishing appropriate governance, oversight and accountability procedures for the index determination process
> Handling of complaints in relation to the indices.

**Procedures performed by PwC and their results**

Reviewed STOXX's Policy “Determination and Dissemination” to validate that responsibility and accountability are allocated to the appropriate departments of STOXX.

Reviewed the operational procedures documents of STOXX, such as the Operational Handbook, and verified that the index determination tasks specified in STOXX's Policy “Determination and Dissemination” were appropriately reflected in those documents.

Inspected evidence that the index governance structure of STOXX had been placed in operation and that the escalation process according to Policy “Determination and Dissemination” had been complied with (the respective testing procedures are described under Principle 5).

For a sample of indices, inspected evidence that periodic index reviews with respect to index construction and methodology execution were performed in accordance with the STOXX policies.

Our procedures regarding index determination process are described under Principle 9.

Our procedures regarding handling of complaints are described under Principle 16.

No exceptions noted.


4.1.2. Principle 2: Oversight of Third Parties

**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.

**STOXX’s Response**

> STOXX may outsource certain activities of the index determination process to third parties; in particular, index calculation and index dissemination. In addition, for some indices, STOXX may outsource determination of index components to specialized third-party financial service providers. A list of outsourcing partners and their roles may be obtained on request from regulations@stoxx.com.

> STOXX has clear written agreements in place with its outsourcing partners in relation to their service provision.

> STOXX monitors the services provided by its outsourcing partners to ensure their compliance with the agreed service levels and standards.

> STOXX ensures through its controls framework that operational risks arising from index administration are duly managed.

> STOXX has outsourced elements of index calculation and dissemination to Deutsche Börse AG. Data centers are locally duplicated to form primary and secondary centers that act as backups of each other. BCM tests with the service providers are conducted yearly and results are documented and reported to STOXX.

**Procedures performed by PwC and their results**

Reviewed DBAG’s Outsourcing Policy and validated that it adequately addressed the recommendations of IOSCO Principle 2.

Obtained a full list of third-party providers of STOXX and enquired about their roles.

On a sample basis, inspected evidence of written arrangements between STOXX and third parties and that they included the elements defined in DBAG’s Outsourcing Policy.

Verified that monitoring instruments, including their time schedule, were defined for all third parties. On a sample basis, inspected evidence that those monitoring measures that were scheduled to take place were effectively performed.
Verified that incidents with third party providers were handled in compliance with the internal incident management requirements.

Inspected evidence that BCM tests with the service providers were conducted and that results were documented. We found in our testing that BCM tests with Deutsche Börse AG were performed.

No exceptions noted.

### 4.1.3. Principle 3: Conflicts of Interest for Administrators

**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 determinations;

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 determinations;

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:

h) 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

i) 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.
STOXX’s Response

> STOXX has created a specific policy for conflicts of interest and is subject to the compliance policies of DBAG, which identify, disclose, mitigate, avoid and manage potential and actual conflicts of interest in general. The STOXX policy on conflicts of interest is reviewed and approved annually. STOXX’s staff certify compliance with these policies upon joining and once per calendar year thereafter.
> Committee members of STOXX governance disclose actual or potential conflicts of interest to the chair of the respective committee at the beginning of each meeting. STOXX’s remuneration policies ensure that all staff who participate in index determination are not directly or indirectly rewarded or incentivized by the levels of the index.
> STOXX does not issue, market, trade or clear securities or financial products on its indices.
> STOXX’s revenue includes fees linked to financial products based on STOXX-administered indices licensed to clients, among which is Eurex Exchange, owned by STOXX’s shareholder, Deutsche Börse AG. However, Eurex Exchange provides only the trading infrastructure and does not hold any positions in the indices themselves.
> STOXX currently has not identified any material conflicts of interest arising from its business relationships or ownership structure. STOXX is committed to disclose such material conflicts of interest should they arise.

Procedures performed by PwC and their results

Reviewed STOXX’s Policy 3 “Conflicts of Interest,” Deutsche Börse AG’s “Compliance Manual” and validated that these policies address the elements recommended by IOSCO Principle 3.

Obtained and reviewed the inventory of potential business conflicts of interest of STOXX and validated that the defined mitigating measures address the described conflicts of interest, as required by IOSCO Principle 3.

For a sample of STOXX employees, inspected evidence that remuneration-related objectives were not linked to index levels.

On a sample basis, inspected evidence of a formal confirmation of compliance with the above policies by new and existing employees and inspected their annual declaration of conflicts of interest.

Inspected evidence on the conflicts-of-interest declaration by the STOXX governance committee members at the beginning of each meeting.

No exceptions noted.

4.1.4. Principle 4: Control Framework

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:

e) 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;

f) 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;

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

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

**STOXX’s Response**

STOXX has implemented a documented risk-based control framework in all areas of the benchmark administration process. Areas include:

i. index design, launch and decommissioning;

ii. changes to index methodology;

iii. periodic index review and adjustment;

iv. index monitoring and surveillance;

v. processing of input data and corporate actions;

vi. incident and unexpected event management;

In addition, the controls framework covers IT general controls, such as controls over access rights, application change management and data security.
The control framework identifies potential risks in the respective business processes in the above areas, determines control objectives that address those risks and defines controls in place to meet those control objectives. The defined controls comprise a range of automated and manual checks and reporting mechanisms and are linked to STOXX's second-and third-level operational procedures.

The underlying input data for the STOXX-administered indices are generally sourced through a variety of data providers.

Where practicable, STOXX sources data from more than one provider in order to improve accuracy and reduce operational dependencies on single providers. STOXX sometimes also supplements vendor data with information sourced through publicly available sources. With respect to the indices' underlying data, STOXX has implemented various quality controls designed to identify abnormal or erroneous inputs for such data as securities prices, foreign exchange rates, fundamental data and corporate actions. If input data are identified as potentially deficient in any of these checks, they are investigated by Operations and are subject to the internal approval process.

Quality of performance of services provided by third parties who provide services to STOXX with respect to an essential element of operation and the index administration process (such as IT system and database maintenance, securities data research and processing, index calculation and index dissemination and their compliance with the contracts and standards set out by STOXX) is monitored by the respective business units.

The documented internal control framework details the adequacy of controls to maintain the integrity and quality of benchmark determination in line with STOXX responses to IOSCO principles and is under the responsibility of the STOXX Index Governance Committee. It is also embedded in the governance and oversight structure of STOXX, as described under Principle 5, and delineates the internal reporting and escalation process.

The STOXX Index Governance committee is responsible for identifying risks in index administration, including conflicts of interest, operational issues and compliance aspects. It is also responsible for regularly reviewing the control framework in terms of its design and operating effectiveness.

The internal controls framework and dedicated organizational measures such as segregation of reporting lines, restricted access to certain information, etc., also aim to mitigate risk of conflicts of interest arising in the index administration process.

STOXX has implemented an internal whistleblowing policy and mechanism for reporting any potential misconduct or irregularities. STOXX staff members are made aware of this policy by means of the intranet and compliance training.

STOXX has implemented a dedicated complaints policy and a procedure that allows stakeholders to lodge their complaints by email. All complaints must be duly investigated, and the complainant must receive a response. Complaints that may result in financial or reputational impact are escalated or subject to review by STOXX's Index Governance Committee or Management Board. Further details are available in the STOXX Complaints Policy.

STOXX has a dedicated human resource policy in place that addresses staff recruitment, onboarding, performance evaluation, training and deputy planning. STOXX business unit managers are responsible for the supervision and training of their staff and for adequate deputy and/or succession planning for all key staff members, with the clear focus of ensuring proper business continuity. STOXX employees are subject to mandatory compliance and conflicts of interest-management training. In addition, depending on their roles in the index administration process, staff members undergo external and internal technical training based on an individual training plan that is reviewed on an annual basis. A standardized comprehensive individual performance assessment takes place on an annual basis.

In the reporting period STOXX did not act as Administrator for a submission-based index.
Obtained the formal documentation of STOXX’s Controls Framework and validated that it covered the relevant areas of the benchmark administration process, such as index design launch and decommissioning; index methodology updates; index review and adjustment; index monitoring; processing of input data and corporate actions; incident and unexpected event management as well as monitoring controls with respect to third parties and outsourced activities.

Validated that individual controls related to the control objectives defined in STOXX’s Controls Framework were suitably designed in order to mitigate the business risks they relate to, were placed in operation and operating effectively.

Validated that IT general controls in the domains of physical access to premises, logical access, application change management and data backup & availability were suitably designed in order to mitigate the business risks they relate to, were placed in operation and operating effectively.

We noted several exceptions in the area of “Index Surveillance and Monitoring” and “Physical Access”, specifically in relation to:

1. Control 2.1.1.2 (Procedures to ensure continuous availability of security identifiers)
2. Control 2.2.1.5 / 2.3.1.4 (Periodic review of index outbound filters)
3. Controls 7.1.3 and 7.1.5 (Periodic review of physical access rights to the restricted STOXX area within the STOXX office building at different locations) where we could not for all cases in our sample be provided with evidence of the effective performance of the control activity.
4. For control 7.1.7 (Physical access for visitors and third parties) where for noted that for 2 locations the evidence provided was non-conclusive on whether the control activity was performed throughout the complete period under review.

No further exceptions noted. Those exceptions are not considered material and the related controls can still be considered operating effectively and the respective control objectives can still be considered as achieved.

Our procedures with respect to the index administration governance and oversight at STOXX are described under Principle 5.

Our procedures with respect to complaints management at STOXX are described under Principle 16.

Reviewed STOXX’s Policy “Whistleblowing” and validated that it adequately addresses the recommendations of IOSCO Principle 4. STOXX has represented to us that no whistleblowing cases occurred during the period of our examination. Therefore, we were unable to validate whether whistleblowing cases had been handled in accordance with STOXX’s Policy.

Reviewed STOXX’s Policy 4B “Qualification and Training” and on a sample basis inspected evidence that the policy had been adhered to in all material aspects.

On a sample basis, inspected evidence that a job-specific training plan was set up for a new employee, that a probation period evaluation was carried out and that the relevant records as required in the STOXX policy were maintained by the HR person responsible at STOXX.

On a sample basis, inspected evidence that an annual employee performance evaluation was conducted.

No exceptions noted.
4.1.5. Principle 5: Internal Oversight

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:

- d) 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 authorizing or requesting the Administrator to undertake a consultation with Stakeholders where 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.
- e) 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:
f) 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 analyzed, or querying the role of the Administrator in challenging or sampling unusual inputs or Submissions;

g) Overseeing the Code of Conduct for Submitters;

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

i) 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.

**STOXX's Response**

STOXX has an appropriate governance structure that oversees all stages of the index administration process. The governance structure is composed of several committees, all of which are assigned specific tasks, and which ultimately report to STOXX Management Board.

As STOXX obtained recognition by the German Federal Financial Supervisory Authority (BaFin) on 31 July 2019 as a third-country administrator in accordance with Art. 32 of the Benchmark Regulation, its governance required a number of amendments in order to comply with all provisions of the Benchmark Regulation.

STOXX's index administration governance framework includes thus the following bodies:

> Management Board (MB)
> Oversight Committee (OC)
> Index Governance Committee (IGC)
> Index Management Committee (IMC)
> Index Operations Committee (IOC)
> Product Approval Committee (PAC)
> Product Initiation Committee (PIC)

In addition, the Advisory Board and Arbeitskreis – composed of external stakeholders – is consulted for specific matters.

The Board of Directors of STOXX Ltd. has delegated the operations of the company as far as possible under the Swiss Code of Obligations to the members of the Management Board. The STOXX Management Board is responsible for implementation, monitoring, and overseeing the activities of STOXX and compliance with the applicable regulations; it comprises the Head of Product – General Manager, the Head of Finance, the Head of Operations, the Head of Engineering and the Head of Governance, Risk and Compliance.

The purpose of the IGC is to oversee all areas of the benchmark determination process and to take final decisions in case Operations, the IOC and the IMC are not capable or allowed to take decisions.

The purpose of the IMC is to oversee decisions made by the IOC and to decide in cases where the IOC has escalated a decision. The second purpose of the IMC is to monitor rules for existing indices and to decide on rule changes, the corresponding impact analysis, development of guidelines for the regular review of index methodologies and the oversight of the results of suitability conducted by Product and Operations. This includes a periodic review of the current index methodology and consideration to terminate.

The purpose of the IOC is to oversee those areas of Operations that deal with daily questions, problems, or issues that arise as a result of the administration of indices. Hence, the overall objective of the IOC is to ensure that the benchmark administration process results in a correct and timely determination, calculation and dissemination of indices. Furthermore, the IOC must define and oversee measures that allow for mitigation of operational risks.

In the reporting period STOXX did not act as Administrator for a submission-based index.
Procedures performed by PwC and their results

Reviewed the STOXX Index Administration Governance framework and the corresponding Terms of Reference of the individual governance and oversight committees and validated that they address the recommendations of IOSCO Principle 5.

Inspected evidence that all oversight committees within STOXX's Index Administration Governance framework had been set up, held meetings as scheduled and acted according to their terms of reference.

On a sample basis, inspected evidence of meetings of the individual governance committees and that the committees have acted in accordance with the defined trigger points for escalation and that the contents of the meetings covered the relevant matters according to their responsibilities/functions.

For a sample of operational incidents, verified whether the incidents were handled in accordance with STOXX's incident management process and, with respect to escalation cases, reviewed the respective committee meeting minutes and validated that:

> The committees acted in accordance with the defined trigger points for escalation.
> The contents of the meetings covered the relevant matters according to their responsibilities/functions.
> The committees acted in accordance with the Terms of Reference.

For 1 out of 8 cases in our sample, we noted that for a case of historical restatement of index values requiring a notification to IGC, no evidence of such notification could be provided to us.

No further exceptions noted.

4.1.6. Principle 6: Benchmark Design

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

STOXX's Response

> STOXX has established dedicated policies, and procedures are in place that regulate the index design process.
> Internal controls with respect to benchmark design are integrated into the STOXX controls framework.
The STOXX-administered indices are constructed, calculated and maintained based on predefined rules. For new indices, the methodology must be designed in a way to ideally achieve synergies in terms of data, processes and procedures. Depending on the underlying interests of the index – for whom and which target group the index is designed – the methodology should also follow certain quality aspects, e.g., diversification of the index composition or restrictions on maximum weightings. During the index design process the simulated results for the index calculation must be reviewed against their ability to adequately measure the interest.

For each new index a detailed methodology and index objective are defined in the Rulebooks. In addition, new indices should be backtested or backcasted (in the case where only limited data are available) using historical data if economically and technically feasible. In the case of new raw data, a data analysis and cleansing must be conducted to ensure adequacy of the sample.

The index methodology must contain rules to capture size, liquidity and the underlying market representation appropriate for the index, provided the respective Interest requires such rules. To ensure that developments in the underlying reference markets are reflected in a timely fashion, the composition and index methodology are periodically reviewed and revised if necessary.

Procedures performed by PwC and their results

Reviewed STOXX’s Policy “Benchmark Design” and validated that it addresses the recommendations of IOSCO Principle 6.

For a sample of newly launched STOXX-administered indices, inspected evidence of compliance with the process and all elements defined in the STOXX policy in response to IOSCO Principle 6.

Inspected evidence on the timely reflection of developments in the underlying reference markets by verifying that the launched indices were subject to periodic index reviews.

Our procedures with respect to the controls framework at STOXX are described under Principle 4 and respectively under Principle 10 for the index review process.

No exceptions noted.

4.1.7. Principle 7: Data Sufficiency

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 behavior 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.

**STOXX's Response**

STOXX has dedicated policies and procedures in place to ensure that the data quality used for index determination purposes is in compliance with IOSCO principles.

The respective data sufficiency provisions are also reflected in the methodology descriptions of specific indices in the index Rulebooks that are available online:

STOXX Rulebooks: [https://www.stoxx.com/rulebooks](https://www.stoxx.com/rulebooks) and
DAX Rulebooks: [http://www.dax-indices.com/resources](http://www.dax-indices.com/resources)

In general, STOXX uses traded prices from regulated exchanges/markets (representing observable bona fide, arms-length transactions) including executable quotes for all of its indices, wherever possible and reasonable.

For any deviations from this rule, such as the use of non-transactional data, a detailed rationale is provided as part of the published index Rulebooks.

In order to prove the accuracy and reliability of the data used in representing the interest measured for index determination, STOXX discloses the nature of the data in the Rulebooks.

In the case of incidents where it is not possible to obtain observable bona fide, arms-length transactions for a specific index (e.g., market disruptions), the hierarchy of data inputs applicable for an index disclosed in the Rulebooks must be followed.

If STOXX determines that transactional data to determine an index are not available or the application of the hierarchy of data inputs would not result in an accurate and reliable representation of the interest measured by the index, the relevant governance structure of STOXX is used.

Management of data sourced from third parties is covered in the response to IOSCO Principle 2.

**Procedures performed by PwC and their results**

Reviewed STOXX's Policy “Data Sufficiency” and validated that it addresses the recommendations of IOSCO Principle 7.

For a sample of indices, inspected evidence that the corresponding index Rulebooks adequately address the provisions of the policy.
Verified the disclosure of the underlying data used for benchmark determination in the index Rulebooks and, where appropriate, a rationale for non-transaction-based input data as described in STOXX's policy.

On a sample basis, inspected evidence that missing transaction-based data were not substituted with non-transactional data and verified that there were no incidents where it was not possible to obtain observable bona fide, “at arms-length” transaction-based data for a specific index as per STOXX policy.

Obtained a written confirmation from STOXX that incidents with regard to missing transaction-based data were subject to a standardized process as defined by the policy.

For a sample of two indices for two days, inspected evidence that underlying market prices are sourced in accordance to the Rulebooks.

On a sample basis, reviewed the price sources used for index calculation and tied them back to formal exchange prices in order to validate that underlying market prices were sourced in accordance to the Rulebooks.

No exceptions noted.

4.1.8. Principle 8: Hierarchy of Data Inputs

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.
STOXX’s Response

STOXX has dedicated policies and procedures in place to ensure that the data hierarchy used for index determination purposes is in compliance with IOSCO principles.

The respective provisions regarding hierarchy of data inputs and exercise of expert judgment are reflected in the methodology descriptions of specific indices and in the index Rulebooks that are available online:

STOXX Rulebooks: https://www.stoxx.com/rulebooks
DAX Rulebooks: www.dax-indices.com/resources

STOXX defines expert judgment as any deviation from published index methodologies, the extrapolation of values from prior or related transactions, the adjustment of values for factors that might influence the quality of data such as market events or impairment of a buyer or seller’s credit quality, or weighting firm bids or offers greater than a particular concluded transaction.

Data filter rules are not considered expert judgment. They are considered a part of the methodology of an index and must be disclosed in the Rulebooks.

In general, STOXX uses traded prices from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all STOXX-administered indices wherever possible and reasonable. For any deviations from this rule, such as the use of non-transactional data, a detailed rationale must be provided as part of the published index methodology of the affected index. As described under Principle 14, indices administered by STOXX are based on data sourced from regulated markets or exchanges with mandatory post-trade transparency requirements and no submission-based indices are currently administered by STOXX.

Procedures performed by PwC and their results

Reviewed STOXX’s Policy “Hierarchy of Data Inputs” and validated that it addresses the recommendations of IOSCO Principle 8.

For a sample of index Rulebooks verified that a clear description of the hierarchy of the data inputs is disclosed in the Rulebooks.

For 1 out of 10 benchmarks and corresponding Rulebooks in our sample, we noted that a clear description of the hierarchy of the data inputs was only included in March 2021. STOXX has represented to us that no significant discretionary expert judgment in relation to input data not otherwise defined in the Rulebooks is applied for the determination of STOXX’s indices.

For a sample of indices, we inspected evidence that no expert judgment was effectively applied with respect to input data.

No further exceptions noted.

4.1.9. Principle 9: Transparency of Benchmark Determinations

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.

**STOXX’s Response**

The indices administered by STOXX are typically derived from data sourced from regulated markets or exchanges that have mandatory post-trade transparency requirements, and they typically do not involve significant expert judgment.

a) The relevant details on index determination are described and disclosed in published Rulebooks of the respective indices.

STOXX Rulebooks: [https://www.stoxx.com/rulebooks](https://www.stoxx.com/rulebooks) and DAX Rulebooks: [www.dax-indices.com/resources](http://www.dax-indices.com/resources)

STOXX provides and publishes a number of documents that describe its benchmark determinations. The following data types provide sufficient transparency for STOXX’s stakeholders to understand the process and data used to make determinations for each relevant benchmark:

> Open quotations
> Index settlement values
> Intraday snapshots data
> Closing data
> Corporate action forecasts
> Monthly reports and selection lists
> Index review lists
> STOXX news and index data notifications

The level of detail varies depending on the nature of the indices and their constituents.

Private clients can have access to data files that are relevant to their own products to allow them to validate and determine the benchmark calculation.

b) For indices that may involve significant expert judgment, STOXX discloses the relevant information with each index determination.

Further information about expert judgment is provided in the response to IOSCO Principle 8.

**Procedures performed by PwC and their results**

Reviewed STOXX’s Policy “Determination and Dissemination” and validated that it addresses the recommendations of IOSCO Principle 9.

For a sample of indices, validated that the index Rulebooks include the relevant details on index determination and comply with the provisions of STOXX’s Policy “Determination and Dissemination.”
For a sample of indices, inspected evidence that STOXX prepared and distributed the information with respect to benchmark determinations as described in STOXX’s response and defined in STOXX’s Policy “Determination and Dissemination” (where applicable).

For a sample of cases where Expert Judgement was used, inspected evidence that a concise explanation was published.

No exceptions noted.

### 4.1.10. Principle 10: Periodic Review

**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.

**STOXX’s Response**

> STOXX has dedicated policies and procedures in place with respect to periodic review of index conditions and parameters.

> Internal controls with respect to index review are integrated into the STOXX controls framework.

> All changes to existing index rules or amendments to index methodologies are updated in the Rulebooks and are published through appropriate communication channels, such as STOXX’s website.

> STOXX has implemented a governance structure with committees and policies to review index methodologies and when stakeholders are to be contacted.

> STOXX constantly monitors the execution of the index calculation rules to ensure the validity of the index methodology. STOXX also conducts general methodology reviews on a periodic and ad-hoc basis to reflect economic and political changes and developments in the investment industry. As a result of these activities, STOXX introduces changes to the methodology books. Material changes are notified to subscribers and the media through the usual communication channels.

**Procedures performed by PwC and their results**

Reviewed STOXX’s Policy “Periodic Review” and validated that it addresses the recommendations of IOSCO Principle 10.

For a sample of indices that had undergone a methodology review, inspected evidence that the periodic index methodology review was carried out by Product Development in accordance with STOXX’s policy.

STOXX has represented to us that no cases of revision of methodologies based on the periodic index methodology review occurred during the period of our examination.

No exceptions noted.
4.1.11. Principle 11: Content of Methodology

**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.

**STOXX’s Response**

STOXX publishes the methodology for all of its administered indices in the index Rulebooks on the STOXX website and ensures that the contents of the methodology meet the requirements of the IOSCO principles.

The index methodologies and the interest that each index seeks to measure are detailed in the STOXX Rulebooks.

Each index methodology is described in the relevant section of an index rulebook.

Stakeholders can access the above information under: http://www.stoxx.com/indices/rulebooks.html and DAX Rulebooks: www.dax-indices.com/resources

STOXX key terms are defined in the STOXX index guide in Chapters 4 and 5 and the overall calculation formulae in the STOXX calculation guide.
The methodologies of STOXX-administered indices outline the selection criteria, weighting scheme and calculation principles used for determination of the benchmarks. They provide sufficient detail to allow stakeholders to understand how an index is derived, to assess its representativeness, its relevance to particular stakeholders and its appropriateness as a reference for financial instruments.

The index methodologies are designed to limit subjectivity and expert judgment.

STOXX is using traded prices including executable quotes from regulated markets and not submission-based data, which are typically prone to subjectivity and the need for expert judgment. In the case of rules being silent or open for interpretation, STOXX has implemented a governance structure to review the individual cases, trigger market consultations and make rule adjustments.

Clients are made aware by email alerts of market disruptions. The handling of extreme market events is published in the Rulebooks and follows the established STOXX governance process.

Procedures are described in the STOXX calculation guide Chapter 9, and STOXX has established an incident management process.

STOXX has implemented a governance structure with committees and policies to review index methodologies and when stakeholders are to be contacted.

STOXX constantly monitors the execution of the index calculation rules to ensure the validity of the index methodology. STOXX also conducts general methodology reviews on a periodic and ad-hoc basis to reflect economic and political changes and developments in the investment industry. As result of these activities, STOXX introduces changes to the methodology books. Material changes trigger a market consultation in accordance to STOXX policy and are notified to subscribers and the media through the usual communication channels. Clarifications of the methodology are updated in the Rulebooks. All changes are tracked in the change log section of each Rulebook.

STOXX-administered indices are constructed to serve as a basis for investment instruments. Clients requiring clarifications on index methodologies can contact the STOXX customer support function. Feedback received from market participants or through the STOXX complaints procedure regarding trading difficulties is evaluated by the internal committees. Any recommendation resulting in a methodology change needs to be approved by the STOXX Index Governance Committee.

As described under Principle 14, indices administered by STOXX are based on data sourced from regulated markets or exchanges with mandatory post-trade transparency requirements and no submission-based indices are currently administered by STOXX.

### Procedures performed by PwC and their results

For a sample of index Rulebooks, verified that the methodology descriptions in the index Rulebooks include the elements recommended by IOSCO Principle 11 and comply with STOXX's Policy “Content of Methodology.”

In particular:

a) Verified that the Rulebooks include the definition of key terms.

b) Verified that the Rulebooks include selection criteria, weighting scheme and calculation principles used for determination of the benchmarks and provide sufficient detail to understand how an index is derived.

c) Verified that practices to promote consistent exercise of Expert Judgment for the benchmark determination were implemented.

d) Verified that the Rulebooks include clear provisions with respect to handling of extreme market events.

e) Verified that procedures for dealing with error reports are disclosed in the Rulebooks and are subject to the incident management process.
f) Verified that information regarding the frequency for internal reviews and approvals of the methodology are disclosed in the Rulebooks.
g) Verified that circumstances and procedures under which STOXX will consult with stakeholders are disclosed in the Rulebooks.
h) Verified that the Rulebooks include the definition of key terms of the index, including potential limitations.

No exceptions noted.

4.1.12. Principle 12: Changes to Methodology

IOSCO Principle 12

An Administrator should Publish or Make Available the rationale of any proposed material change 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.

STOXX’s Response

> Changes to the methodology of indices administered by STOXX are disclosed through the STOXX website.

> The internal control framework of STOXX ensures that changes to the index methodology follow the STOXX policies and are subject to the appropriate oversight and stakeholder consultation. (Changes to Methodology Policy, Consultation Policy).

> STOXX has implemented a governance structure with committees and policies to review index methodologies, when stakeholders are to be contacted and when and how to publish any changes. All material methodology changes need to be approved by the STOXX IGC.

> Clarifications of the methodology are updated in the Rulebooks. All changes are tracked in the change log section of each Rulebook.

> In case of Changes to Methodology as described in STOXX Changes to Methodology Policy, STOXX consults with reasonably affected stakeholders (“Stakeholders”) prior to take decision.
Apart from material changes to the methodology where a consultation is required in all cases, the IGC is responsible for evaluating the necessity for consulting the Advisory Board or any other external stakeholders. The timing and duration of the consultation period is determined by the IGC and is dependent on the proposed change in methodology. A summary of the stakeholders' comments and STOXX's summary response to those comments is made available to all stakeholders after any given consultation period, except where the commenter has requested confidentiality.

In case of any proposed material change in its methodology, STOXX shall share its view on the key elements of the methodology that will be impacted by a proposed material change. Furthermore, STOXX shall include an assessment as to whether the representativeness of the benchmark and its appropriateness for its intended use are put at risk in case the proposed material change is not put in place.

All material methodology changes should generally be publicly announced three months prior to implementation, except for urgent or distressed situations where the timing of the announcement must be determined by the IGC ad-hoc or in situations where there is no stakeholder impact and where immediate communication is possible. All rule changes including changes in distress situations will require a minimum notice period of one full trading day. On request, STOXX provides detailed information about the nature and rationale of the change as well as the implications and terms of the new methodology to enter into force.

Procedures performed by PwC and their results

For a sample of indices that had undergone a methodology change in the period under examination, inspected evidence that the methodology change management adhered to the process defined in STOXX's Policy “Changes to Methodology”.

On a sample basis, inspected evidence that methodology changes had been publicly announced three months prior to implementation or in accordance with STOXX's Policy to shorten the notice period.

On a sample basis, inspected evidence of the availability of detailed information about the nature and rationale of the methodology change that can be provided on request.

For the above sample, inspected evidence that methodology changes had been approved by the appropriate Committee as defined in STOXX's policies and Terms of References.

On a sample basis, inspected evidence that for material methodology changes a consultation was performed.

No exceptions noted.

4.1.13. Principle 13: Transition

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.

**STOXX’s Response**

STOXX has put a dedicated policy (“Benchmark Transition Policy”) in place that regulates transitions and cessations of indices administered by STOXX. This policy can be obtained from [https://www.stoxx.com/index-regulations](https://www.stoxx.com/index-regulations) and [www.dax-indices/indexregulations](http://www.dax-indices/resources).

STOXX has integrated into its Rulebooks an index termination process: [http://www.stoxx.com/indices/rulebooks.html](http://www.stoxx.com/indices/rulebooks.html) and [www.dax-indices/resources](http://www.dax-indices/resources).

In general, any STOXX department can identify the need for decommissioning an index and submit a proposal to Product. The decision to decommission an index is made by the IGC in accordance with the terms of reference.

Due to changing economic or regulatory realities, market demand or internal product offering strategies, STOXX must periodically evaluate the need for the following:

a. Benchmark transition: Launching of a new benchmark that is supposed to replace an old benchmark;
b. Benchmark cessation: Permanent discontinuation of the dissemination and publication of a benchmark without offering a replacement. The guidelines for the cessation of a benchmark are defined by the IGC in accordance with the terms of reference.
c. The detailed process of how a benchmark is decommissioned and the corresponding internal controls are outlined in the process flowchart and controls matrix “benchmark transition/cessation.”
Before decommissioning a benchmark, STOXX must always determine whether there are any listed financial products or license agreements issued on that benchmark as the underlying.

For the transition of a benchmark or benchmark family for which listed financial products are issued in the market, STOXX will perform a market consultation in accordance to STOXX Consultation Policy.

For the cessation of a benchmark or benchmark family for which listed financial products are issued in the market, STOXX will perform a market consultation in accordance to STOXX Consultation Policy.

In case of a benchmark transition as described in the STOXX Benchmark Transition Policy (the “Relevant Changes”), STOXX consults with reasonably affected stakeholders prior to taking a decision.

When it is discontinuing an index without launching a new one, STOXX considers whether to recommend using an alternative credible index. Criteria to be considered are matching characteristics of the discontinued index, differentials between indices, the extent to which an alternative index meets the needs of stakeholders, whether the alternative index is investable, availability of transparent transaction data, impact on stakeholders and impact of existing legislation.

Subscribers or other stakeholders are informed about a cessation or transition of an index at least three months in advance. A press release and email to subscribers or other stakeholders must be issued giving detailed information about the nature and rationale of the cessation and transition as well as the date on which the index is to be decommissioned. The press release and email must also inform subscribers or other stakeholders that there will be no replacement of the index and whether STOXX suggests the use of alternative indices.

The duration of the transition is approved by the IGC.

A summary of the stakeholders’ comments and STOXX’s summary response to those comments must be made available upon request to all stakeholders after any given consultation period, except where the commenter has requested confidentiality.

**Procedures performed by PwC and their results**

Reviewed STOXX’s Policy “Benchmark Transition” and validated that it addresses the recommendations of IOSCO Principle 13.

For a sample of terminated Indices, inspected that the process of cessation was conducted in accordance with STOXX’s Policy “Index Transition”.

Inspected a sample index license agreement and noted that it includes a provision stating that STOXX has the right to materially change or decommission an index at any time and that for such cases subscribers or other stakeholders who have financial instruments that refer to the index are responsible for implementing robust fallback provisions (e.g., early redemption of the financial instruments issued on the index).

No exceptions 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.

**STOXX's Response**

> In general, STOXX uses traded prices from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all STOXX-administered indices wherever possible and reasonable. For any deviations from this rule, such as the use of non-transactional data, a detailed rationale must be provided as part of the published index methodology of the affected index.

> Therefore, no submission-based indices are currently administered by STOXX.
Procedures performed by PwC and their results

No procedures were performed because excluded from the scope.

4.1.15. Principle 15: Internal Controls over Data Collection

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.

STOXX’s Response

STOXX collects underlying data from stock exchanges and a variety of market data vendors. Within its internal controls framework, STOXX has implemented appropriate internal control procedures with respect to the collection and processing of the underlying index data. For further details, see the response to Principle 4.

Procedures performed by PwC and their results

Obtained the formal documentation of STOXX’s Controls Framework and validated that it covers the relevant controls with respect to input data collection as well as monitoring controls over third-party data providers.

Validated that individual controls related to the control objectives defined in STOXX’s Controls Framework with respect to input data collection were suitably designed in order to mitigate the business risks they relate to and were placed in operation.

Our procedures with respect to the internal controls framework of STOXX are described in detail under Principle 4.

No exceptions noted.

4.1.16. Principle 16: Complaints Procedures

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.

**STOXX’s Response**

STOXX has implemented a dedicated complaints policy and a procedure that allows stakeholders to lodge their complaints in a user-friendly manner via the STOXX website or by email. All complaints must be duly investigated and a response given to the complainant. Complaints that may result in financial or reputational impact are escalated or subject to review by the STOXX IGC or Management Board. Further details are available in the STOXX Complaints Policy.

As described under Principle 14, indices administered by STOXX are based on data sourced from regulated markets or exchanges with mandatory post-trade transparency requirements and no submission-based indices are currently administered by STOXX.

**Procedures performed by PwC and their results**

Reviewed STOXX’s Policy “Complaints Procedures” and validated that it addresses the recommendations of IOSCO Principle 16.

For a sample of complaints, inspected evidence that complaints have been treated in accordance with the Policy “Complaints Procedures”.

No exceptions noted.

**4.1.17. Principle 17: Audits**

**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.

STOXX’s Response

STOXX has appointed PwC to perform an audit of compliance of STOXX with the IOSCO Principles. Given that STOXX's indices are designed to be replicated by clients, STOXX does not deem it necessary to undergo additional audits with respect to adherence to index methodologies.

Procedures performed by PwC and their results

We have been engaged to conduct an examination of STOXX's responses in relation to compliance with the IOSCO Principles for Financial Benchmarks and provide a reasonable assurance opinion on whether the relevant responses have been fairly stated.

4.1.18. Principle 18: Audit Trail

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.

**STOXX’s Response**

STOXX has implemented a dedicated policy with respect to storage and archiving of data and information that are used in the process of index administration. This policy complies with the regulatory requirements and the IOSCO Principles.

Written records are retained for at least five years with respect to the following data within STOXX or with the support of the shareholders’ systems:

a) All market data and any other data and information sources relied upon for index determination are kept for at least five years, in particular:
   > End-of-day index values (ticks)
   > End-of-day prices of index constituents
   > Parameterization of in- and outbound filters
   > End-of-day index configuration (weightings, etc.)

STOXX does not archive real-time input data because of the following factors:
   > Stakeholders can typically obtain real-time/intra-day data from the established information service providers.
   > The headline indices of STOXX are replicated and monitored by a large range of market participants, ensuring the correctness of the indices instantaneously.
   > Applicable law does not impose an obligation on STOXX to archive real-time/intra-day data.

b) In general, for STOXX-administered indices, STOXX uses traded prices from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all of its indices wherever possible and reasonable. The decision-making process for the exercise of expert judgment made in reaching a benchmark determination is determined by the governance structure of STOXX. STOXX stores this information within the minutes of the relevant committee (IOC, IMC or IGC).

c) The governance structure of STOXX is designed to deal with situations where rules of STOXX-administered indices do not contain sufficient information or the rules are open to interpretation. In these cases, the IOC will be convened; in more complex cases, the IMC will be notified by the IOC. The details of any decisions are documented within the minutes of the relevant committee and are retained for at least five years.

d) STOXX has a clear organizational and governance structure; the roles and responsibilities of each individual involved in the index administration process are defined and documented. The Index Operations teams have a dedicated shift program; within this, individuals are responsible for checklists for end-of-day and real-time index production. The checklists and any appropriate authorizations are stored for at least five years.

e) Any correspondence from customers or shareholders relating to data inputs is stored in a database or within the STOXX email system. These records are stored for at least five years.

As described under Principle 14, indices administered by STOXX are based on data sourced from regulated markets or exchanges with mandatory post-trade transparency requirements and no submission-based indices are currently administered by STOXX.
Procedures performed by PwC and their results

Reviewed STOXX’s Policy 18 “Record-keeping” and validated that it addresses the recommendations of IOSCO Principle 18.

Response a):
On a sample basis, inspected the availability of the data elements and information specified in STOXX’s response and Policy “Record-keeping” (“a” through “e” of the STOXX policy) and verified that those data are stored for at least five years as defined by the policy.

For one case, inspected evidence of a formal record sharing agreement that exists between the exchange where the underlying constituents price data is stored and STOXX.

Responses b) – c):
Inspected evidence that the information described in STOXX’s response is documented in the governance committee meeting minutes and that those minutes are retained.

Response d):
Reviewed STOXX’s staff planning tool and checklists of controls and processes carried out during the index production process and validated that those records were retained as specified by the policy.

Response e):
For a sample of client emails, inspected evidence that they were retained as specified by the policy.

No exceptions noted.

4.1.19. Principle 19: Cooperation with Regulatory Authorities

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.

STOXX’s Response

STOXX obtained recognition by the German Federal Financial Supervisory Authority (BaFin) on 31 July 2019 as a third-country administrator in accordance with Art. 32 of the EU Benchmarks Regulation (EU-BMR).

Upon request, STOXX provides access to any information required by Regulatory Authorities in carrying out their regulatory or supervisory duties.

Procedures performed by PwC and their results

Verified that STOXX provided access with respect to information to the relevant regulators.

No exceptions noted.
4.2. STOXX’s Statement of Compliance with the EU-BMR: Individual Articles and Responses

Section 4.2. describes those provisions of the EU-BMR STOXX believes to be relevant for its administered benchmarks within the meaning of Art. 3 (1) 5 EU-BMR throughout the period from 1 January 2020 to 31 December 2020.

The table below shows the selected EU-Benchmark Regulation provisions (taken from EU 2016/1011 together with EU 2019/2089) together with their applicability to the benchmarks administered by STOXX and a commentary on how STOXX complies with the respective provisions. Those articles which are labelled as not applicable are cases that do not apply to the benchmarks administered by STOXX for the period from 1 January 2020 to 31 December 2020:

<table>
<thead>
<tr>
<th>Article</th>
<th>Article Description</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title II Benchmark Integrity and Reliability</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article 4</td>
<td>Governance and Conflict of Interest Requirements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 5</td>
<td>Oversight Function Requirements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 6</td>
<td>Control Framework Requirements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 7</td>
<td>Accountability Framework Requirements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 8</td>
<td>Record-keeping Requirements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 9</td>
<td>Complaints-handling Mechanism</td>
<td>✓</td>
</tr>
<tr>
<td>Article 10</td>
<td>Outsourcing</td>
<td>✓</td>
</tr>
<tr>
<td>Article 11</td>
<td>Input Data</td>
<td>✓</td>
</tr>
<tr>
<td>Article 12</td>
<td>Methodology</td>
<td>✓</td>
</tr>
<tr>
<td>Article 13</td>
<td>Transparency of Methodology</td>
<td>✓</td>
</tr>
<tr>
<td>Article 14</td>
<td>Reporting of Infringements</td>
<td>✓</td>
</tr>
<tr>
<td>Article 15</td>
<td>Code of Conduct</td>
<td>X</td>
</tr>
<tr>
<td>Article 16</td>
<td>Governance and Control Requirements for Supervised Contributors</td>
<td>X</td>
</tr>
<tr>
<td><strong>Title III Requirements for Different Types of Benchmarks</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article 17</td>
<td>Interest Rate Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 18</td>
<td>Commodity Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 19a</td>
<td>EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks</td>
<td>✓</td>
</tr>
<tr>
<td>Article 19b</td>
<td>Requirements for EU Climate Transition Benchmarks</td>
<td>✓</td>
</tr>
<tr>
<td>Article 19c</td>
<td>Exclusions for EU Paris-aligned Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 19d</td>
<td>Endeavour to provide EU Climate Transition Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 20</td>
<td>Critical Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 21</td>
<td>Mandatory Administration of a Critical Benchmark</td>
<td>X</td>
</tr>
<tr>
<td>Article 22</td>
<td>Mitigation of Market Power of Critical Benchmark Administrators</td>
<td>X</td>
</tr>
<tr>
<td>Article 23</td>
<td>Mandatory Contribution to a Critical Benchmark</td>
<td>X</td>
</tr>
<tr>
<td>Article 24</td>
<td>Significant Benchmarks</td>
<td>✓</td>
</tr>
<tr>
<td>Article 25</td>
<td>Exemptions from Specific Requirements for Significant Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Article 26</td>
<td>Non-significant Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td><strong>Title IV Transparency and Consumer Protection</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Article 27</td>
<td>Benchmark Statement</td>
<td>✓</td>
</tr>
<tr>
<td>Article 28</td>
<td>Changes to and Cessation of a Benchmark</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Title VIII Transitional and Final Provisions</strong></td>
<td></td>
<td></td>
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<tr>
<td>Annex I</td>
<td>Interest Rate Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Annex II</td>
<td>Commodity Benchmarks</td>
<td>X</td>
</tr>
<tr>
<td>Annex III</td>
<td>EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks</td>
<td>✓</td>
</tr>
</tbody>
</table>

✓ U-BMR requirement applicable  X U-BMR requirement not applicable
4.2.1. Article 4: Governance and Conflict of Interest Requirements

EU-BMR Provision

1. An administrator shall have in place robust governance arrangements which include a clear organizational structure with well-defined, transparent and consistent roles and responsibilities for all persons involved in the provision of a benchmark.

Administrators shall take adequate steps to identify and to prevent or manage conflicts of interest between themselves, including their managers, employees or any person directly or indirectly linked to them by control, and contributors or users, and to ensure that, where any judgement or discretion in the benchmark determination process is required, it is independently and honestly exercised.

2. The provision of a benchmark shall be operationally separated from any part of an administrator's business that may create an actual or potential conflict of interest.

3. Where a conflict of interest arises within an administrator due to the latter's ownership structure, controlling interests or other activities conducted by any entity owning or controlling the administrator or by an entity that is owned or controlled by the administrator or any of the administrator's affiliates, that cannot be adequately mitigated, the relevant competent authority may require the administrator to establish an independent oversight function which shall include a balanced representation of stakeholders, including users and contributors.

4. If such a conflict of interest cannot be adequately managed, the relevant competent authority may require the administrator to either cease the activities or relationships that create the conflict of interest or cease providing the benchmark.

5. An administrator shall publish or disclose all existing or potential conflicts of interest to users of a benchmark, to the relevant competent authority and, where relevant, to contributors, including conflicts of interest arising from the ownership or control of the administrator.

6. An administrator shall establish and operate adequate policies and procedures, as well as effective organizational arrangements, for the identification, disclosure, prevention, management and mitigation of conflicts of interest in order to protect the integrity and independence of benchmark determinations. Such policies and procedures shall be regularly reviewed and updated. The policies and procedures shall take into account and address conflicts of interest, the degree of discretion exercised in the benchmark determination process and the risks that the benchmark poses, and shall:

   (a) ensure the confidentiality of information contributed to or produced by the administrator, subject to the disclosure and transparency obligations under this Regulation; and
   (b) specifically mitigate conflicts of interest due to the administrator's ownership or control, or due to other interests in the administrator's group or as a result of other persons that may exercise influence or control over the administrator in relation to determining the benchmark.

7. Administrators shall ensure that their employees and any other natural persons whose services are placed at their disposal or under their control and who are directly involved in the provision of a benchmark:

   (a) have the necessary skills, knowledge and experience for the duties assigned to them and are subject to effective management and supervision;
   (b) are not subject to undue influence or conflicts of interest and that the compensation and performance evaluation of those persons do not create conflicts of interest or otherwise impinge upon the integrity of the benchmark determination process;
(c) do not have any interests or business connections that compromise the activities of the administrator concerned;
(d) are prohibited from contributing to a benchmark determination by way of engaging in bids, offers and trades on a personal basis or on behalf of market participants, except where such way of contribution is explicitly required as part of the benchmark methodology and is subject to specific rules therein; and
(e) are subject to effective procedures to control the exchange of information with other employees involved in activities that may create a risk of conflicts of interest or with third parties, where that information may affect the benchmark.

8. An administrator shall establish specific internal control procedures to ensure the integrity and reliability of the employee or person determining the benchmark, including at least internal sign-off by management before the dissemination of the benchmark.

STOXX's Response

1. This EU-BMR provision is materially the same as IOSCO Principles 3 and 5, therefore STOXX's response can be found under the respective principles in Section 4.1.

STOXX already put in place a robust governance regime under the IOSCO Principles for Financial Benchmarks since 2014. This setup was further revised in order to meet specific provisions of this Regulation and consists of the following governance bodies and committees:

1. Management Board ("MB"): Responsible for implementation, monitoring, and overseeing the activities of STOXX (incl. the provision of benchmarks) and compliance with the applicable regulations.
2. Oversight Committee: Set up to carry out activities as defined under Article 5 of EU BMR and is responsible for overseeing the provision of benchmarks in accordance with the IOSCO Principles and the EU BMR;
3. Index Governance Committee ("IGC"): The purpose of the Index Governance Committee is to oversee the activities of the other committees in respect to the provision of a benchmark, to take final decision after escalation and to provide supporting information to the Oversight Committee ("OC"), Management Board ("MB") and Board of Directors ("BoD"), as described in the relevant Terms of References;
4. Index Management Committee ("IMC"): Responsible for overseeing certain areas of the provision of benchmarks and providing supporting information to the IGC and OC to enable them in their work;
5. Index Operations Committee ("IOC"): Responsible for overseeing certain areas of the provision of benchmarks and providing supporting information to the IGC and OC to enable them in their work;
6. Product Initiation Committee ("PIC"): Responsible for the approval of internal, strategic or client requests, where Product Development and Operations believe there is a significant impact;
7. Product Approval Committee ("PAC"): Responsible for the approval of a launch of new products. The PAC is responsible for the approval of launch of new products and is composed by senior management of STOXX whose integrity and reliability is thoroughly checked.


2. This EU-BMR provision is materially the same as IOSCO Principles 3 and 4, therefore STOXX's response can be found under the respective principles in Section 4.1.

3. Being a global index provider, conflicts of interest may arise in the process of provision of a benchmark or as STOXX Ltd. is part of Deutsche Börse Group, conflicts of interest may arise due to the ownership structure. Thus, appropriate actions to mitigate any actual or potential conflicts of interest have been
determined to ensure that the respective conflict of interest does not negatively affect STOXX Ltd. and its individuals. The mitigating measures are described under https://www.stoxx.com/document/Resources/Regulation/Conflict_of_Interest_STOXX_Ltd..pdf

4. See above.

5. STOXX disclosed its potential conflicts of interest register to the relevant authority.

   In addition, STOXX updated its published Conflicts of Interest Policy in March 2021 to include all existing or potential conflicts of interests.

6. This EU-BMR provision is materially the same as IOSCO Principle 3, therefore STOXX's response can be found under the respective principles in Section 4.1.

7. This EU-BMR provision is materially the same as IOSCO Principles 3 and 4, therefore STOXX's response can be found under the respective principles in Section 4.1.

8. As laid down under IOSCO Principle 4 “Control Framework”, STOXX has implemented a documented risk-based control framework in all areas of the benchmark administration process including index design, launch and decommissioning as well as changes to index methodology.

   Further, any decisions to proceed with the launch of a new or change to an existing benchmark methodology are exclusively taken by the STOXX governance regime including final sign-off by management before initial dissemination of any benchmark. Specifically, the PAC is responsible for the approval of launch of new products which is composed inter alia of members of STOXX' Management Board. As per Terms of Reference (“ToR”) of the PAC, its members are required to disclose any conflict of interests before the discussion of an agenda item during meetings of the PAC and ensure their recording in the minutes of the PAC meeting.

**Procedures performed by PwC and their results**

1. Please refer to our procedures with respect to IOSCO Principles 3 and 5 in Section 4.1.

2. Please refer to our procedures with respect to IOSCO Principles 3 and 4 in Section 4.1.

3. Please refer to our procedures with respect to IOSCO Principle 3 in Section 4.1 and Art. 5 BMR in Section 4.2.

   Obtained and reviewed the inventory of potential business conflicts of interest of STOXX and validated that the defined mitigating measures address the described conflicts of interest, as required by IOSCO Principle 3.

   No exceptions noted.

4. See above.

5. Inspected evidence that STOXX disclosed the register of existing or potential conflicts of interest to the relevant competent authority.

   We noted that the updated conflict of interest policy including existing or potential conflicts of interest was only disclosed to users of a benchmark in March 2021.

   No further exceptions noted.
6. Please refer to our procedures with respect to IOSCO Principle 3 in Section 4.1.

7. Please refer to our procedures with respect to IOSCO Principles 3 and 4 in Section 4.1.
   No exceptions noted.

8. On a sample basis, inspected evidence of PAC meetings including members of STOXX’ management and that any benchmark methodology was approved by PAC before initial dissemination.
   No exceptions noted.

4.2.2. Article 5: Oversight Function Requirements

EU-BMR Provision

1. Administrators shall establish and maintain a permanent and effective oversight function to ensure oversight of all aspects of the provision of their benchmarks.

2. Administrators shall develop and maintain robust procedures regarding their oversight function, which shall be made available to the relevant competent authorities.

3. The oversight function shall operate with integrity and shall have the following responsibilities, which shall be adjusted by the administrator based on the complexity, use and vulnerability of the benchmark:
   (a) reviewing the benchmark's definition and methodology at least annually;
   (b) overseeing any changes to the benchmark methodology and being able to request the administrator to consult on such changes;
   (c) overseeing the administrator's control framework, the management and operation of the benchmark, and, where the benchmark is based on input data from contributors, the code of conduct referred to in Article 15;
   (d) reviewing and approving procedures for cessation of the benchmark, including any consultation about a cessation;
   (e) overseeing any third party involved in the provision of the benchmark, including calculation or dissemination agents;
   (f) assessing internal and external auditors reviews, and monitoring the implementation of identified remedial actions;
   (g) where the benchmark is based on input data from contributors, monitoring the input data and contributors and the actions of the administrator in challenging or validating contributions of input data;
   (h) where the benchmark is based on input data from contributors, taking effective measures in respect of any breaches of the code of conduct referred to in Article 15; and
   (i) reporting to the relevant competent authorities any misconduct by contributors, where the benchmark is based on input data from contributors, or administrators, of which the oversight function becomes aware, and any anomalous or suspicious input data.

4. The oversight function shall be carried out by a separate committee or by means of another appropriate governance arrangement.
STOXX's Response

1. At STOXX, the oversight function is carried out by the separate STOXX Oversight Committee (OC) that is composed of important stakeholders and independent experts.

All tasks and responsibilities of the OC are governed by its Terms of Reference covering all duties including all duties required by EU-BMR. Further information relating to the composition and tasks of the OC can be found under https://www.stoxx.com/document/Resources/Regulation/STOXX_Governance_Structure.pdf

Oversight Committee meets quarterly and, if necessary, on an ad-hoc basis.

2. STOXX developed and implemented
   a) dedicated Terms of Reference for the OC; and
   b) a Tasks List the OC is required to address during meetings.

IGC, IMC and IOC are responsible for preparation of relevant subject matter information and provision of required documentation for the OC to fulfil its tasks in accordance with article 5 EU-BMR.

3. Based on STOXX' OC Terms of Reference and on the specific OC Task List, the OC has the following responsibilities which were initiated in July 2019 and are currently regularly performed:
   a) reviewing the benchmark's definition and methodology at least annually to review all benchmark methodologies annually;
   b) overseeing any changes to the benchmark methodology and being able to request the administrator to consult on such changes;
   c) overseeing the administrator's control framework, the management and operation of the benchmark, and, where the benchmark is based on input data from contributors, the code of conduct referred to in Article 15;
   d) reviewing and approving procedures for cessation of the benchmark, including any consultation about a cessation;
   e) overseeing any third party involved in the provision of the benchmark, including calculation or dissemination agents;
   f) assessing internal and external auditors reviews, and monitoring the implementation of identified remedial actions;
   g) and h) STOXX does currently not administer any benchmarks based on input data from contributors.
   i) Any misconduct by the administrator or anomalous or suspicious input data that the OC becomes aware of are reported to the competent authorities.

Reviews and any feedback are documented by the OC in its meeting minutes.

4. STOXX' OC forms part of STOXX' organizational structure but is distinctly separated from the management body and other governance functions.

Procedures performed by PwC and their results

1. Reviewed STOXX's Oversight function and the corresponding Terms of Reference and validated that they address the requirements of Art. 5 EU-BMR.

Reviewed composition of the oversight function and whether it adequately addresses the provisions of Commission Delegated Regulation EU 2018/1637 Art. 1.

Inspected evidence that STOXX's oversight function had been set up and held meetings as scheduled.

No exceptions noted.
2. Validated that the procedures governing the oversight function include at least those stipulated by the provisions of Commission Delegated Regulation EU 2018/1637 Art. 3(1).

No exceptions noted.

3. Reviewed the Terms of Reference of the Oversight function and validated that the responsibilities as laid down in the provisions of Art. 5 (3) EU-BMR are addressed. Further, we validated that those requirements were also standing agenda items to all meetings held by the STOXX OC.

No exceptions noted.

g) and h) No procedures were performed because these provisions are not applicable.

i) Inspected all OC meeting minutes during the period under examination and found no evidence of cases of misconduct by the administrator or suspicious input data requiring reporting to the relevant authority being discussed by the OC.

No exceptions noted.

4. Validated that the oversight function of STOXX is aligned with the provisions of Commission Delegated Regulation EU 2018/1637 Art. 2.

No exceptions noted.

4.2.3. Article 6: Control Framework Requirements

<table>
<thead>
<tr>
<th>EU-BMR Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Administrators shall have in place a control framework that ensures that their benchmarks are provided and published or made available in accordance with this Regulation.</td>
</tr>
<tr>
<td>2. The control framework shall be proportionate to the level of conflicts of interest identified, the extent of discretion in the provision of the benchmark and the nature of the benchmark input data.</td>
</tr>
<tr>
<td>3. The control framework shall include:</td>
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<tr>
<td>(a) management of operational risk;</td>
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<tr>
<td>(b) adequate and effective business continuity and disaster recovery plans;</td>
</tr>
<tr>
<td>(c) contingency procedures that are in place in the event of a disruption to the process of the provision of the benchmark.</td>
</tr>
<tr>
<td>4. An administrator shall establish measures to:</td>
</tr>
<tr>
<td>(a) ensure that contributors adhere to the code of conduct referred to in Article 15 and comply with the applicable standards for input data;</td>
</tr>
<tr>
<td>(b) monitor input data including, where feasible, monitoring input data before publication of the benchmark and validating input data after publication to identify errors and anomalies.</td>
</tr>
<tr>
<td>5. The control framework shall be documented, reviewed and updated as appropriate and made available to the relevant competent authority and, upon request, to users.</td>
</tr>
</tbody>
</table>
1. This EU-BMR provision is materially the same as IOSCO Principle 4, therefore STOXX’s response can be found under the respective principles in Section 4.1.

2. STOXX has implemented comprehensive policies, procedures, and a dedicated controls framework to monitor the activities of the provision of a benchmark, also taking into consideration the level of conflict of interest identified, the extent of discretion in the provision of the benchmark and the nature of the benchmark input data.

The policies and procedures to monitor the activities of the benchmark provision can be classified into two main areas:

A. Benchmark Development Policies
   1. Benchmark Design
   2. Content of Methodology
   3. Changes of Methodology
   4. Transition and Cessation
   5. Periodic Review

B. Benchmark Management Policies
   1. Determination and Dissemination
   2. Data Sufficiency Policy
   3. Hierarchy of Data Inputs
   4. Record-keeping
   5. Business Continuity Management

The STOXX internal control framework addresses all activities conducted by STOXX employees to ensure that all risks inherent to the process of the provision of a benchmark are adequately mitigated (“STOXX Control Framework”). It includes the relevant controls that ensure that a benchmark is determined, disseminated, and published correctly and compliant with the applicable policies and procedures.

This control framework is reviewed at least annually by the IGC and OC.

3. (a) This EU-BMR provision is materially the same as IOSCO Principle 4, therefore STOXX’s response can be found under the respective principles in Section 4.1.

(b) STOXX established an effective business continuity plan and disaster recovery plan.

Contingency plans for determining and publishing a benchmark on a temporary basis are governed by the DBG Business Continuity Management Policy which also applies to STOXX. It describes principles and processes to ensure STOXX’s ability to plan for and respond to incidents and business disruptions in order to continue business operations at an acceptable predefined level. It addresses the unavailability of all the resources required to operate systems, workspace, staff, external dependencies and suppliers.

> Data centres are duplicated locally to form primary and secondary centres acting as back-ups of each other. The local data centres are interconnected with high-speed optical data links to provide real-time data mirroring.

> Processes are in place for workplace and employee unavailability.

(c) See Article 6 (3) b above.

4. (a) Not applicable as STOXX does currently not administer any benchmarks based on input data from contributors.
(b) This EU-BMR provision is materially the same as IOSCO Principle 4, therefore STOXX's response can be found under the respective principles in Section 4.1.

5. This EU-BMR provision is materially the same as IOSCO Principle 4, therefore STOXX's response can be found under the respective principles in Section 4.1.

STOXX' control framework has been made available to BaFin and upon request, STOXX provides its control framework to users.

For further information, see also Art. 6 (2) EU-BMR.

### Procedures performed by PwC and their results

1. Please refer to our procedures with respect to IOSCO Principle 4 in Section 4.1.

2. See above.

3. (a) Please refer to our procedures with respect to IOSCO Principle 4 in Section 4.1.

   (b) Validated that Business Continuity Management process is in line with the description as per STOXX response.

   No exceptions noted.

   (c) See above.

4. (a) No procedures were performed because these provisions are not applicable.

   (b) Please refer to our procedures with respect to IOSCO Principle 4 in Section 4.1.

5. Please refer to our procedures with respect to IOSCO Principle 4 in Section 4.1.

   STOXX has represented to us that during the period under examination there were no requests by users to be provided with the control framework.

### 4.2.4. Article 7: Accountability Framework Requirements

#### EU-BMR Provision

1. An administrator shall have in place an accountability framework, covering record-keeping, auditing and review, and a complaints process, that provides evidence of compliance with the requirements of this Regulation.

2. An administrator shall designate an internal function with the necessary capability to review and report on the administrator's compliance with the benchmark methodology and this Regulation.

3. For critical benchmarks, an administrator shall appoint an independent external auditor to review and report on the administrator's compliance with the benchmark methodology and this Regulation, at least annually.
4. Upon the request of the relevant competent authority, an administrator shall provide to the relevant competent authority the details of the reviews and reports provided for in paragraph 2. Upon the request of the relevant competent authority or any user of a benchmark, an administrator shall publish the details of the audits provided for in paragraph 3.

**STOXX’s Response**

1. STOXX approved and implemented a Control Framework indicating the Controls Owners accountable for record-keeping, auditing and review and complaints processing. Furthermore, a Record Keeping Policy, a Complaints Management Policy and an Audit Trial Policy have also been established and implemented. For further details see above Art. 6 (2) EU-BMR.

2. STOXX has appointed the Qontiqo GRC Department as responsible for reviewing STOXX’ compliance with the EU-BMR provisions. For 2020, PwC as an external auditor has been appointed to examine and report on compliance with the relevant EU-BMR provisions as presented in this report.

3. Not applicable as STOXX currently administers exclusively non-significant and significant benchmarks.

4. Upon the request of the relevant competent authority, STOXX will provide details of the reviews and reports provided for in paragraph 2.

**Procedures performed by PwC and their results**

1. Inspected evidence (in particular the control framework and ToRs) of the accountability framework and that areas as stipulated per Art. 7(1) are covered. No exceptions noted.

2. Inspected evidence that an internal function with the necessary capability was assigned to review STOXX’s compliance with EU-BMR. No exceptions noted.

3. No procedures were performed because these provisions are not applicable.

4. Inspected evidence that a process for documentation and evidence retention in relation to those reviews conducted under Art. 7(2) EU-BMR was placed in operation. No exceptions noted.

**4.2.5. Article 8: Record-keeping Requirements**

**EU-BMR Provision**

1. An administrator shall keep records of:
   (a) all input data, including the use of such data;
(b) the methodology used for the determination of a benchmark;
(c) any exercise of judgement or discretion by the administrator and, where applicable, by assessors, in the determination of a benchmark, including the reasoning for said judgement or discretion;
(d) the disregard of any input data, in particular where it conformed to the requirements of the benchmark methodology, and the rationale for such disregard;
(e) other changes in or deviations from standard procedures and methodologies, including those made during periods of market stress or disruption;
(f) the identities of the submitters and of the natural persons employed by the administrator for the determination of a benchmark;
(g) all documents relating to any complaint, including those submitted by a complainant; and
(h) telephone conversations or electronic communications between any person employed by the administrator and contributors or submitters in respect of a benchmark.

2. An administrator shall keep the records set out in paragraph 1 for at least five years in such a form that it is possible to replicate and fully understand the determination of a benchmark and enable an audit or evaluation of input data, calculations, judgements and discretion. Records of telephone conversations or electronic communications recorded in accordance with point (h) of paragraph 1 shall be provided to the persons involved in the conversation or communication upon request and shall be kept for a period of three years.

**STOXX’s Response**

1. (a) This EU-BMR provision is materially the same as IOSCO Principle 18, therefore STOXX’s response can be found under the respective principles in Section 4.1.

(b) In line with STOXX record keeping requirements, STOXX retains the methodology used for the determination of its benchmarks for at least 5 years.

(c) STOXX has methodologies in place that clearly dictate application of rules and therefore effective application of discretion is limited.

In case discretion is to be exercised, STOXX follows the procedure established by the Index Guides/ToRs and implemented by STOXX’ governance system. As such, any exercise of expert judgement is recorded in the meeting minutes of the corresponding governance committee.

(d) In the event that STOXX’ governance considers the disregard of any input data appropriate, any such decision and related rationale is recorded in the meeting minutes of the corresponding governance committee.

(e) In general, STOXX uses traded prices including executable quotes from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all STOXX-administered benchmarks wherever possible and reasonable.

Any deviations from standard procedures or methodologies are evaluated and if deemed appropriate decided by STOXX’ internal governance and documented by the relevant committee in its meeting minutes.

(f) STOXX has a clear organizational and governance structure where the roles and responsibilities of each individual involved in the benchmark determination are defined and documented. Any required records of the relevant staff members are retained.

(g) All documents relating to a complaint, including those submitted by the complainant as well as STOXX’ own records, are retained for a minimum of 5 years.

(h) STOXX does currently not administer any benchmarks based on input data from contributors.
2. In accordance with STOXX’s Policy “Record Keeping and Audit Trail”, STOXX keeps relevant records as set out in paragraph 1 for at least 5 years in such a form that it is possible to replicate and fully understand the determination of a benchmark.

### Procedures performed by PwC and their results

1. (a) Please refer to our procedures with respect to IOSCO Principle 18 in Section 4.1.
   
   (b) Inspected evidence of records of the methodology used for the determination of a benchmark.
   
   No exceptions noted.

   (c) For a sample of cases where expert judgement was exercised, inspected evidence of the retention of records including the reasoning for judgement.
   
   No exceptions noted.

   (d) + (e) STOXX has represented to us that there was/were no cases of
   
   > disregard of input data
   
   during the period under examination. Accordingly, we could not validate whether STOXX would have complied with the corresponding record-keeping requirements.

   (f) On a sample basis, inspected evidence of records of the identities of the natural persons employed by the administrator for the determination of a benchmark.
   
   No exceptions noted.

   (g) On a sample basis, inspected evidence of records of all documents relating to any complaint.
   
   No exceptions noted.

   (h) No procedures were performed because these provisions are not applicable.

2. Reviewed STOXX’s Policy “Record-keeping” and validated that it addresses the provisions of Art. 8 EU-BMR.

   On a sample basis, inspected the availability of the relevant data elements and information specified in the STOXX Policy “Record-keeping”.

   No exceptions noted.

### 4.2.6. Article 9: Complaints-handling Mechanism

#### EU-BMR Provision

1. An administrator shall have in place and publish procedures for receiving, investigating and retaining records concerning complaints made, including about the administrator’s benchmark determination process.

   Such a complaints-handling mechanism shall ensure that:

   (a) the administrator makes available the complaints-handling policy through which complaints may be submitted on whether a specific benchmark determination is representative of market value, on a proposed change to the benchmark determination process, on an application of the methodology in relation to a specific benchmark determination, and on other decisions in relation to the benchmark determination process;
(b) the complaints are investigated in a timely and fair manner and the outcome of the investigation is communicated to the complainant within a reasonable period of time, unless such communication would be contrary to objectives of public policy or to Regulation (EU) No 596/2014; and
(c) the inquiry is conducted independently of any personnel who may be or may have been involved in the subject-matter of the complaint.

**STOXX’s Response**

1. This EU-BMR provision is materially the same as IOSCO Principle 16, therefore STOXX’s response can be found under the respective principles in Section 4.1.

**Procedures performed by PwC and their results**

1. Please refer to our procedures with respect to IOSCO Principle 16 in Section 4.1.

### 4.2.7. Article 10: Outsourcing

**EU-BMR Provision**

1. An administrator shall not outsource functions in the provision of a benchmark in such a way as to impair materially the administrator’s control over the provision of the benchmark or the ability of the relevant competent authority to supervise the benchmark.

Where an administrator outsources to a service provider functions or any relevant services and activities in the provision of a benchmark, the administrator shall remain fully responsible for discharging all of the administrator’s obligations under this Regulation.

2. Where outsourcing takes place, the administrator shall ensure that the following conditions are fulfilled:

   (a) the service provider has the ability, capacity, and any authorisation required by law, to perform the outsourced functions, services or activities reliably and professionally;
   (b) the administrator makes available to the relevant competent authorities the identity and the tasks of the service provider that participates in the benchmark determination process;
   (c) the administrator takes appropriate action if it appears that the service provider may not be carrying out the outsourced functions effectively and in compliance with applicable law and regulatory requirements;
   (d) the administrator retains the necessary expertise to supervise the outsourced functions effectively and to manage the risks associated with the outsourcing;
   (e) the service provider discloses to the administrator any development that may have a material impact on its ability to carry out the outsourced functions effectively and in compliance with applicable law and regulatory requirements;
   (f) the service provider cooperates with the relevant competent authority regarding the outsourced activities, and the administrator and the relevant competent authority have effective access to data related to the outsourced activities, as well as to the business premises of the service provider, and the relevant competent authority is able to exercise those rights of access;
   (g) the administrator is able to terminate the outsourcing arrangements where necessary;
   (h) the administrator takes reasonable steps, including contingency plans, to avoid undue operational risk related to the participation of the service provider in the benchmark determination process.
STOXX’s Response

1. STOXX outsources certain activities of the index determination process to third parties, in particular, index calculation and index dissemination. In addition, for some indices, STOXX outsources determination of index components to specialized third-party financial service providers. A list of outsourcing partners and their roles is kept in the Outsourcing Inventory. STOXX Outsourcing Inventory distinguishes between activities outsourced internally to DBAG Group and activities outsourced to external service providers.

Any outsourcing relationship is governed by clear written agreements with the outsourcing partners in relation to their service including provisions which explicitly cover this Regulation. STOXX monitors the services provided by its outsourcing partners to ensure their compliance with the agreed service levels and standards. Therefore, in accordance with DBAG Outsourcing Policy all contractual arrangements with outsourcing partners including definition and review of KPIs within pre-defined time-windows.

In that respect, STOXX remains fully responsible for the outsourced activities and keeps full control of the outsourced activities.

2. Before entering any new outsourcing relationship, related service provider is duly scrutinized including the following steps: a) pre-assessment b) Regulatory Relevance check c) Risk Assessment Process d) DBAG Group Outsourcing Governance Committee sign-off e) STOXX Management Board sign-off.

Within STOXX’ monitoring system the dedicated employees of the Business Surveillance team with the necessary expertise are responsible to monitor the activity of the service providers.

IGC and OC are regularly informed in relation to the service quality of external and internal service providers and related KPIs.

STOXX’ outsourcing agreements require that the service providers cooperate with the relevant competent authority regarding the outsourced activities and that STOXX and the relevant competent authority have effective access to data related to the outsourced activities, as well as to the business premises of the service provider and the relevant competent authority is able to exercise those rights of access.

Further, the outsourcing agreements include a dedicated termination clause allowing STOXX to terminate the outsourcing arrangements when necessary.

By means of its outsourcing questionnaires, STOXX ensures that its outsourcing partners have BCM in place. Per contractual arrangements, the service provider is required to disclose to STOXX any development that may have a material impact on its ability to carry out the outsourced functions effectively and in compliance with applicable law and regulatory requirements.

Procedures performed by PwC and their results

1. Reviewed DBAG’s Outsourcing Policy and validated that it adequately addresses the provisions of Art. 10 (1–2).

Please also refer to our procedures with respect to IOSCO Principle 2 in Section 4.1.

No exceptions noted.

2. On a sample basis, inspected evidence of compliance of outsourcing relationships with EU-BMR Art. 10 (3).

No exceptions noted.

STOXX has represented to us that during the period under examination no new outsourcing providers were contracted.
4.2.8. Article 11: Input Data

**EU-BMR Provision**

1. The provision of a benchmark shall be governed by the following requirements in respect of its input data:

   (a) the input data shall be sufficient to represent accurately and reliably the market or economic reality that the benchmark is intended to measure.

   The input data shall be transaction data, if available and appropriate. If transaction data is not sufficient or is not appropriate to represent accurately and reliably the market or economic reality that the benchmark is intended to measure, input data which is not transaction data may be used, including estimated prices, quotes and committed quotes, or other values;

   (b) the input data referred to in point (a) shall be verifiable;

   (c) the administrator shall draw up and publish clear guidelines regarding the types of input data, the priority of use of the different types of input data and the exercise of expert judgement, to ensure compliance with point (a) and the methodology;

   (d) where a benchmark is based on input data from contributors, the administrator shall obtain, where appropriate, the input data from a reliable and representative panel or sample of contributors so as to ensure that the resulting benchmark is reliable and representative of the market or economic reality that the benchmark is intended to measure;

   (e) the administrator shall not use input data from a contributor if the administrator has any indication that the contributor does not adhere to the code of conduct referred to in Article 15, and in such a case shall obtain representative publicly available data.

2. Administrators shall ensure that their controls in respect of input data include:

   (a) criteria that determine who may contribute input data to the administrator and a process for selecting contributors;

   (b) a process for evaluating a contributor’s input data and for stopping the contributor from providing further input data, or applying other penalties for non-compliance against the contributor, where appropriate; and

   (c) a process for validating input data, including against other indicators or data, to ensure its integrity and accuracy.

3. Where the input data of a benchmark is contributed from a front office function, meaning any department, division, group, or personnel of contributors or any of its affiliates that performs any pricing, trading, sales, marketing, advertising, solicitation, structuring, or brokerage activities, the administrator shall:

   (a) obtain data from other sources that corroborate that input data; and

   (b) ensure that contributors have in place adequate internal oversight and verification procedures.

4. Where an administrator considers that the input data does not represent the market or economic reality that a benchmark is intended to measure, that administrator shall, within a reasonable time period, either change the input data, the contributors or the methodology in order to ensure that the input data does represent such market or economic reality, or else cease to provide that benchmark.
STOXX’s Response

1. (a) This EU-BMR provision is materially the same as IOSCO Principles 7, 8 and 9, therefore STOXX’s response can be found under the respective principles in Section 4.1.

(b) In general, STOXX uses traded prices including executable quotes from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all STOXX-administered benchmarks wherever possible and reasonable. Any input data employed in the determination of a benchmark meet the requirements as set out in the Methodology including and where applicable the requirements on the currency and tenor and the requirements of use of different types of input data.

STOXX has implemented a comprehensive internal control framework to ensure that input data is sufficient, appropriate and verifiable. The controls are tailored to the real-time calculation of indices and the end-of-day calculation of indices.

Further, STOXX keeps records including those relevant for input data in such a form that it is possible to replicate and fully understand the determination of a benchmark (in line with STOXX Policy “Record-keeping”).

(c) STOXX has in place a dedicated Input Data Policy, duly published on STOXX website describing: the types of input data, the priority of use of different types of input data and the exercise of expert judgement in general.

In addition, specific provisions regarding hierarchy of data inputs and exercise of expert judgment are reflected in the methodology descriptions of specific indices and in the Index Guides that are available online under the below links:

STOXX Rulebooks: https://www.stoxx.com/rulebooks and
DAX Rulebooks: www.dax-indices.com/resources

STOXX defines expert judgment as any deviation from published index methodologies, the extrapolation of values from prior or related transactions, the adjustment of values for factors that might influence the quality of data such as market events or impairment of a buyer or seller’s credit quality, or weighting firm bids or offers greater than a particular concluded transaction.

Data filter rules are not considered expert judgment. They are considered a part of the methodology of an index and must be disclosed in the Index Guides.

(d) Not applicable as STOXX does currently not administer benchmarks based on input data from contributors.

(e) See above.

2. Not applicable for item a) and b) as STOXX does currently not administer any benchmarks based on input data from contributors.

(c) STOXX has implemented a comprehensive internal control framework to validate its input data. The controls are tailored to the real-time calculation of indices and the end-of-day calculation of indices (see also our response in relation to IOSCO Principle 15 in section 4.1).

3. Not applicable as STOXX does currently not administer any benchmarks where the input data is contributed from a front office function.

4. STOXX has in place policies and procedures to change the input data service provider or the contributors or the methodology or to terminate the index if deemed necessary.
**Procedures performed by PwC and their results**

1. (a) Please refer to our procedures with respect to IOSCO Principles 7, 8 and 9 in Section 4.1.

   (b) On a sample basis, verified that input data used for the purpose of determining a benchmark is verifiable, i.e. complies with the provisions of Commission Delegated Regulation EU 2018/1638 and that required checks are covered within STOXX's control framework.

   On a sample basis, inspected evidence that underlying market prices were sourced in accordance with the rulebooks.

   No exceptions noted.

   (c) For a sample of index rulebooks and further documentation of the methodology verified that clear guidelines regarding the types of input data, the priority of use of the different types of input data and the exercise of expert judgement were disclosed in the methodology.

   For 1 out of 10 benchmarks and corresponding Rulebooks in our sample, we noted that a clear description of the hierarchy of the data inputs was only included in March 2021.

   No further exceptions noted.

   (d) No procedures were performed because these provisions are not applicable.

   (e) See above.

2. No procedures were performed for item a) and b) because these provisions are not applicable.

   Inspected evidence of controls in relation to input data and validated that these address the provisions of Art. 11 (2) c EU-BMR.

   No exceptions noted.

3. No procedures were performed because these provisions are not applicable.

4. Reviewed STOXX’s Policy “Input Data” and rulebooks and validated that these address the provisions of Art. 11(4) EU-BMR.

   No exceptions noted.

**4.2.9. Article 12: Methodology**

**EU-BMR Provision**

1. An administrator shall use a methodology for determining a benchmark that:

   (a) is robust and reliable;
   (b) has clear rules identifying how and when discretion may be exercised in the determination of that benchmark;
   (c) is rigorous, continuous and capable of validation including, where appropriate, back-testing against available transaction data;
   (d) is resilient and ensures that the benchmark can be calculated in the widest set of possible circumstances, without compromising its integrity;
   (e) is traceable and verifiable.
2. When developing a benchmark methodology, a benchmark administrator shall:

(a) take into account factors including the size and normal liquidity of the market, the transparency of trading and the positions of market participants, market concentration, market dynamics, and the adequacy of any sample to represent the market or economic reality that the benchmark is intended to measure;
(b) determine what constitutes an active market for the purposes of that benchmark; and
(c) establish the priority given to different types of input data.

3. An administrator shall have in place clear published arrangements that identify the circumstances in which the quantity or quality of input data falls below the standards necessary for the methodology to determine the benchmark accurately and reliably, and that describe whether and how the benchmark is to be calculated in such circumstances.

**STOXX’s Response**

1. STOXX publishes the methodology for all of its administered indices in the Index Guides on the STOXX website and ensures that the contents of the methodology meet the requirements of the EU-BMR. The index methodologies and the interest that each index seeks to measure are detailed in the STOXX and DAX Index Guides. Each index family has a dedicated Index Guide and sections. Stakeholders can access the above information under: http://www.stoxx.com/indices/rulebooks.html and DAX Rulebooks: www.dax-indices.com/resources

Key terms are also defined as part of the rulebooks.

The methodologies of STOXX-administered indices outline the selection criteria, weighting scheme and calculation principles used for determination of the benchmarks. They provide sufficient detail to allow stakeholders to understand how an index is derived, to assess its representativeness, its relevance to particular stakeholders and its appropriateness as a reference for financial instruments.

The index methodologies are designed to limit subjectivity and expert judgment.

In the case of rules being silent or open for interpretation, STOXX has implemented a governance structure to review the individual cases, trigger market consultations and make rule adjustments.

Clients are made aware by email alerts of market disruptions. The handling of extreme market events is published in the Index Guides and follows the established STOXX governance process.

Procedures are described for STOXX indices in the STOXX calculation guide (“STOXX Calculation Guide”) and for the DAX indices in the respective index family guides.

STOXX has established an incident management process covering all the administered indices.

STOXX has implemented a governance structure with committees and policies to review index methodologies and when stakeholders are to be contacted.

STOXX constantly monitors the execution of the index calculation rules to ensure the validity of the index methodology both for STOXX indices and DAX indices.

STOXX also conducts general methodology reviews on a periodic and ad-hoc basis to reflect economic and political changes and developments in the investment industry.

As result of these activities, STOXX introduces changes to the methodology books.

Material changes trigger a market consultation in accordance to STOXX policy and are notified to stakeholders and the media through the usual communication channels.
Clarifications of the methodology are updated in the Index Guides.
All changes are tracked in the change log section of each Index Guides.
STOXX-administered indices are constructed to serve as a basis for investment instruments.
Clients requiring clarifications on index methodologies can contact the STOXX customer support function. Feedback received from market participants or through the STOXX complaints procedure is evaluated by the internal committees.
Any recommendation resulting in a methodology change needs to be approved by the STOXX Index Governance Committee.

2. This EU-BMR provision is materially the same as IOSCO Principles 8, 9 and 11, therefore STOXX’s response can be found under the respective principles in Section 4.1.

3. STOXX has no general criteria for minimum data requirements but, by continuously monitoring Transaction Data received, STOXX is able to assess whether this data is adequate. If STOXX assesses that the quantity of Transaction Data is inadequate it will deem this to be a Limitation and the IGC will then exercise discretion in how to resolve the situation.

**Procedures performed by PwC and their results**

1. Reviewed STOXX’s Policy “Methodology” and validated that it addresses the provisions of Art. 12 EU-BMR.
   For a sample of benchmarks, validated that the rulebooks include the relevant details on benchmark determination as per Art. 12(1) EU-BMR and comply with the provisions of STOXX’s STOXX Policy “Methodology”.
   No exceptions noted.

2. Please refer to our procedures with respect to IOSCO Principles 8, 9 and 11 in Section 4.1.

3. Validated that STOXX has clear published arrangements that describe the approach by which STOXX complies with the requirement under Art. 12 (3) EU-BMR.
   No exceptions noted.

**4.2.10. Article 13: Transparency of Methodology**

**EU-BMR Provision**

1. An administrator shall develop, operate and administer the benchmark and methodology transparently.
   To that end, the administrator shall publish or make available the following information:
   (a) the key elements of the methodology that the administrator uses for each benchmark provided and published or, when applicable, for each family of benchmarks provided and published;
   (b) details of the internal review and the approval of a given methodology, as well as the frequency of such review;
   (c) the procedures for consulting on any proposed material change in the administrator’s methodology and the rationale for such changes, including a definition of what constitutes a material change and the circumstances in which the administrator is to notify users of any such changes.
(d) an explanation of how the key elements of the methodology laid down in point (a) reflect ESG factors for each benchmark or family of benchmarks, with the exception of interest rate and foreign exchange benchmarks.

Benchmark administrators shall comply with the requirement laid down in point (d) of the first subparagraph by 30 April 2020.

2. The procedures required under point (c) of paragraph 1 shall provide for:

(a) advance notice, with a clear time frame, that gives the opportunity to analyze and comment upon the impact of such proposed material changes; and

(b) the comments referred to in point (a) of this paragraph, and the administrator's response to those comments, to be made accessible after any consultation, except where confidentiality has been requested by the originator of the comments.

**STOXX's Response**

1. (a) STOXX and DAX Index Guides and related Benchmark Statements provide the key elements of the methodology used for each benchmark.

STOXX published on the relevant website the Index Guides related to the administered benchmarks:

- STOXX Index Guides: [https://www.stoxx.com/rulebooks](https://www.stoxx.com/rulebooks)
- DAX Index Guides: [www.dax-indices.com/resources](http://www.dax-indices.com/resources)

STOXX published on the relevant website the Benchmark Statement referring to the related Benchmark Families.

For the respective links to be corresponding benchmark statements, please refer to:

- [www.stoxx.com/index-regulations](http://www.stoxx.com/index-regulations)
- [www.dax-indices.com/indexregulations](http://www.dax-indices.com/indexregulations)

(b) STOXX’s Policy "Determination and Dissemination" and “Periodic Review Policy” together with STOXX’s control framework describe details of the internal review and approval of any given methodology as well as the frequency of such review.

(c) STOXX published a dedicated Consultation Policy (see under [https://www.stoxx.com/index-regulations](http://www.stoxx.com/index-regulations)) including those procedures required under Art. 13 (1) c EU-BMR.

(d) STOXX and DAX Index Guides and related Benchmark Statements include an explanation of the key elements of the methodology reflecting ESG factors for each benchmark or family of benchmarks.

2. The details of consultation on material methodology changes with clients and other stakeholder groups are described in STOXX’ Consultation Policy and include those pieces of information as required per Art. 13 (2) EU-BMR.

**Procedures performed by PwC and their results**

1. (a) For a sample of benchmarks, validated that the index rulebooks include the relevant details on the methodology and comply with the provisions of Commission Delegated Regulation EU 2018/1641 Art. 2 and STOXX's Policy "Methodology".

For 1 out of 10 benchmarks and corresponding Rulebooks in our sample, we noted that a clear description of the hierarchy of the data inputs was missing.

No further exceptions noted.
(b) Inspected STOXX’s Policies “Determination and Dissemination” and “Periodic Review” and validated that they include the relevant details on the methodology review procedures and comply with the provisions of Commission Delegated Regulation EU 2018/1641 Art. 3 and STOXX’s Policy “Methodology”.

No exceptions noted.

(c) Inspected STOXX’s Policy “Consultation” and rulebooks and validated that they include the relevant details on the consultation procedures and comply with the provisions of Commission Delegated Regulation EU 2018/1641 Art. 4 and STOXX’s Policy “Methodology”.

No exceptions noted.

(d) For a sample of benchmark families pursuing ESG objectives, validated that the index rulebooks include the relevant details on the methodology and comply with the provisions of Commission Delegated Regulation EU 2020/1817.

For 2 out 4 benchmark families pursuing ESG objectives in our sample, we noted that the initially published list of environmental factors considered (see Commission Delegated Regulation EU 2020/1817 item 5a) included more factors than were effectively taken into consideration for the benchmark determination: Specifically the disclosure “This benchmark family takes the following environmental factors into account by weighting: Environmental Ratings, Overall ESG Ratings; EU Climate Transition Benchmark (EU CTB) requirements; EU Paris Aligned Benchmark (EU PAB) requirements.” was not applicable to the DAX ESG and STOXX Thematic Benchmark Families. STOXX corrected corresponding disclosure in August 2021.

No further exceptions noted.

2. Validated that the index methodology and corresponding procedures including STOXX’ Consultation Policy include the relevant details to comply with the provisions of Art. 13 (2), Commission Delegated Regulation EU 2018/1641 Art. 4.

No exceptions noted.

4.2.11. Article 14: Reporting of Infringements

**EU-BMR Provision**

1. An administrator shall establish adequate systems and effective controls to ensure the integrity of input data in order to be able to identify and report to the competent authority any conduct that may involve manipulation or attempted manipulation of a benchmark, under Regulation (EU) No 596/2014.

2. An administrator shall monitor input data and contributors in order to be able to notify the competent authority and provide all relevant information where the administrator suspects that, in relation to a benchmark, any conduct has taken place that may involve manipulation or attempted manipulation of the benchmark, under Regulation (EU) No 596/2014, including collusion to do so.

The competent authority of the administrator shall, where applicable, transmit such information to the relevant authority under Regulation (EU) No 596/2014.

3. Administrators shall have procedures in place for their managers, employees and any other natural persons whose services are placed at their disposal or under their control to report internally infringements of this Regulation.
**STOXX’s Response**

1. STOXX Operations put an input data monitoring system.

   STOXX uses traded prices including executable quotes from regulated exchanges/markets (representing observable bona fide, arms-length transactions) for all STOXX-administered indices wherever possible and reasonable. There are controls mechanisms in place to detect suspicious data (real-time and EOD price monitoring, contributed data checks performed daily by STOXX Index Operations). Any case of suspicious data is recorded as an incident and handled in accordance with STOXX’s incident management process and, with respect to escalation cases, reviewed by the relevant committee. Any anomalous or suspicious input data is reported through the governance to the relevant authorities.

2. See above.

3. This EU-BMR provision is materially the same as IOSCO Principle 4, therefore STOXX’s response can be found under the respective principles in Section 4.1.

**Procedures performed by PwC and their results**

1. Please refer to our procedures with respect to the incident management process to IOSCO Principle 4 in Section 4.1.

   STOXX has represented to us that no cases of manipulation occurred during the period under examination. Therefore, we were unable to validate whether reporting of relevant cases had been handled in compliance with the requirements of Art. 14 EU-BMR.

2. See above.

3. Please refer to our procedures with respect to IOSCO Principle 4 in Section 4.1.

**Article 15: Code of Conduct**

**STOXX’s Response**

Not applicable as STOXX does currently not administer benchmarks based on input data from contributors.

**Procedures performed by PwC and their results**

No procedures were performed because these provisions are not applicable.

**Article 16: Governance and Control Requirements for Supervised Contributors**

**STOXX’s Response**

Not applicable as STOXX does currently not administer benchmarks based on input data from supervised contributors.
**Article 17: Regulated-data Benchmarks**

**STOXX’s Response**

Not applicable as STOXX does currently not administer regulated-data benchmarks.

**Procedures performed by PwC and their results**

No procedures were performed because these provisions are not applicable.

**Article 18: Interest Rate Benchmarks**

**STOXX’s Response**

Not applicable as STOXX does currently not administer any interest rate benchmarks. GC Pooling Indices are not considered “Interest Rate Benchmarks” within the meaning of Art. 3 (1) 22 EU-BMR as they are based on readily available input data sourced from a trading venue regulated under EU law and do therefore not rely on contributions specifically provided for the purpose of the benchmark determination. Accordingly, any requirements for interest rate benchmarks stipulated inter alia by Article 18 and Annex I EU-BMR are not applicable.

**Procedures performed by PwC and their results**

No procedures were performed because these provisions are not applicable.

**Article 19 Commodity Benchmarks**

**STOXX’s Response**

Not applicable as STOXX does currently not administer any commodity benchmarks.

**Procedures performed by PwC and their results**

No procedures were performed because these provisions are not applicable.
4.2.12. Article 19a: EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks

**EU-BMR Provision**

The requirements laid down in Annex III shall apply to the provision of, and contribution to, EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, in addition to the requirements of Titles II, III and IV.

**STOXX’s Response**

STOXX has aligned its methodologies to the requirements set out in Annex III and EU Delegated Regulation 2020/1818.

The methodology for the STOXX Climate Transition Benchmark Indices and STOXX Paris-Aligned Benchmark Indices are provided in section 22 of the STOXX Index Methodology guide. Methodology for the EURO iSTOXX Ambition Climate PAB index is provided in section 87 of the iSTOXX Index Methodology guide. The guides include details on the selection and weighting of the securities in the STOXX CTB and STOXX PAB Indices.

Additionally, the list of constituents, carbon emissions, and other relevant information can be found on the index specific STOXX page for each STOXX CTB and STOXX PAB index.

**Procedures performed by PwC and their results**

For a sample of EU Climate Transition Benchmark and EU Paris-aligned Benchmark families, validated that the requirements laid down in Annex III were complied with.

For 1 out of 2 EU Climate Transition Benchmark and EU Paris-aligned Benchmark families in our sample, we noted that the market value ratio between the parent index and the Climate Transition Benchmark was not disclosed (see EU-BMR Annex III (1)).

No further exceptions noted.

4.2.13. Article 19b: Requirements for EU Climate Transition Benchmarks

**EU-BMR Provision**

Administrators of EU Climate Transition Benchmarks shall select, weight, or exclude underlying assets issued by companies that follow a decarbonisation trajectory by 31 December 2022, in accordance with the following requirements: (i) the companies disclose measurable carbon emission reduction targets to be achieved within specific timeframes; (ii) the companies disclose a reduction in carbon emissions which is disaggregated down to the level of relevant operating subsidiaries; (iii) the companies disclose annual information on progress made towards those targets; (iv) the activities relating to the underlying assets do not significantly harm other ESG objectives.

Art. 19c not applicable to STOXX.

Art. 19d Endeavour to provide EU Climate Transition Benchmarks.
Articles 20–23: Critical benchmarks

**STOXX's Response**

The requirement is only applicable by 31 December 2022.

Art. 19c: See above.

Art. 19d: Not applicable as STOXX is not located in the Union.

Articles 20–23: Not applicable as STOXX currently administers exclusively non-significant and significant benchmarks, therefore Art. 20 to 23 EU-BMR do not apply.

**Procedures performed by PwC and their results**

No procedures were performed because these items were not applicable for the period under examination.

Art. 19c: See above.

Art. 19d: No procedures were performed because these provisions are not applicable for the period under examination.

Articles 20–23: No procedures were performed because these provisions are not applicable.

### 4.2.14. Article 24: Significant Benchmarks

**EU-BMR Provision**

1. A benchmark which does not fulfil any of the conditions laid down in Article 20(1) is significant when:
   
   (a) it is used directly or indirectly within a combination of benchmarks as a reference for financial instruments or financial contracts or for measuring the performance of investments funds having a total average value of at least EUR 50 billion on the basis of all the range of maturities or tenors of the benchmark, where applicable, over a period of six months; or
   
   (b) it has no or very few appropriate market-led substitutes and, in the event that the benchmark ceases to be provided or is provided on the basis of input data no longer fully representative of the underlying market or economic reality or unreliable input data, there would be a significant and adverse impact on market integrity, financial stability, consumers, the real economy or the financing of households or businesses in one or more Member States.

2. Art. 28 (2) not applicable to STOXX.

3. An administrator shall immediately notify its competent authority when its significant benchmark falls below the threshold mentioned in point (a) of paragraph 1.

   Article 25: Exemptions from specific requirements for significant benchmarks.

   Article 26: Non-significant benchmarks.
STOXX’s Response

As of 31 December 2020, STOXX exclusively administers non-significant and significant benchmarks which are gathered in a dedicated Benchmark Inventory. The inventory includes the reference value calculation on a per benchmark level in order to monitor if any benchmark reference value exceeds or falls below those thresholds defined in Art. 24 (1) and Art. 26 (2) EU-BMR.

STOXX does currently not apply any exemptions granted under Art. 25 or Art. 26 (1) EU-BMR and therefore does not provide any compliance statement in that respect.

Article 25: Not applicable as STOXX does currently not claim any exemptions as per Art. 25 EU-BMR.
Article 26: Not applicable as STOXX does currently not claim any exemptions as per Art. 26 EU-BMR.

Procedures performed by PwC and their results

Reviewed STOXX’s reference value calculation and validated that it adequately addresses the provisions of Commission Delegated Regulation EU 2018/66.

Inspected evidence that STOXX notified its competent authority when a significant benchmark fell below the threshold mentioned in point (a) of Art. 24 (1) and a non-significant benchmark exceeded the threshold mentioned in point (a) of Article 24 (1).

For 2 out of 2 cases where the benchmarks fell below the threshold mentioned in point (a) of Art. 24 (1), we noted that the competent authority was not notified immediately. However despite those 2 benchmarks falling below the threshold, STOXX continued to apply the same regime for those benchmarks (i.e. not claiming exemptions granted under Art. 25 or Art. 26 (1) EU-BMR).

No further exceptions noted.

Article 25: No procedures were performed because these provisions are not applicable.
Article 26: No procedures were performed because these provisions are not applicable.

4.2.15. Article 27: Benchmark Statement

EU-BMR Provision

1. Within two weeks of the inclusion of an administrator in the register referred to in Article 36, the administrator shall publish, by means that ensure fair and easy access, a benchmark statement for each benchmark or, where applicable, for each family of benchmarks, that may be used in the Union in accordance with Article 29.

Where that administrator begins providing a new benchmark or family of benchmarks that may be used in the Union in accordance with Article 29, the administrator shall publish, within two weeks and by means that ensure a fair and easy access, a benchmark statement for each new benchmark or, where applicable, family of benchmarks.

The administrator shall review and, where necessary, update the benchmark statement for each benchmark or family of benchmarks in the event of any changes to the information to be provided under this Article and at least every two years.
The benchmark statement shall:

(a) clearly and unambiguously define the market or economic reality measured by the benchmark and the circumstances in which such measurement may become unreliable;
(b) lay down technical specifications that clearly and unambiguously identify the elements of the calculation of the benchmark in relation to which discretion may be exercised, the criteria applicable to the exercise of such discretion and the position of the persons that can exercise discretion, and how such discretion may be subsequently evaluated;
(c) provide notice of the possibility that factors, including external factors beyond the control of the administrator, may necessitate changes to, or the cessation of, the benchmark; and
(d) advise users that changes to, or the cessation of, the benchmark may have an impact upon the financial contracts and financial instruments that reference the benchmark or the measurement of the performance of investment funds.

2. A benchmark statement shall contain at least:

(a) the definitions for all key terms relating to the benchmark;
(b) the rationale for adopting the benchmark methodology and procedures for the review and approval of the methodology;
(c) the criteria and procedures used to determine the benchmark, including a description of the input data, the priority given to different types of input data, the minimum data needed to determine a benchmark, the use of any models or methods of extrapolation and any procedure for rebalancing the constituents of a benchmark's index;
(d) the controls and rules that govern any exercise of judgement or discretion by the administrator or any contributors, to ensure consistency in the use of such judgement or discretion;
(e) the procedures which govern the determination of the benchmark in periods of stress or periods where transaction data sources may be insufficient, inaccurate or unreliable and the potential limitations of the benchmark in such periods;
(f) the procedures for dealing with errors in input data or in the determination of the benchmark, including when a re-determination of the benchmark is required; and
(g) the identification of potential limitations of the benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs.

2a. By 30 April 2020, for each of the requirements referred to in paragraph 2, the benchmark statement shall contain an explanation of how ESG factors are reflected in each benchmark or family of benchmarks provided and published. For those benchmarks or families of benchmarks that do not pursue ESG objectives, it shall be sufficient for benchmark administrators to clearly state in the benchmark statement that they do not pursue such objectives. Where no EU Climate Transition Benchmark or EU Paris-aligned Benchmark is available in the portfolio of that individual benchmark administrator, or the individual benchmark administrator has no benchmarks that pursue ESG objectives or take into account ESG factors, this shall be stated in the benchmark statements of all benchmarks provided by that administrator.

For significant equity and bond benchmarks, as well as for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, benchmark administrators shall disclose in their benchmark statements details on whether or not and to what extent a degree of overall alignment with the target of reducing carbon emissions or the attainment of the objectives of the Paris Agreement is ensured in accordance with the disclosure rules for financial products in Article 9 (3) of Regulation (EU) 2019/2088 of the European Parliament and of the Council.

By 31 December 2021, benchmark administrators shall, for each benchmark or, where applicable, each family of benchmarks, with the exception of interest rate and foreign exchange benchmarks, include in their benchmark statement an explanation of how their methodology aligns with the target of carbon emission reductions or attains the objectives of the Paris Agreement.
STOXX's Response

STOXX publishes benchmark statements in accordance with Art. 27 EU-BMR for all STOXX administered benchmarks. Each benchmark statement is circulated to the relevant governance committee before publication.

Procedures performed by PwC and their results

Inspected evidence that benchmark statements were published within two weeks of the inclusion of STOXX in the register referred to in Article 36 EU-BMR.

For a sample of benchmark statements and further relevant published documentation, verified that the descriptions include the elements as required by Art. 27 EU-BMR as well as those provided in Commission Delegated Regulation EU 2018/1643 Art. 1 and 2 and Commission Delegated Regulation EU 2020/1816.

For all benchmarks and corresponding benchmark families pursuing ESG objectives in our sample, we noted that

1. for several benchmarks undergoing a methodology change to incorporate sustainability filters in 2020, no explanation of how ESG factors are reflected in each benchmark were published due to the fact that no re-allocation to a benchmark family pursuing ESG objectives had taken place;
2. the disclosure of Commission Delegated Regulation EU 2020/1816 Annex I item 6;
3. the absolute number of benchmark constituents subject to social violations as referred to in international treaties and conventions, United Nations principles and, where applicable, national law and as required by Commission Delegated Regulation EU 2020/1816 Annex II item 6(c); were not published as part of the relevant benchmark statement or further relevant documentation on STOXX' website.

Furthermore, we noted that the relevant documentation to comply with Commission Delegated Regulation EU 2020/1816 Art. 2 Item 8 in Annex I was only published in February 2021.

No further exceptions noted.

4.2.16. Article 28: Changes to and Cessation of a Benchmark

EU-BMR Provision

1. An administrator shall publish, together with the benchmark statement referred to in Article 27, a procedure concerning the actions to be taken by the administrator in the event of changes to or the cessation of a benchmark which may be used in the Union in accordance with Article 29(1). The procedure may be drafted, where applicable, for families of benchmarks and shall be updated and published whenever a material change occurs.

2. Art. 28 (2) not applicable to STOXX.

STOXX's Response

STOXX published procedures that would be taken into account if STOXX decided to change or cease to determine a benchmark which may be used in the Union in accordance with Article 29 (1) EU-BMR.
**Procedures performed by PwC and their results**

Reviewed STOXX’ published policies and validated that they adequately address the provisions of Art. 28 EU-BMR.

No exceptions noted.
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Learn more about how Qontigo can help you better manage risk and enhance your investment process.

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