

# Guide to the DAXglobal<sup>®</sup> Equity Indices

Formerly known as Guide to the DAXglobal<sup>®</sup>  
Indices of Deutsche Börse AG

Version 3.6

September 2022

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## General Information

With effect to August 2019 Deutsche Börse AG has transferred the administration of the DAXglobal® Equity Indices formerly known as the DAXglobal® Indices of Deutsche Börse AG to its affiliate STOXX Ltd.

STOXX Ltd. develops, creates and calculates markets and publishes Indices for certain usages, e.g., the issuance of Financial Instruments. In general, an Index is any figure published or made available to the public that is regularly determined by the application of a formula (or any other method of calculation, or by an assessment) on the basis of the value of one or more underlying assets or prices, including estimated prices, actual or estimated interest rates, quotes and committed quotes, or other values or survey.

All DAXglobal® Equity Indices are governed by the respective index methodology applicable to the respective index or index family. Purpose of this "Guide to the DAXglobal® Equity Indices" is to provide for a comprehensible index methodology in continuity of the former Guide to the DAXglobal® Indices of Deutsche Börse AG as last amended with effect from September 2018 (version 2.21).

In order to ensure the highest quality of each of its indices, STOXX Ltd. exercises the greatest care when compiling and calculating equity indices on the basis of the rules set out in this Guide.

However, STOXX Ltd. cannot guarantee that the various indices, or the various ratios that are required for index compilation and computation purposes, as set out in this Guide, are always calculated free of errors. STOXX Ltd. accepts no liability for any direct or indirect losses arising from any incorrect calculation of such indices or ratios.

The DAXglobal® Equity Indices in no way represent a recommendation for investment. In particular, the compilation and calculation of the various indices shall not be construed as a recommendation of STOXX Ltd. to buy or sell individual securities, or the basket of securities underlying a given index.

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## History of Amendments to the Rules and Regulations

All amendments listed with effect prior to August 2019 are amendments to the Rules and Regulations of the former DAXglobal® Indices of Deutsche Börse AG.

Amendments listed as of August 2019 are amendments to the Rules and Regulations of STOXX Ltd in continuation of the Rules and Regulations of the former DAXglobal® Indices of Deutsche Börse AG.

September 2022	Version 3.6	Discontinuation of DAXglobal® Latin America
August 2022	Version 3.5	Methodology Change of quarterly Review Process by introduction of the quarterly underlying data announcement and preponement of review schedule to 2 <sup>nd</sup> Friday (t-5). Changes are reflected in section 4.9
May 2022	Version 3.4	Discontinuation of DAXglobal® Russia and DAXglobal® Russia+
March 2022	Version 3.3	Removal of Russia from the list of eligible countries in DAXglobal BRIC 2.1.2 and reducing number of constituents to 30 Addition of Russia as non-eligible exchange for DAXglobal Agribusiness and DAXglobal Water in sections 2.2.1 and 2.2.2 Removal of Russia from the list of exchanges in Appendix 8.2 which determines list of eligible countries for DAXglobal Gold Miners in 2.2.3
March 2022	Version 3.2.2	Precision of Wording in Chapter 4.8.1 regarding the deletion price of a constituent from previously “zero” to 0.001 in local currency
February 2022	Version 3.2.1	Adjustment of the list of eligible exchanges on which ADRs and GDRs can be traded for DBIX Deutsche Börse India Index, DAXglobal BRIC Index, DAXglobal Russia, DAXglobal Russia+, DAXglobal Asia and DAXglobal Asia Sector Indices, sections 2.1.1 to 2.1.4
September 2021	Version 3.2	Discontinuation of DAXglobal China Sector family, DAXglobal Vietnam, DAXglobal Austria Dividend, DAXglobal Austria Eastern Europe Exposure, DAXglobal Emerging 11, DAXglobal Shipping, DAXglobal Steel and select DAX Asia Sector indices
January 2021	Version 3.1.7	Adjustment of the calculation times of DAXglobal® Austria Dividend and DAXglobal® Austria Eastern Europe Exposure indices
December 2020	Version 3.1.6	Discontinuation of DAXglobal® Africa, DAXglobal® GCC.
October 2020	Version 3.1.5	Clarification of Chapter 4.9.3 for deletion price in terms of Mergers & Acquisitions

September 2020	Version 3.1.4 Clarifications in Chapter 3.3 for DAXglobal Emerging Markets Discontinuation of DAXglobal Alternative Energy Index
June 2020	Version 3.1.3 Governance Update 1.1, 4.3.2, 6, 7.2.2, 7.2.3
April 2020	Version 3.1.2 Correction of incorrect cross-references and criteria definitions in tables 3.2 and 3.3
October 2019	Version 3.1.1 Clarifications relating to EU Benchmark Regulation.
August 2019	Version 3.1 Clarifications relating to EU Benchmark Regulation and changes relating to the transfer of index administration to STOXX Ltd.
September 2018	Version 2.21 Discontinuation of DAXglobal <sup>®</sup> Austria Mid-Cap, DAXglobal <sup>®</sup> Nuclear Energy, DAXglobal <sup>®</sup> Coal Adjustments of selection and weighting criteria DAXglobal <sup>®</sup> Africa, DAXglobal <sup>®</sup> GCC Adjustments of selection criteria DAXglobal <sup>®</sup> Emerging 11 Concretion of selection criteria regarding listing DAXglobal <sup>®</sup> Gold Miners, DAXglobal <sup>®</sup> Steel, DAXglobal <sup>®</sup> Shipping Correction of list of eligible exchanges
December 2014	Version 2.20 Clarification of the rulebook according to IOSCO principles
February 2013	Version 2.18 Adjustments - Special Consideration of Critical Economic Situations as well as treatment of trading suspensions and trading restrictions Adjustments – Selection Criteria DAXglobal Nuclear Energy Index
December 2011	Version 2.14 Treatment of Stock Suspension
July 2011	Version 2.13 Introduction of further net-return indices Adjustment inclusion rules DAXglobal China Indices
June 2011	Version 2.12 Adjustment 40-10-5 Capping Adjustment inclusion rules DAXglobal Russia+
March 2010	Version 2.10 Launch of DAXglobal <sup>®</sup> China Urbanization
February 2010	Version 2.9 Change in rebalancing-timeline
December 2009	Version 2.8 Changed selection criteria of DAXglobal <sup>®</sup> India, DAXglobal <sup>®</sup> Russia, DAXglobal <sup>®</sup> Russia+, DAXglobal <sup>®</sup> Vietnam, DAXglobal <sup>®</sup> Nuclear Energy, DAXglobal <sup>®</sup> Agribusiness
November 2009	Version 2.7 Launch of DAXglobal <sup>®</sup> Gold Miners Launch of DAXglobal <sup>®</sup> Coal Launch of DAXglobal <sup>®</sup> Shipping Launch of DAXglobal <sup>®</sup> Steel

March 2009	Version 2.6 Changed selection criteria of DAXglobal® Russia+, DAXglobal® Nuclear Energy, DAXglobal® Agribusiness
December 2008	Version 2.5 Launch of DAXglobal® GCC Launch of DAXglobal® Latin America
October 2008	Version 2.4 Changed Withholding Tax; Changed calculation period
June 2008	Version 2.3 Launch of DAXglobal® Africa
March 2008	Version 2.2 Launch of DAXglobal® Vietnam
March 2008	Version 2.1 Launch of DAXglobal® Water
February 2008	Version 2.0 Launch of DAXglobal® China Launch of DAXglobal® China Sector Indices
December 2007	Version 1.15 Weighting concept changes for DAXglobal® Asia and DAXglobal® Asia Sector Indices
October 2007	Version 1.14 Launch of DAXglobal® Austria Dividend Launch of DAXglobal® Austria Eastern Europe Exposure Launch of DAXglobal® Austria Mid-Cap
October 2007	Version 1.13 Launch of DAXglobal® Sarasin Sustainability Germany Launch of DAXglobal® Sarasin Sustainability Switzerland
September 2007	Version 1.12 Changed Withholding Tax; Changed adjustment of DAXglobal® Emerging 11 total return index via net-dividends
August 2007	Version 1.11 Changed calculation frequency for DAXglobal® BRIC
July 2007	Version 1.10 Launch of DAXglobal® Agribusiness Launch of DAXglobal® Nuclear Energy
June 2007	Version 1.9 Launch of DAXglobal® Emerging 11
March 2007	Version 1.8 Launch of double cap limit for DAXglobal® Alternative Energy
March 2007	Version 1.7 Launch of DAXglobal® Russia+
February 2007	Version 1.6 Launch of DAXglobal® Asia Sector Indices
February 2007	Version 1.5 Launch of DAXglobal® Asia
December 2006	Version 1.4 Launch of free float rule
October 2006	Version 1.3 Inclusion of ADRs in DAXglobal® Alternative Energy
August 2006	Version 1.2 Launch of DAXglobal® Alternative Energy

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	Launch of DAXglobal <sup>®</sup> Russia
June 2006	Version 1.1 Launch of DAXglobal <sup>®</sup> BRIC Index
April 2006	Version 1.0 Launch of DBIX Deutsche Börse India Index <sup>®</sup>

CDAX<sup>®</sup>, Classic All Share<sup>®</sup>, DAX<sup>®</sup>, FDAX<sup>®</sup>, HDAX<sup>®</sup>, MDAX<sup>®</sup>, ODAX<sup>®</sup>, SDAX<sup>®</sup>, TecDAX<sup>®</sup>, X-DAX<sup>®</sup>, X-MDAX<sup>®</sup>, X-TecDAX<sup>®</sup> are registered trademarks of Qontigo Index GmbH.

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## 1 Discretion

Save for the cases expressly described in this Guide, the index methodology is entirely rule-based and automatic. Discretion only applies if expressly stated and must be exercised as provided for in this Guide.

### 1.1 Exercise of Discretion

Discretion may only be exercised by STOXX Committee(s) (as defined hereafter) with a view to resolve issues arising in maintaining the prevailing index methodology in response to events, with an overarching aim to accurately and reliably measure the market or economic realities as defined in this Guide.

Discretion shall be exercised in line with the following principles:

- The body or person(s) exercising discretion must not be affected by a conflict of interest;
- The body or person(s) exercising discretion must have the requisite skills, knowledge and experience to exercise such discretion;
- All facts and circumstances relevant for the exercise of discretion must have been established and properly documented prior to the exercise of discretion;
- The exercise of discretion must comply with all applicable laws and regulations;
- The body or person(s) exercising discretion must act on the basis of the relevant facts and circumstances only, must give proper weight to the various considerations and ignore irrelevant facts and circumstances;
- The body or person(s) exercising discretion must act with a view to maintain the integrity of the market or economic reality by aiming to ensure that indices remain representative and can be replicated, taking into account, inter alia, some, or all of the following:
  - Relevance of the event to the DAX indices
  - Trading accessibility of the affected market
  - Availability of alternative markets
  - Ability of market participants to replicate the index or, where applicable, the results of the index review
  - Public information related to the events and their development in the foreseeable future
- The body or person(s) exercising discretion must act honestly, reasonably, impartially and in good faith.

As part of the decision-making process, STOXX may consult with external stakeholders.

**Discretionary Rule:** *Any exercise of discretion must take into account the rationale of the index, the purpose of the rules with regard to which discretion is exercised, the objective to preserve market integrity and reliability of the index calculation to avoid undue market impact, the technical feasibility and economic reasonability, and the interest of licensees or investors.*

The cases in which STOXX Ltd. may exercise discretion regarding the index methodology and its application are noted in the respective rules of this Guide.

The following bodies (hereafter each of them separately also referred to as “STOXX Committee”) are involved in the decision-making process relevant for the indices governed by this Guide:

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

The following table summarizes the cases in which STOXX Committee(s) may exercise discretion regarding the index methodology and its application

Case	Responsible STOXX Committee
Index Termination and Transition	IGC
Sector Affiliation	IGC
Exclusion from Rankings	IGC
Deviation from Fast Exit/Fast Entry rules and Regular Exit/Regular Entry rules in exceptional cases	IGC
Procedure in case of a breach of the Basic Criteria	IGC
Determination of expected price to new shares in case of Subscription Rights on Other Share Classes	IGC
Procedure for Subscription Rights on Instruments with Embedded Options	IGC
Limitations	IGC
Review and approve treatment of Calculation Errors. Non-rule-based Correction.	IOC, IGC
Annual methodology review schedule	IGC
Initiation of ad hoc methodology reviews	IMC

Determination regarding materiality of changes to the index methodology	IMC,
Deviation from standard consultation period in case of material changes of the index methodology	IGC
Deviations from notification procedure in case of non-material changes of the index methodology	IMC
Extreme or exceptional market conditions or analogous extraordinary situations to be addressed in a fast track way (e.g, Pandemic)	IGC
Periodic review of current index methodologies (e.g. matching of underlying interest) including initiation of ad-hoc reviews of benchmarks or benchmark families and clarification of methodologies (if required).	IGC
(Annual) Review of the control framework (including identification of operational risks and definition of measures that address operational risks).	IOC, IMC
Review and approve reports on monitoring of outsourced service providers, contributors, risks and incidents reporting (Art. 10 BMR relevant)	IGC
Consideration and follow-up on the implementation of remedial actions based on results of internal and external audits.	IGC
Monitoring of input data (including input data from contributors).	IOC, IGC, OC
Review and approval of special cases identified during index review	IOC, IMC, IGC
Review and approval of complex corporate actions (disagreement on treatment of corp. action or application of rules)	IOC, IMC, IGC
Decisions with respect to complaints.	IGC
Review and approve periodic reporting requirements under the Periodic Review Policy.	IGC
Review and approve changes in case thresholds of significant or critical benchmarks exceeded and notify competent authority	IGC
Approval of introduction of new internal or strategic projects for new product ideas.	PIC
Responsibilities for clients requests: Decision to proceed or not or further analysis required.	PIC

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Approval of launch of new products, including checks on suitability based on Positioning Paper .(including Regulatory Checklist, financial products that will be used and confirmation that any maintenance tool will be delivered by the launch date).	PAC, IGC
Responsibilities for clients, strategic or internal requests:  -Final estimation of costs and revenues and final launch date  -Final Positioning Paper (including Regulatory Checklist, financial products that will be used and confirmation that any maintenance tool will be delivered by the launch date).	PAC, IGC

## 2 General Index Information

### 2.1 Region-oriented Indices

The DAXglobal® Equity Indices are calculated according to the Xetra® trading calendar. Eligible exchanges are listed in Section 8.2 unless otherwise specified in the index description. For details on selection criteria and weighting methodology please see Section 3.2 and 3.3.

#### 2.1.1 DBIX Deutsche Börse India Index

DBIX Deutsche Börse India Index® represents the performance of the most liquid and largest American Depository Receipts<sup>1</sup> (ADRs) and Global Depository Receipts (GDRs)<sup>2</sup> of Indian companies, which are traded on New York Stock Exchange or on Nasdaq and on London Stock Exchange, respectively. The number of constituents is limited to a maximum of 25. In case the number of securities fulfilling the selection criteria is not sufficient to reach the targeted number of constituents, the index will have a lower number of constituents than maximum targeted.

#### 2.1.2 DAXglobal BRIC Index

DAXglobal® BRIC Index includes companies from **Brazil**, **India** and **China**. Companies are represented by ADRs and GDRs, traded on New York Stock Exchange or Nasdaq and on London Stock Exchange, respectively. For China, H-Shares and Red-Chips are eligible for the index. From each country 10 companies are selected for the index. The number of index constituents therefore equals 30.

#### 2.1.3 DAXglobal Asia

DAXglobal® Asia Index replicates the performance of up to 40 companies from India, China, South Korea, Taiwan, Indonesia, Hong Kong, Thailand, Malaysia, Singapore and the Philippines. Indian securities are represented by ADRs (listed on NYSE or NASDAQ) and GDRs (listed on London Stock Exchange), while securities from other countries are covered by shares listed on their respective primary exchanges. For China, H-Shares and Red-Chips are eligible for the index. Each country is represented according to its economic performance as measured by its gross domestic product. The number of companies for each country is determined in a two-stage process. First, the gross domestic product of all countries is utilized to determine each country's weight in the index and the weight of any country is capped at 30 percent. Thereafter the weights are multiplied by the number of companies in the index to determine the number of companies per country. As a result of this procedure, it is not always possible to determine exactly 40

<sup>1</sup> American Depository Receipts (ADRs) are receipts for the shares of a remotely based corporation held in the vault of a US bank, entitling the shareholder to all dividends and capital gains. ADRs are traded on various stock exchanges worldwide and are denominated in US\$.

<sup>2</sup> Global depository receipts (GDRs), which were developed on the basis of American depository receipts (ADRs), securitize the ownership in shares. A GDR can relate to one or several shares, or a mere proportion of a share. GDRs are traded instead of the original shares on exchanges worldwide

companies. The number of companies per country is rounded either up or down, depending on which direction of rounding minimizes the deviation from the rules set above. Furthermore, the number of companies per country shall not fall below a minimum of one.

#### 2.1.4 DAXglobal Asia Sector Indices

DAXglobal® Asia sector indices represent the performance of eight economic business sectors from East Asia. Each sector index consists of up to 15 constituents, which are selected according to their market capitalization. The index constituents representing India are based on ADRs (listed on NYSE or NASDAQ) and GDRs (listed on London Stock Exchange), China is represented via Red-Chips and H-Shares, whereas South Korea, Taiwan, Indonesia, Hong Kong, Thailand, Malaysia, Singapore and the Philippines are covered by shares listed on their respective primary exchanges. DAXglobal Asia sector indices are calculated for the following sectors:

DAXglobal® Asia sector indices	
DAXglobal® Asia Basic Resources	DAXglobal® Asia Infrastructure/Transportation
DAXglobal® Asia Food & Beverages	DAXglobal® Asia Technology & Telecommunication

#### 2.1.5 DAXglobal China

The portfolio of DAXglobal® China tracks the performance of the 40 largest and most liquid Chinese companies. The constituents are represented by Red-Chips and H-Shares from Hong Kong Stock Exchange as well as by ADRs or shares<sup>3</sup> from Singapore Stock Exchange, London Stock Exchange, Nasdaq and New York Stock Exchange.

## 2.2 Industry and Trend Indices

#### 2.2.1 DAXglobal® Agribusiness

DAXglobal® Agribusiness represents the performance of companies belonging to the agricultural economy. A company is considered as an agricultural company, if it generates more than 50% of its revenues from one of the following sectors: livestock farming, production, processing and distribution of agricultural chemicals, ethanol and bio diesel as well as other agricultural equipment.

The local exchanges of the following countries are excluded from the selection: Brazil, China (Shanghai, Shenzhen), India, Mexico, Russia, Saudi Arabia, Thailand.

<sup>3</sup> The instrument with the higher liquidity is considered for the index portfolio.

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**2.2.2 DAXglobal® Water**

DAXglobal® Water comprises companies belonging to the water economy. A company is considered for the index if more than 30 percent of its revenues are generated from the sectors of water supply and irrigation as well as sewage treatment.

The local exchanges of the following countries are excluded from the selection: China (Shanghai, Shenzhen), Russia.

**2.2.3 DAXglobal® Gold Miners**

The DAXglobal® Gold Miners index represents companies of the gold mining industry that generate at least 50 percent of their revenues with gold mining.

A list of eligible stock exchanges that qualify for inclusion in the index may be found in Appendix 1 of chapter 8.2. Shares that are listed in countries which do not qualify for the index are to be considered for inclusion via ADRs/GDRs, that are listed in the US and UK (see Appendix 2 in chapter 8.2). Stocks that are listed at one of the exchanges described in Appendix 3 of chapter 8.2 will be substituted by ADRs/GDRs, provided that these account for at least 75 percent of the liquidity of shares represented.

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### **3 Technical Parameters**

The DAXglobal<sup>®</sup> indices calculated by STOXX Ltd. are based on transparent index concepts. In chapter 3.1 the technical parameters are listed and commented to provide comparability. Weighting concepts and applied capping methods are introduced within chapter 3.2. To maintain quality and liquidity of the indices, several minimum standards have to be fulfilled by each constituent. These selection criteria are presented in chapter 3.3.

#### **3.1 Calculation Basis**

The basic information for DAXglobal<sup>®</sup> indices are provided in the following tables. As in chapter 1, the two main types of indices are separated. There are two tables: the first providing information for the region-oriented indices, whereas the second deals with the industry and trend indices. Both tables have the same structure. The first column “Constituents” contains the number of underlyings for the respective index, where either a limit is given or the number of underlyings remains unrestricted. As of base date the index history is available. On the base date the base value determines the number of index points the calculation had started with. The information in the columns labelled “Calculation” show the calculation frequency for price- (PR) and performance (TR)<sup>4</sup> indices and the time period at which they are calculated e.g. the price index for DAXglobal<sup>®</sup> Asia is calculated every 60 seconds from 9.00 a.m. to 10.15 p.m., whereas the calculation of performance index is only carried out once at the end of the trading day (eod).

The calculation is performed based on the last available traded prices.

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<sup>4</sup>Total return indices are calculated as net- and/or gross-return indices.

## Region-oriented Indices

Name	Base		Calculation		
	Value	Date	Frequency	Period	Currency
DBIX Deutsche Börse India Index*	100	15 Mar. 2002	PR: 60 sec. TR: 60 sec.	9:00 a.m. – 10:15 p.m.	€, US\$, £
DAXglobal® BRIC Index	100	21 Sep. 2001	PR: 60 sec. TR: 60 sec.	9:00 a.m. – 10:15 p.m.	€, US\$, £
DAXglobal® Asia	100	21 Sep. 2001	PR: 60 sec. TR: eod	9:00 a.m. – 10:15 p.m.	€, US\$, £
DAXglobal® Asia Sector Indices	100	21 Sep. 2001	PR: 60 sec. TR: eod	9:00 a.m. – 10:15 p.m.	€, US\$
DAXglobal® China	100	21 Sep. 2001	PR: 15 sec. TR: eod	9:00 a.m. – 10:15 p.m.	€, US\$, £

## Industry- and Trend-Indices

Name	Base		Calculation		
	Value	Date	Frequency	Period	Currency
DAXglobal® Agribusiness	100	28 Dec. 2001	PR: 15 sec. TR: 15 sec.	9:00 a.m. – 10:15 p.m.	€, US\$, £
DAXglobal® Water	100	21 Sep. 2001	PR: 60 sec. TR: eod	9:00 a.m. – 10:15 p.m.	€, US\$, £
DAXglobal® Gold Miners	100	21 Sep. 2001	PR: 15 sec. TR: 15 sec.	8:30 a.m. – 10:15 p.m.	€, US\$

### 3.2 Weighting and Capping Methods

DAXglobal® indices are weighted and capped using different methods according to their composition and calculation concepts. The methods are described more precisely in chapters 4.4 and 4.5. During the chaining procedure, the number of shares or the weighting factor for some companies are reduced (capped), due to limitation of their weight in the index. In the following tables the methods applied for each index are presented. The columns “Capping” provide the name of the capping method in use and the applied parameters, e.g. for the DAXglobal® BRIC a double capping is applied, where the maximum weight for each country is set to 35 percent and the weight for each company is limited to 10 percent of the entire index

capitalization. The method which determines the weight of the single index constituent is stated in the column "Weighting Concept".

### Region-oriented Indices

Name	Capping		Weighting Concept
	Concept	Parameter in %	
DBIX <sup>®</sup> Deutsche Börse India Index	single	Company:15	Market-Cap
DAXglobal <sup>®</sup> BRIC Index	double; max. weight max. weight	Country: 35 Company: 10	Market-Cap
DAXglobal <sup>®</sup> Asia	double; max. weight max. weight	Country: 30 Company: 10	GDP Liquidity (ADVT 6 months)
DAXglobal <sup>®</sup> Asia Sector Indices	single	Company: 10	Liquidity (ADVT 6 months)
DAXglobal <sup>®</sup> China	single	Company: 10	Liquidity (ADVT 6 months)

### Industry- and Trend-Indices

Name	Capping		Weighting Concept
	Concept	Parameter in %	
DAXglobal <sup>®</sup> Agribusiness	40/8/4.5-Capping		Market-Cap
DAXglobal <sup>®</sup> Water	40/8/4.5-Capping		Market-Cap
DAXglobal <sup>®</sup> Gold Miners	single	Company: 15	Liquidity (ADVT 3 months)

### 3.3 Selection Criteria

The selection criteria for the DAXglobal® Indices ensure the individual constituents' liquidity and quality. For these purposes, selection criteria are determined for the number of months specified in the table above e.g. the average daily value traded (ADVT), market capitalization (MC), free float market capitalization and the aggregated trading volume. Market capitalization is calculated as a twenty-day average.

The following table sets out the individual requirements applying to the index constituents, for example, companies which are candidates for inclusion in the DAX® global Agribusiness index must show: an ADVT of at least 1.2 million US\$ over the previous six months as well as in each of the previous two months, a market capitalization of at least 1.2 \* 150 million US\$ and an aggregated trading volume of at least 1.2 \* 250.000 shares (for each one of the previous 6 months).

Some of the Region-oriented Indices as well as some of the Industry and Trend Indices have a buffer rule implemented for the Average Daily Value Traded criterion. For these indices, the liquidity threshold for present index constituents is only 2/3 of the threshold value compared to entry candidates. The buffer rules (which are only relevant for present index constituents) are written in **bold letters**.

#### Region-oriented Indices

Index	Average Daily Value Traded	Market-Capitalization (MC)	Aggregated Trading Volume /Month	Constituents
DBIX® Deutsche Börse India Index	(6 months) ≥ US\$1.2 million <b>(&lt;0.8 * US\$1 million)</b>	Ranking by MC	-	max. 25
DAXglobal® BRIC Index	(6 months) ≥ US\$1 million	Ranking by MC	-	30
DAXglobal® Asia	(6 months) ≥ US\$1 million	Ranking by MC	-	40
DAXglobal® Asia Sector Indices	(6 months) ≥ US\$1 million	Ranking by MC	-	15
DAXglobal® China	(6 months) ≥ US\$1 million	Ranking by MC	-	40

The above-mentioned values (average daily value traded (ADVT), market-capitalization and aggregated volume) are calculated ending on the last trading day the month prior to the month in which the index recomposition takes place.

To assure index continuity and representativeness, the liquidity and market capitalization thresholds defined above may be adjusted downwards in case of a general decrease in the respective measure across the given region / sector. (Discretionary see 1.1)

## Industry and Trend Indices

Index	Average Daily Value Traded	Market-Capitalization (MC)	Aggregated Trading Volume /Month	Constituents
	Selection based on cumulated ranking			
DAXglobal* Agribusiness	(6 months) $\geq$ US\$1.2 million and (each of the last 2 months) $\geq$ US\$1.2 million (6 months) $<$ 0.8 * US\$1 million	$\geq$ 1.2 * US\$150 million ( <b><math>&lt;</math>0.8 * US\$150 million</b> )	$\geq$ 1.2 * 250,000 shares ( <b><math>&lt;</math>0.8 * 250,000 shares</b> ) (for each of the 6 previous months)	
DAXglobal* Water	(6 months) $\geq$ \$1 million (6-months) <b><math>&lt;</math>0.8 * 1million. US\$</b> )	Ranking by MC	-	
DAXglobal* Gold Miners <sup>5,6</sup>	(3 Months) $\geq$ 2 Mio. US\$	Ranking by Free float -MC $\geq$ 500 Mio. US\$ (full MC)	-	35 floor 20*

\* If less than 20 companies qualify for inclusion in the index according to the criteria, the criterion of market-capitalization  $\geq$  500 Mio. USD is lowered accordingly.

The above-mentioned values (average daily value traded, market-capitalization and aggregated volume) are calculated ending on the last trading day the month prior to the month in which the index recomposition takes place.

To assure index continuity and representativeness, the liquidity and market capitalization thresholds defined above may be adjusted downwards in case of a general decrease in the respective measure across the given region / sector.

<sup>5</sup> Constituents that made up less than 0.5% of the index weight at the index recomposition dates in March and September are not included in the index.

<sup>6</sup> If shares of companies are listed on more than one exchange, the primary listing is chosen in the selection for DAXglobal Gold Miners.

## 4 Calculation Methodology

### 4.1 Index Formula

The DAXglobal® indices are designed according to the index formula of Laspeyres and are calculated as follows:

$$\text{Index}_t = K_T \cdot \frac{\sum_{i=1}^n p_{it} \cdot q_{iT} \cdot ff_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

where:

$c_{it}$  = Adjustment factor of company I at time t

$ff_{iT}$  = Free-float factor<sup>7</sup> of company I at time T

$n$  = Number of constituents in the index

$p_{i0}$  = Closing price of share/ADR/GDR of company I on the trading day before the first inclusion in the index

$p_{it}$  = Price of share/ADR/GDR of company I at time t

$q_{i0}$  = Number of shares/ADRs/GDRs or weighting factor of company I on the trading day before the first inclusion in the index

$q_{iT}$  = Number of shares/ADRs/GDRs or weighting factor of company I at time T

$t$  = Calculation time of the index

$K_T$  = Index-specific chaining factor valid as of chaining date T

$T$  = Date of the last chaining

For DAXglobal indices the  $ff_{i,T}$  factors are set to 1 in the index formula.

<sup>7</sup> Cp. "Guide to DAX Equity Indices"

The formula set out below is equivalent in analytic terms, but designed to achieve relative weightings:

$$\text{Index}_t = \frac{\sum_{i=1}^n p_{it} \cdot \left( K_T \cdot \frac{ff_{iT} \cdot q_{iT}}{\sum_{i=1}^n q_{i0}} \cdot 100 \cdot c_{it} \right)}{\sum_{i=1}^n p_{i0} \cdot \frac{q_{i0}}{\sum_{i=1}^n q_{i0}} \cdot 100} \cdot \text{Base} = \frac{\sum_{i=1}^n p_{it} \cdot F_{it}}{A} \cdot \text{Base}$$

where: 
$$A = \frac{\sum_{i=1}^n p_{i0} \cdot q_{i0} \cdot 100}{\sum_{i=1}^n q_{i0}}$$

and: 
$$F_{it} = K_T \cdot \frac{ff_{iT} \cdot q_{iT}}{\sum_{i=1}^n q_{i0}} \cdot 100 \cdot c_{it}$$

Index calculation can be reproduced in simplified terms by using the expression  $F_{it}$ :

- Multiply the current price by the respective  $F_{it}$  weighting factor;
- take the sum of these products; and
- divide this by the base value (A), which remains constant until a modification in the index composition occurs.

The  $F_{it}$  factors provide information on the number of shares/ADRs/GDRs required from each company to track the underlying index portfolio.

## 4.2 Computational Accuracy

The  $K_t$  chaining factors are used and published as figures rounded to seven decimal places.

The  $c_{it}$  adjustment factors are included in the index formula with six decimal places. In the event of several adjustment events coinciding, such as 'ex-dividend' and 'ex subscription right' markdowns on the same day, only one single adjustment factor (six decimal places) is computed using the total markdown. Where several adjustment events are required for a single share/ADR/GDR but at different times, the rounded factors are multiplied by each other, and the product is rounded to six decimal places again.

When determining the  $c_{it}$  adjustment factor for subscription rights, the rights value is used as a figure with two decimal places. Only in the case of a capital increase out of company reserves, values are not rounded at all. If a dividend disadvantage has to be prorated (e.g. for three months), the value of such disadvantage used for index calculation is rounded to two decimal places.

The indices are rounded to two decimal places and published accordingly. The  $F_{it}$  factors are rounded to five decimal places and published accordingly, changing with each instrument-specific adjustment.

## 4.3 Calculation Correction

This section outlines the rules and procedures applicable in case of a calculation error, meaning the provision of index values, usage of index constituents or other elements or the application of weightings, cappings, or other aspects of the index methodology in a manner that is not in line with this index methodology, e.g. due to a mistake, incorrect input data, etc.

### 4.3.1 Rule-based Correction

STOXX Ltd. corrects a Calculation Error without delay on the dissemination day it occurred, provided that STOXX Ltd. becomes aware of such Calculation Error before 15:30 CET of that dissemination day and insofar as technically and operationally feasible. STOXX Ltd. does not change intraday index composition of an index.

If STOXX Ltd. became aware of a Calculation Error at or after 15:30 CET, STOXX Ltd. aims at correcting the Calculation Errors as of the end of the next dissemination day, including corrections to index constituents.

STOXX Ltd. amends without undue delay previous incorrect index values or input data only if they are required for the subsequent index values calculation. Incorrect real-time index values disseminated before the effective time of the correction are not restated.

### 4.3.2 Non-rule based Correction

If the above-outlined rule-based error correction cannot be applied, the relevant STOXX Committee assesses without undue delay:

- if and how the Calculation Error should be corrected, including if the index shall be restated, and/or
- if the dissemination of index values shall be suspended (Discretionary Rule, see Section 1.1).

An index should be restated, when the performance of the index (other than Selection Indices) can no longer be replicated. A suspension of index dissemination is triggered when the relevant STOXX Committee decides that the correction will take significant time during which misleading index values could lead to financial, legal and reputational risks (Discretionary Rule, see Section 1.1).

STOXX Ltd. suspends the dissemination of an index at the latest at the end of the dissemination day after it became aware of a Calculation Error, if the Calculation Error has not been corrected by then.

STOXX Ltd. will resume the dissemination of the index as soon as the correct index calculation is feasible, and the correct historical values are available.

#### **4.3.3 Notifications**

In general, notifications take the form of an announcement on the DAX website (<http://www.dax-indices.com>). Announcements can (but need not, depending on the decision of STOXX Ltd.) be published via financial relevant media.

With regard to Calculation Errors, STOXX Ltd. Issues notifications in accordance with the following rules:

- STOXX Ltd. will publish a notification before correcting a Calculation Error. Notifications are effective immediately following their issuance, unless otherwise specified in the notification.
- The notification will specify if a Calculation Error will be corrected retrospectively. In case of retrospective correction, STOXX Ltd. will publish the notification using the new end of day closing price.
- If STOXX Ltd. decides under Section 4.3.2 that index dissemination is suspended until the Calculation Error is corrected, a resume notification is published specifying the point in time when index dissemination is resumed and the correction will take place.

STOXX Ltd. Will refrain from the issuance of a notification if it reaches the view that the issuance of a notification is not in line with the applicable laws and may decide to issue such Notification at a later point in time when such reasons have lapsed (Discretionary Rule, see Section 1.1). By reason of force majeure or other events beyond the control of STOXX Ltd. It might become impossible for STOXX Ltd. To issue a notification in due time or by the means set out herein. In such cases STOXX Ltd. May exceptionally issue the notification either subsequently immediately following such event or in any case by other means (Discretionary Rule, see Section 1.1).

## 4.4 Weighting

STOXX Ltd. Uses four different concepts to determine the weighting of the index constituents. For that the difference between weight and weighting/weighting factor needs to be clarified. The weight of a constituent is given by:

$$X_{it} = \frac{p_{it} \cdot q_{iT} \cdot ff_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{it} \cdot q_{iT} \cdot ff_{iT} \cdot c_{it}}$$

whereby:

$X_{it}$  = the weight of the constituent I at time t.

Given these weights the weighting factors  $q_{iT}$  can be calculated.

### 4.4.1 Market Capitalization Weighting

Applying the market capitalization weighting, the weighting factors are determined as the weight of each constituent reflecting its share in the overall market capitalization of the index portfolio.

### 4.4.2 Free float Market Capitalization Weighting

The free float market capitalization weighting is similar to the market capitalization weighting in principle but instead of the market capitalization, the free float market capitalization forms the basis for the calculation of the weighting factors.

### 4.4.3 Liquidity Weighting

Applying the liquidity weighting, the weighting factors ( $q_{it}$ ) are determined so that this factor, multiplied with the price at date of determination, represents the company's liquidity. The liquidity is defined as the Average Daily Value Traded (ADVT) over the last n-month (for n, see table in section 2.3).

### 4.4.4 Equal Weighting

Applying the equal weighting, the weighting factors are determined so that every constituent has the same weight within the index.

## 4.5 Cap Limit

Capping is a procedure which prevents single underlyings from dominating the index. At the regular quarterly chaining day the influence of a single index constituent is capped to a certain percentage of the index capitalization.

Three main capping methods can be distinguished, each of them being introduced in one of the following sections. The concrete capping method applied for an index can be taken from the table at chapter 2.2.

If any violation against the applied capping rule takes place during the quarter, adjustments to the weighting factors are only carried out on the next chaining day and weighting factors are kept constant until then.

#### 4.5.1 Single Cap Limit

By execution of a single capping each share portion of the index capitalization is limited to x percent.

For this purpose, the index capitalization is calculated. If any single class of instruments accounts for more than x percent of the respective capitalization, the number of shares/ADRs/GDRs used as weighting for that company is reduced to x percent of the index capitalization (which is being reduced accordingly). Should yet another company exceed the cap limit after that, the capitalization is to be determined with which both companies would account for exactly x percent of the revised index capitalization. This procedure is repeated until no company exceeds the respective cap limit. Then the next smaller integer of instruments resulting in the desired capitalization is used as the new weighting for the index calculation.

#### 4.5.2 Double Cap Limit

Applying the double capping procedure there are two approaches on the sector/country level.

During the first procedure, the weight of the single country is determined according to its GDP ranking once a year on the date of the index recomposition and is kept constant until the next recomposition. Applying the second method the weights of the single sectors/countries can vary from chaining to chaining date and must be eventually capped. In the following, y stands for the capping limit in percent on the sector/country level and x stands for the limit on the company level.

##### Method 1: Fixed country weights

Step A). On the date of the index recomposition, the weight for each single country is determined according to its GDP ranking. In case one or more countries exceed the limit of y percent of the aggregated GDP of all countries, the countries with the weight of more than y percent are capped to y percent and the difference is allocated proportionally to the remaining countries. The capping procedure and the proportioned allocation take place until all countries' weights are equal or below y percent of the aggregated GDP. The weights determined above are then kept constant until the next index recomposition

Step B). On the basis of the fixed weights according to Step A) the number of companies per country is calculated by multiplying the fixed weights and the total number of constituents in the index portfolio and applying the truncation rules as described in chapter 2.1.3. The weight per company is then given by the ADVT share of the total ADVT of all companies from all countries taking into account that the sum of the companies' weights from one country has to be equal to the respective country weight. In case one or more companies exceed the limit of x percent of the entire ADVT, the companies with the weight of more than x percent are capped to x percent and the difference is allocated proportionally to the remaining companies of the respective country. The capping procedure and the proportioned allocation take place until all companies are equal or below x percent of the total ADVT in the index portfolio.

##### Method 2: Maximum countries/sectors weights

Step A) and Step B) are applied during every chaining procedure.

Step A). First, summing up the weights of the companies determines the weights within every sector/country. In case one or more sectors/countries exceed then the limit of y percent, then the weight of respective sector/country is capped to y percent and the difference is allocated to the remaining sectors/countries. If the weight of another sector/country exceeds y percent due to the proportioned allocation, then the capping and the proportioned allocation take place until all countries are below the limit of y percent.

Step B). The adjustments of the countries/sectors' weights are assigned proportionally to the companies' weights. In addition, the weight of each company may not exceed a limit of x percent of the total weight of all companies from all sectors/countries. In case one or more companies exceed the limit of x percent, the companies with the weight of more than x percent are capped to x percent and the difference is allocated proportionally to the remaining companies of the respective sector/country. The capping procedure and the proportioned allocation take place until all companies' weights are equal or below x percent.

#### 4.5.3 40/8/4.5-Capping Method

The 40/8/4.5-Capping Method (named by the applied percentages) avoids the dominance of only a few constituents. To avoid extraordinary rebalancings that become necessary if certain restrictions are violated, certain buffers have been worked into the capping mechanism described below.

The procedure is carried out as follows:

Step A). All companies will be capped at a maximum of 8 percent by the single cap limit method.

Step B). The companies will then be ranked from largest to smallest (in case more than one company has the weight of 8 percent after step A) the original weight is taken to determine the order among these companies).

Step C). Maximal weights are determined for the largest 6 companies according to step B). For the largest 6 companies, the maximum weights allowed are 8%, 7.5%, 7%, 6.5%, 6% and 5%. All further stocks will be capped down to a maximum weight of 4.5%. E.g. if the weight of the second largest stock exceeds 7.5%, it will be capped down accordingly.

Step D). Step C) is repeated until all constituents fulfil the restrictions listed under C).

#### 4.6 Adjustments

The DAXglobal® indices are adjusted for exogenous influences (e.g. price-relevant capital changes) by means of certain correction factors, assuming a reinvestment according to the "operation blanche". If the absolute amount of the accumulated distributions (dividends, bonus and special distributions, spin-offs or subscription rights on other security-classes) between two regular chaining dates accounts for more than 10

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percent of the market capitalization of the distributing company on the day before the first distribution, the part of the distribution exceeding the 10 percent will not be reinvested in a single stock but in the overall index portfolio per unscheduled chaining date.

The DAXglobal® indices require a simultaneous adjustment of systematic price changes. The prerequisite for this is to calculate the correction factor on an ex-ante basis.

Consequently, already the first “ex” price can be adequately included for index calculation purposes. The ex-ante incorporation of adjustments presupposes a general acceptance of the computation formula as well as a general availability of the parameters used.

All parameters necessary for the respective computation are available from STOXX Ltd. Via its website ([www.dax-indices.com](http://www.dax-indices.com)) on the evening before each adjustment. As with all other adjustment processes, there may be differences between the computed values and the traded prices. However, since a preliminary correction is necessary and any delay would be problematic, this procedure remains the most appropriate one.

The calculated adjustment factor and a synthetic price accordingly adjusted for this factor are used in the index from the ex-date of a share as long as there is no “ex” price available.

The total return version of the DAXglobal® Indices are calculated as net- and/or gross-return indices. For a detailed overview see the table at the end of this document.

The withholding tax rates applied for the calculation of the net-return indices can be found on the STOXX website [www.stoxx.com](http://www.stoxx.com) (<http://www.stoxx.com/indices/taxes.html>).

For the calculation of the adjustment factors of all indices see „Guide to the DAX Equity Indices“.

#### **4.7 Currency Conversion**

Because of their international importance and to improve comparability DAXglobal® indices mostly are calculated in euro as well as in foreign currencies.

The intraday currency conversion is based on the spot rates provided by Refinitiv previously Financial and Risk business of Thomson Reuters. The WM/Reuters currency fixing rates from 5:00 pm CET are used to calculate the indices’ closing values.

#### **4.8 New Listings and Deletions**

Regular modifications to the index composition only occur if the ordinary chaining coincides with the actualization of the index composition.

The following table presents the dates for the regular recomposition of all DAXglobal® indices.

Region-oriented Indices	Date of Recomposition
DBIX Deutsche Börse India Index <sup>®</sup>	3 <sup>rd</sup> Friday in March/June/September/December
DAXglobal <sup>®</sup> BRIC Index	3 <sup>rd</sup> Friday in September
DAXglobal <sup>®</sup> Asia	3 <sup>rd</sup> Friday in September
DAXglobal <sup>®</sup> Asia Sector Indices	3 <sup>rd</sup> Friday in September
DAXglobal <sup>®</sup> China	3 <sup>rd</sup> Friday in September

Industry and Trend Indices	Date of Recomposition
DAXglobal <sup>®</sup> Agribusiness	3 <sup>rd</sup> Friday in March/September
DAXglobal <sup>®</sup> Water	3 <sup>rd</sup> Friday in September
DAXglobal <sup>®</sup> Gold Miners	3 <sup>rd</sup> Friday in March/September

#### 4.8.1 Special Consideration of Critical Economic Situations as well as treatment of trading suspensions and trading restrictions

To account for the special economic situations of the countries represented in DAXglobal<sup>®</sup> indices, the following steps dealing with deletions and new listings of constituents can be taken if possible (Discretionary Rule, see Section 1.1).

If a company is rejected from the index subject to extraordinary circumstances, such as deletion, composition proceedings, bankruptcy, etc., a replacing company is taken with respect to the ranking (if possible) (Discretionary Rule, see Section 1.1). The weight of the new constituents is adjusted according to the predecessors' weight.

Additionally, STOXX Ltd. retains the right to make extraordinary modifications in the composition of the indices if the tradability of particular instruments is limited, e.g. due to a decrease in liquidity or a restriction of shares that can be owned by market participants (Discretionary Rule, see Section 1.1).

For Indices that cover ex ante defined countries applies the following: If an extraordinary modification becomes necessary a replacing company of the same country as the leaving company is taken into the index (Discretionary Rule, see Section 1.1). If this is not possible (e.g. by virtue of limitations affecting the entire country - changes in economic policies, extraordinary regulatory limitations), the affected companies are taken out of the index without determination of a replacing company (Discretionary Rule, see Section 1.1). In this case, the weight of the leaving company is automatically distributed among all countries.

In times of extreme economic cases, additional exceptions from this rulebook can be made, e.g. postponement of an ordinary review date (Discretionary Rule, see Section 1.1).

All such changes will be published within an appropriate notice period.

In case a constituent is suspended from trading on the exchange taken for index calculation, it will be removed from the index after a period of 10 trading days (initial period) if

- (1) trading does not resume within this time period
- (2) within the initial period, trading is announced to resume later than 20 trading days after the end of the initial period
- (3) during the initial period, if it is unclear when trading will resume.

The Constituent will be deleted at market close in local currency of 0.001.

## 4.9 Chaining

Dividend payments and capital changes are initially reflected through an adjustment of the respective  $c_{it}$  adjustment factors. Quarterly chaining is carried out on the maturity date of the various equity index futures of Eurex®, implying that on this day (i.e. on the third Friday of the last month of a quarter), the index is calculated for the last time on the basis of weights valid up to that point. As of the following trading day the new weights apply.

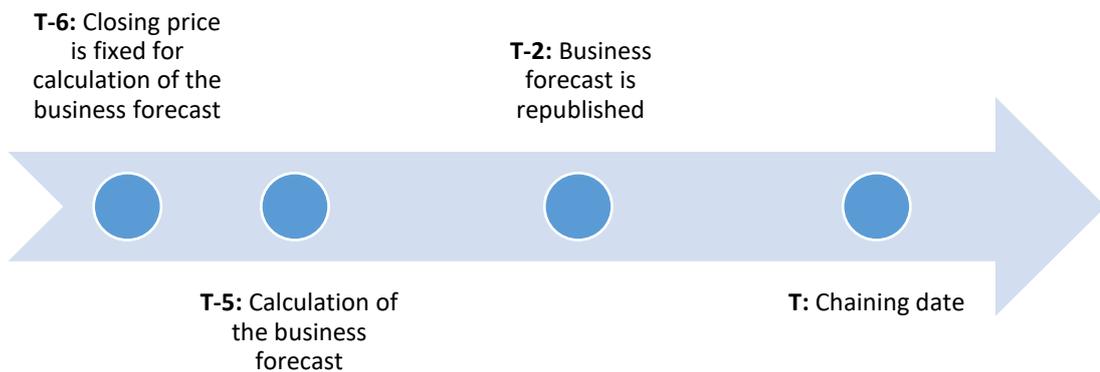
A change in the index composition also becomes necessary in the event of an index component issue being or becoming subject to extraordinary circumstances, such as deletion, composition proceedings, bankruptcy, new admission, etc.

### 4.9.1 Business Forecast

The business forecast is published at the quarterly underlying data announcement date, five trading days before the chaining date (i.e. at the second Friday in March, June, September, and December). It contains the composition, constituents weighting and cap factors for the new index compositions effective from the trading day following the third Friday of a review month.

The new number of shares, free float factors and closing prices used to determine the constituents weightings and cap factors are fixed at the trading day prior to the quarterly underlying data announcement date (T-6). For this purpose, the  $c_{it}$  adjustment factors are set to 1.

The business forecast will be republished on the Wednesday before the chaining date (T-2), taking into account all corporate actions with ex-dates effective during the period between the quarterly underlying data announcement date and the chaining date (including delistings and IPOs) STOXX became aware of since the initial publication of the business forecast at the quarterly underlying data announcement date.



#### 4.9.2 Quarterly Chaining

The quarterly chaining procedure encompasses the following measures:

- The weighting-factor (e.g. representing the number of shares/ADRs/GDRs) is updated.
- The accumulated income from distributions and capital changes is allocated to the index component issues according to the respective new weights. For this purpose, the individual  $c_{it}$  adjustment factors are set to 1.
- The following applies for capital increases that are announced before the review effective date, but effective date for registration of new shares is after review implementation date: to account for the price adjustment, the change in share capital will be adjusted via the correction factor  $c_{it}$  at ex-date of the capital increase; at Index review,  $c_{it}$  is set to 1. The  $q_{it}$  will be adjusted at the next following regular index review.
- A chaining factor is calculated to avoid a gap in the respective index.

If the ordinary chaining coincides with the actualization of the index composition at the same time, a change of the composition takes place additionally.

These measures help to prevent the weighting scheme from “ageing” due to capital changes and the accumulation of income.

Chaining is carried out in three steps:

a) *Calculation of the index value on the chaining date according to the old weighting scheme*

The following applies accordingly:

$$\text{Index}_t = K_T \cdot \frac{\sum_{i=1}^n p_{it} \cdot \text{ff}_{iT} \cdot q_{iT} \cdot c_{it}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

This value corresponds to the closing index published on the date of chaining and is used with two decimal places (as published) for all subsequent calculations.

b) *Computation of an interim value*

The interim value is computed using the number of shares valid on the chaining date ( $q_{i,T+1}$ ) and the current free float factors ( $\text{ff}_{i,T+1}$ ). The  $c_{it}$  adjustment factors are set to 1.

The following applies accordingly:

$$\text{Interim value} = \frac{\sum_{i=1}^n p_{it} \cdot \text{ff}_{i,T+1} \cdot q_{i,T+1}}{\sum_{i=1}^n p_{i0} \cdot q_{i0}} \cdot \text{Base}$$

The interim value is used as an exact figure for subsequent calculations.

c) *Calculation of the new chaining factor*

The following applies accordingly:

$$K_{T+1} = \frac{\text{Index}_t}{\text{Interim value}}$$

After chaining, the index is computed on the basis of the new chaining factor ( $K_{T+1}$ ).

After calculation of the chaining factor, capital changes and dividend payments due on the date of chaining are taken into account via the  $c_{it}$  factor.

The  $F_i$  weighting factors of the index formula based on relative weights are calculated as follows:

$$F_i = K_{T+1} \cdot \frac{ff_{i,T+1} \cdot q_{i,T+1} \cdot c_{it}}{\sum_{i=1}^n q_{io}} \cdot 100$$

#### 4.9.3 Unscheduled Chaining

In the event of a deletion of an index constituent, chaining is carried out in line with the procedure described in section 4.9.2 above, however, without adjustment to the number of shares/ADRs/GDRs and the various  $c_{it}$  factors.

In case a new stock succeeds the stock leaving the index, the replacement will enter the index with the same weight the old stock had, based on the closing price of its last day in the index.

In case a company leaves the index due to Mergers & Acquisitions, the following holds true:

Generally, the absorbed company is deleted at the last traded price of the company. If the absorbed company is not trading anymore (delisted or suspended before its deletion), a new artificial price based on the acquisition/merger terms is calculated and the absorbed company is kept/deleted with this price instead of the last traded one. For the calculation of the artificial price only ordinary cash and stock terms will be used. Other instruments such as Contingent Value Rights will not be considered.

Payment Type	Artificial Price
Cash	Deletion Price = Cash term
Stock	Deletion Price = Close price acquirer*Stock term
Cash and Stock	Deletion Price = Cash term + Close price acquirer*Stock term
Cash or Stock	Deletion Price = Cash term

The weighting factor “q” of the successor “i” is then calculated as follows:

$$q_{i,S+1} = \frac{P_{jS} \cdot q_{jT}}{P_{iS}}$$

i = new company

j = company leaving the index

S = last day of old company in the index

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T = date of the last chaining

In this case (replacement with the same weight) no chaining is necessary.

#### **4.9.4 Quarterly Chaining of Equally Weighted and Double Capped Indices**

The weighting factor  $q_{i,T+1}$  for each constituent is adjusted so that each index constituent is weighted equally.

The following applies accordingly:

$$q_{i,T+1} = \frac{X_{i,T+1}}{p_{i,t}} \cdot 1 \text{ bn}$$

where:

$X_{i,T+1}$  = Weight of constituent i at time T+1

$q_{i,T+1}$  = Weighting factor of constituent i at time T+1

$p_{i,t}$  = Published closing price of constituent i at the chaining date

Where the scale factor of 1 billion is equal to the sum of weighting factors  $q_{i,T+1}$  and prices  $p_{i,t}$  over all constituents.

Thereafter the correction factors are calculated as described in chapter 4.9.2 using the determined weighting factors.

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## **5 General Information**

### **5.1 Index Labels**

An index is published with the label “A” (“amtlich”) once the opening criteria are fulfilled. Where the opening criteria have not been met for an index on a certain trading day, an index value is derived from the last available prices at the end of the calculation period. Accordingly, this index is labelled “I” (indicative).

In the event of index value changes of more than an index specific amount between two successive index ticks, the corresponding index is labelled “U” (unchecked). The calculated index value is subsequently checked for errors. In the case of a deviation in excess of this index specific threshold where no error has occurred, the index is revalidated (i.e. labelled in line with its corresponding status).

### **5.2 Historical Data**

Historical index data exists for all indices, dating back at least to the respective base date

Time series for the various indices are available at [www.dax-indices.com](http://www.dax-indices.com).

### **5.3 Index Termination Policy**

For termination of an index or an index family that underlie financial products issued on the market, to the knowledge of STOXX Ltd., a market consultation will be conducted by STOXX Ltd. in advance of the termination in line with STOXX Transition Policy and STOXX Consultation Policy (publicly available on STOXX website). The length of the consultation period will be defined in advance based on the specific issues of each proposed termination subject to STOXX Benchmark Transition Policy (Discretionary Rule, see Section 1.1). During the consultation period, clients and third parties will have the chance to share their concerns regarding the termination of the index or index family. Based on the collected feedback, STOXX Ltd. may rethink its decision to terminate an index or an index family (Discretionary Rule, see Section 1.1). At the end of the consultation period, STOXX Ltd. will publicly announce its final decision about the termination. A transition period will be granted in the event of termination (Discretionary Rule, see Section 1.1ca).

For termination of an index or an index family that do not underlie financial products issued on the market, no market consultation will be conducted.

## 6 Limitations

This section applies in the event of Limitations that occur due to:

- insufficient rules, meaning the absence of a methodology rule, provision or procedure which leads to a failure when determining the respective index value or which leads to an index value that does not properly reflect the concept / nature of the index, e.g.:
  - performance of the index can no longer be physically replicated;
  - insufficiently available index constituents to fulfil the requirements of the Index Methodology;
- unclear rules, meaning a situation in which the rules leave multiple possible interpretations on how a certain rule shall be applied to a specific situation;
- data insufficiency, meaning a scenario in which the calculation of an index is no longer possible due to insufficient data quantity or quality;
- failure to produce index values as intended;  
  
market disruption which results in the performance of the index being unable to be tracked,
- events with a market impact that by their nature could reasonably not be foreseen, or events whose impact on an index or the economic reality the index intends to represent, cannot be determined in advance. Events covered in this section include, but are not limited to, events of natural, social, political, economic nature that may negatively impact regional or global societies or economies. Examples may be, but are not limited to, the following: (i) change to currency convertibility or restriction on capital flows announced by a country; (ii) market disruption, e.g. an event that materially negatively influences the aggregated liquidity, capitalization or tradability of an entire market; (iii) exchange closure, (iv) government intervention, (v) pandemic, (vi) natural catastrophe.

If a Limitation has occurred, the IGC shall decide if and how the Limitation shall be rectified (Discretionary Rule, see Section 1.1). Any such rectification may comprise deviations from the index methodology which may apply as long as the Limitation persists (Discretionary Rule, see Section 1.1).

In this context, STOXX may also decide to cancel an index review.

If a Limitation that could justify the cancellation of an index review occurs two or fewer dissemination days before the scheduled review implementation day, the review will be performed as planned, if reasonably possible. This aims to avoid last minute changes and not undermine the trading activity that may have already been performed.

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If a review is cancelled, STOXX aims to perform it at the next scheduled review of the index or at the next quarterly review date (3rd Friday of March, June, September and December), whichever comes first and subject to the then prevailing market conditions.

If a decision to deviate from the index methodology is taken, it will be communicated as soon as possible in form of an Announcement or Press Release. STOXX Ltd. will refrain from the issuance of a notification if it reaches the view that the issuance of a notification is not in line with applicable laws and may decide to issue such notification at a later point in time when such reasons have lapsed (Discretionary Rule, see Section ). By reason of force majeure or other events beyond the control of STOXX Ltd. it might become impossible for STOXX Ltd. to issue a notification in due time or by the means set out herein. In such cases STOXX Ltd. may exceptionally issue the notification either subsequently immediately following such event or in any case by other means.

Any measures will be implemented two dissemination days later and will enter into effect the next dissemination day after implementation, unless a different effective date is specified in the notification.

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## **7 Methodology Review**

The purpose of the methodology review is to maintain integrity of the index, i.e. that the index methodology remains executable and results in an accurate and reliable representation of the market / economic realities the index seeks to measure.

### **7.1 Frequency of Review**

In order to ensure the index integrity is maintained, the methodology is reviewed annually and ad hoc if a Limitation has occurred. If a Limitation cannot be addressed with by a methodology review, this may give rise to an index cessation or index transition. STOXX Ltd. shall not be liable for any losses arising from any decisions taken as part of a methodology review..

### **7.2 Review procedure**

#### **7.2.1 Initiation of Methodology Review**

The IMC proposes an annual methodology review schedule for approval by the IGC (Discretionary Rule, see Section 1.1).

The IMC is in charge of initiating ad hoc methodology reviews in case of a Limitation or based on recommendations to initiate a Methodology Review by other STOXX. Committee (Discretionary Rule, see Section 1.1)

#### **7.2.2 Decision and Escalation**

The following STOXX Ltd. Committees are responsible for making the decisions on amendments to an index methodology:

The IMC decides on changes to the index methodology, unless

- a. a material change to the index methodology is proposed (see Section 7.2.3 below),
- b. the change is triggered by an Unclear Rule or Insufficient Rule (as part of a Limitation, Section 6), or
- c. financial products relating to the index have a notional value/notional amount of more than EUR 100 mn.

If the IMC is not in charge, the decision is taken by the IGC (i.e. in the cases set forth in a) to c) above).

#### **7.2.3 Material Changes with Consultation**

As described in the STOXX Changes to Methodology Policy and in STOXX Consultation Policy (publicly available on STOXX website), prior to proposed material changes to the index methodology, a consultation will be performed.

A change to an index methodology shall be considered material in the event of:

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- a) a substantial change in the index objective or market/economic reality the index aims to represent (e.g. market leader components vs. mid cap companies), or
  - b) a substantial change of the index methodology in aspects such as, but not limited to, the ones listed below and that would result in altering the overall concept or the nature of the index:
    - i. calculation methods or formulas with a substantial impact on the index performance, or
    - ii. rules regarding the determination of index constituents by application of the index methodology, or
    - iii. rules regarding the determination of the weights of index constituents by application of the index methodology,
    - iv. rules regarding the treatment of corporate actions.

On the contrary, index methodology updates resulting from the application of existing methodology principles or minor clarifications of existing rules or corrections without altering the overall concept or the nature of the index are generally considered non-material.

The IMC determines whether an amendment is material as defined above. In case such determination is not possible, the proposed amendment shall be treated as material. (Discretionary Rule, see Section 1.1).

In case of Changes to Methodology as described in STOXX Changes to Methodology Policy a STOXX consults with reasonably affected stakeholders (“Stakeholders”) prior to take decision.

Stakeholders mean (a) persons or entities who have an index license with STOXX regarding a benchmark administered by STOXX (Subscriber) and/or as far as STOXX is reasonable aware (b) persons or entities and/or third parties who own contracts or financial instruments that reference a benchmark administered by STOXX (Investors)

Taking into account the Principle of Proportionality, STOXX informs affected Stakeholders as follows:

- either via public consultation open to the entire market and performed via STOXX website;
- or, when the relevant Stakeholders are known, on a restricted basis directly on the Stakeholders e-mail address.

STOXX shall inform in writing the Stakeholders on:

- the key elements of the proposed relevant changes
- the rationale for any proposed relevant changes
- the specific questions to be answered

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- the deadline for receiving feedback
  - the timeline of implementation of the Relevant Changes
  - contact details where to provide feedback
  - relevant definitions

The consultation shall enable Stakeholders to submit comments.

The standard consultation period shall be 1 month with the option to shorten or extend this period.

The IGC may decide to shorten the 1-month period in the following cases:

- in extreme or exceptional market conditions or analogous extraordinary situations
- in urgent cases, such as a situation in which the Index cannot be replicated anymore;
- in situations where there is no known Stakeholders impact or only a limited number of Stakeholders;
- in order to align the effective date of a proposed change with Index Maintenance; e.g. an Equity/Bond Index Rebalancing, Index Review, and Corporate Action Adjustment, or
- any other similar cases applying the principle of proportionality.

The IGC s will consider the feedback received and decide whether the relevant changes shall become effective.

The IGC is not bound by any feedback received. Moreover, if the received feedback is ambiguous, or if no Stakeholders participated, the IGC may decide to conduct another consultation, which again will not be binding.

If the IGC decides that relevant changes shall become effective, STOXX will communicate a timeline on the implementation of the relevant changes, if not already communicated in the consultation material.

STOXX will after the consultation make available the Stakeholders feedback received in the consultation and STOXX's summary response to those comments, except where confidentiality has been requested by the respective Stakeholders.

The decision will be communicated as soon as possible in the form of an Announcement or Press Release.

STOXX Ltd. will refrain from issuance of a notification if it reaches the view that the issuance of a notification is not in line with applicable laws and may decide to issue such notification at a later point in time when such reasons have lapsed.

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By reason of force majeure or other events beyond the control of STOXX Ltd. it might become impossible for STOXX Ltd. to issue a notification in due time or by the means set out herein. In such cases STOXX Ltd. may exceptionally issue the notification either subsequently immediately following such event or in any case by other means.

At the end of each consultation STOXX Ltd. will make available the feedback received from Stakeholders in the consultation together with a summary of its response to that feedback, except where confidentiality has been requested by the respective Stakeholders. (Discretionary Rule, see Section 1.1).

#### **7.2.4 Non-Material Changes without Consultation**

Non-material changes of the index methodology, including a description of the impact and the rationale, will be announced via Announcement or Press Release, effective immediately following publication, unless otherwise specified in the notification (Discretionary Rule, see Section 1.1). STOXX Ltd. will refrain from the issuance of a notification if it reaches the view that the issuance of a notification is not in line with applicable laws and may decide to issue such notification at a later point in time when such reasons have lapsed (Discretionary Rule, see Section 1.1). By reason of force majeure or other events beyond the control of STOXX Ltd. it might become impossible for STOXX Ltd. to issue a notification in due time or by the means set out herein. In such cases STOXX Ltd. may exceptionally issue the notification either subsequently immediately following such event or in any case by other means.

#### **7.2.5 Publication of the methodology change**

The effective date for benchmark methodology changes is aligned, where feasible, with the periodic benchmark reviews dates when the benchmark composition is changed, and a rebalancing is triggered to avoid extra ordinary impact for clients. Material methodology changes should generally be publicly announced 3 months prior to implementation. IGC may decide to shorten the notice period:

- a. In exceptional or urgent cases such as extreme or exceptional market conditions or analogous extraordinary situations
- b. in situations where there is no Stakeholder impact and where it has been agreed that the notice period has to be shortened but immediate communication is not possible. A case that requires urgent action is for example a situation in which the investor's ability to replicate the index benchmark performance with his or her portfolio is no longer ensured. In such cases, changes or amendments to the published index methodology must be made on the same day the new rule or change is implemented.
- c. to align with the period benchmark review dates and the rebalancing of the benchmarks.

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 Ltd. shall include an assessment as to whether the representativeness of the benchmark and its appropriateness for

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its intended use are put at risk in case the proposed material change is not put in place. In case of any changes or amendments to the present Index Guide, Operations and Product will work together to ensure both the public and subscribers are provided with detailed information about the nature and rationale of the change as well as the implications and terms for the new methodology to enter into force.

**8 Appendix****8.1 ISINs and Alpha Codes**

Index	Alpha (Price)	ISIN (Price)	Alpha (Gross)	ISIN (Gross-TR)	Alpha (Net)	ISIN (Net-TR)
DBIX Deutsche Börse India Index® (EUR)	D1AT	DE000A0C4CC6	D1AS	DE000A0C4CB8	WHDE	DE000A1A4M09
DBIX Deutsche Börse India Index® (USD)	D1AV	DE000A0C4CE2	D1AU	DE000A0C4CD4	WHDJ	DE000A1A4M58
DBIX Deutsche Börse India Index® (GBP)	D1AY	DE000A0C4CH5	D1AX	DE000A0C4CG7	WHDI	DE000A1A4M41
DAXglobal® BRIC Index (EUR)	D1A1	DE000A0C4CK9	D1AZ	DE000A0C4CJ1	WHDF	DE000A1A4M17
DAXglobal® BRIC Index (USD)	D1A5	DE000A0C4CP8	D1A4	DE000A0C4CN3	WHDH	DE000A1A4M33
DAXglobal® BRIC Index (GBP)	D1A7	DE000A0C4CR4	D1A6	DE000A0C4CQ6	WHDG	DE000A1A4M25
DAXglobal® Asia(EUR)	N8WX	DE000A0LLPW4			N8WY	DE000A0LLPV6
DAXglobal® Asia(USD)	N8B2	DE000A0LLP09			N8B2	DE000A0LLPZ7
DAXglobal® Asia(GBP)	N8WZ	DE000A0LLPY0			N8B1	DE000A0LLPX2
DAXglobal® Agribusiness (EUR)	F9MB	DE000A0ME7B8	F9MA	DE000A0ME7A0	UDYN	DE000A1A4PA3
DAXglobal® Agribusiness (USD)	F9NA	DE000A0QY1U3	F9NB	DE000A0QY1V1	UDYQ	DE000A1A4PC9
DAXglobal® Agribusiness (GBP)	F9NC	DE000A0QY1W9	F9ND	DE000A0QY1X7	UDYP	DE000A1A4PB1
DAXglobal® Agribusiness (CHF)	2DYD	DE000A0Z3L34	2DYE	DE000A0Z3L42	2DYG	DE000A0Z3L67
DAXglobal® China (EUR)	3BQ5	DE000A0S2903			3BQ6	DE000A0S2911
DAXglobal® China (USD)	3BRT	DE000A0S3AQ4			3BRU	DE000A0S3AR2
DAXglobal® China (GBP)	3BRV	DE000A0S3AS0			3BRW	DE000A0S3AT8
DAXglobal® Water (EUR)	F9TM	DE000A0QY6A4	F9TL	DE000A0QY592	4218	DE000A1EXN21
DAXglobal® Water (USD)	3BQZ	DE000A0S29U9	3BQY	DE000A0S29T1	4219	DE000A1EXN39
DAXglobal® Water (GBP)	3BQ1	DE000A0S29W5	3BQ0	DE000A0S29V7	4210	DE000A1EXN47
DAXglobal® Gold Miners (EUR)	G78P	DE000A0X7NT5			G73U	DE000A0X7KV7
DAXglobal® Gold Miners (USD)	G78V	DE000A0X7NZ2			G730	DE000A0X7K10

DAXglobal® Asia Sector Indices	Alpha (Price)	ISIN (Price)	Alpha (Gross)	ISIN (Gross-TR)	Alpha (Net)	ISIN (Net-TR)
DAXglobal® Asia Basic Resources (EUR)	N8BA	DE000A0LLP82			N8BB	DE000A0LLP74
DAXglobal® Asia Basic Resources (USD)	LZM8	DE000A0MEM75			LZM7	DE000A0MEM67
DAXglobal® Asia Food & Beverages (EUR)	N8BE	DE000A0LLQC4			N8BF	DE000A0LLQB6
DAXglobal® Asia Food & Beverages (USD)	LZMC	DE000A0MENB6			LZMB	DE000A0MENA8
DAXglobal® Asia Infrastructure/Transportation (EUR)	N8BI	DE000A0LLQG5			N8BJ	DE000A0LLQF7
DAXglobal® Asia Infrastructure/Transportation (USD)	LZMG	DE000A0MENF7			LZMF	DE000A0MENE0
DAXglobal® Asia Technology/Telecommunication (EUR)	LZM4	DE000A0MEM34			LZM3	DE000A0MEM26
DAXglobal® Asia Technology/Telecommunication (USD)	LZMQ	DE000A0MENP6			LZMP	DE000A0MENN1

## 8.2 Eligible and non-eligible exchanges for selection of instruments and input data

Appendix 1 List of eligible exchanges	Appendix 2 List of non-eligible exchanges to be screened for ADR and GDR	Appendix 3 List of eligible exchanges to be screened for ADR and GDR
Tokyo Stock Exchange	Shenzhen Stock Exchange	San Paulo Stock Exchange
Australian Securities Exchange	Shanghai Stock Exchange	Singapore Exchange
Athens Exchange [TBC]	Indonesian Stock Exchange	Hong Kong Stock Exchange
Wiener Börse	Stock Exchange of Thailand	Johannesburg Stock Exchange
Deutsche Börse	Korea Stock Exchange	

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Swiss Exchange	Sant. Commerc	
Nasdaq OMX	Philippines Stock Exchanges	
Borsa Italiana	National Stock Exchange of India	
Euronext	Taiwan Stock Exchange	
Bolsa de Madrid	Istanbul Stock Exchange	
London Stock Exchange	Bolsa Mexicana de Valores	
Toronto Stock Exchange	Karachi Stock Exchange	
Euronext NYSE	GreTai Securities Market	
NASDAQ	Bursa Malaysia	
Sao Paulo Stock Exchange (BOVESPA)	Bombay Stock Exchange	
Singapore Exchange	Saudi Stock Exchange	
Hong Kong Stock Exchange		
Johannesburg Stock Exchange		
Oslo Stock Exchange		

### 8.3 Contact

- **Information on prices, index concepts and licenses**

*STOXX Ltd. – Customer Support*

Phone: +41 43430 - 7272

E-mail: [customersupport@stoxx.com](mailto:customersupport@stoxx.com)

- **Press inquiries**

Andreas von Brevern

+49-(0) 69- 2 11-1 42 84

Alexandra Reed

+49-(0) 69- 2 11-1 7764

E-mail: [media-relations@deutsche-boerse.com](mailto:media-relations@deutsche-boerse.com)

- **Website**

[www.dax-indices.com](http://www.dax-indices.com)

- **Mailing address**

STOXX Ltd.

Theilerstrasse 1a

CH-6300 Zug

P +41-(0)43 430 71 01

- **STOXX global representative offices**

Frankfurt: +49 (0) 69 211 0

Hong Kong: +852 2530 7862

London: +44 (0) 207 862 7680

New York: +1 646-876-2030

Tokyo: +81-3-4578-6688