

December 2021

DAX BENCHMARK STATEMENT DAX VOLATILITY INDEX FAMILY

Creating an Investment
Intelligence Advantage

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Regulation Clause	Regulation Subclause	Required Information	STOXX LTD Statement
1. General Disclosure Requirements			
1.1 Date of Publication	Art. 1(1)(a) Commission Delegated Regulation (EU) 2018/1643 ("RTS")	The benchmark statement shall state: the date of publication of the statement and, where applicable, the date of its last update.	<p>Date of Publication 16 August 2019</p> <p>Date of Update 22 December 2021</p>
1.2 Definition of the market or economic reality and circumstances in which such measurement may become unreliable	Art. 27(1)(3) of Regulation (EU) 2016/1011 ("BMR"); Art. 1(2) RTS; Art. 1(3) RTS	<p>The benchmark statement shall clearly and unambiguously define the market or economic reality measured by the benchmark and the circumstances in which such measurement may become unreliable.</p> <p>In defining the market or economic reality, the benchmark statement shall include at least the following information:</p> <p>(a) a general description of the market or economic reality;</p> <p>(b) the geographical boundaries, if any, of the market or economic reality;</p> <p>(c) any other information that the administrator considers to be relevant or useful to help users or potential users of the benchmark to understand the relevant features of the market or economic reality, including at least the following elements</p>	<p>Definition of market or Economic Reality The DAX Volatility Index Family groups together benchmarks which aim to measure the underlying volatility of the DAX® Index. The Family consists of benchmarks which calculate implied volatility by deriving it from traded option prices. The benchmarks of this benchmark family do not pursue ESG objectives. The benchmarks of this benchmark family do not use any temperature scenario for the alignment with the target of reducing greenhouse gas emissions or attaining the objectives of the Paris Agreement.</p> <p>STOXX applies clear and transparent rules to both the eligibility and selection criteria for all traded option contracts within each component index.</p>

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		<p>insofar as reliable data on these elements is available:</p> <ul style="list-style-type: none"> (i) information on actual or potential participants in the market; (ii) an indication of the size of the market or economic reality. <p>In defining (the potential limitations of the benchmark and) the circumstances in which the measurement of the market or economic reality may become unreliable, the benchmark statement shall include at least:</p> <ul style="list-style-type: none"> (a) a description of the circumstances in which the administrator would lack sufficient input data to determine the benchmark in accordance with the methodology; (b) where relevant, a description of instances when the accuracy and reliability of the methodology used for determining the benchmark can no longer be ensured, such as when the administrator deems the liquidity in the underlying market as insufficient; <p>Any other information that the administrator reasonably considers to be relevant or useful.</p>	<p>The unit of measurement of the DAX Volatility Index Family is 100 times the annualised volatility percentage.</p> <p>Circumstances in which such measurement may become unreliable:</p> <p>The DAX Volatility Index Family uses as input data for the underlying index portfolio, official equity closing prices sourced directly from eligible stock exchanges. Interest rates are sourced from Börse Frankfurt and Thomson Reuters. Index option prices are sourced directly from eligible derivative exchanges. The measurement of the market or economic reality may become unreliable if one or more of the eligible stock exchanges ceased to operate but the constituent securities affected continued to trade elsewhere.</p>

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1.3 Discretion	Art. 27(1)(3)(b) BMR	The benchmark statement shall 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.	<p>The rules and procedures to which the DAX Volatility Index Family must adhere to are written with the express intention of removing the need for any discretion in so far as this is feasible.</p> <p>Where the existing methodology does not fully prescribe how an event should be dealt with or a complex or an unexpected operational event occurs (e.g. a complex corporate action or a market disruption) then discretion may need to be applied. STOXX has a clear set of procedures for dealing with events that require discretion and will apply these procedures to determine the appropriate treatment. In exercising discretion, STOXX ensures that the benchmark rationale is taken into account; market integrity is preserved; the ongoing reliability of the benchmark calculation is assured; any undue market impact is avoided, and the interests of stakeholders are taken into account. Depending on the nature of the event, the issue will initially be dealt with by either, the Index Operations Committee (“IOC”) or the Index Management Committee (“IMC”). These committees both consist of senior,</p>

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			<p>full-time members of STOXX's staff and will evaluate and document all occurrences in which discretion may need to be used. The IOC or IMC, as appropriate, will then send their evaluation to the Index Governance Committee ("IGC") for oversight. The IGC consists of the senior management of STOXX. The subsequent evaluation of the use of discretion will be evaluated by the Oversight Committee ("OC") which includes external representatives and representatives from the compliance.</p>
<p>1.4 Notice regarding changes to, or the cessation of, the benchmark</p>	<p>Art. 27(1)(3)(c) BMR</p>	<p>The benchmark statement shall 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.</p>	<p>It is possible that certain factors, including external circumstances beyond the control of STOXX, will lead to changes or even cessation of an index within the Index Family.</p>
<p>1.5 Advice concerning material changes to financial contracts and financial instruments</p>	<p>Art. 27(1)(3)(d) BMR</p>	<p>The benchmark statement shall 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</p>	<p>Any financial contracts or instruments that reference any member of the DAX Volatility Index Family or any investment funds that measure their performance by reference to a member of the family may be impacted by any changes to or cessation of a Family member. These financial contracts, financial</p>

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		investment funds.	products and investment funds must be able to withstand, or at least address the issue of, any changes to or cessation of a family member.
1.6 Rationale; review and approval procedures	Art. 27(2)(b) BMR; Art. 1(5) RTS	<p>A benchmark statement shall contain at least, the rationale for adopting the benchmark methodology and procedures for the review and approval of the methodology.</p> <p>In specifying the procedures for review of the methodology, the benchmark statement shall at least outline the procedures for public consultation on any material changes to the methodology.</p>	<p>Rationale for adopting the benchmark methodology: The DAX Volatility Index Family methodology is designed so that it can appropriately measure the economic reality previously described in Statement 1.2.</p> <p>Procedures for review and approval of the methodology: The new index approval process is managed by the Product Approval Committee (“PAC”), and the IGC who assess the ongoing suitability of any index or family of indices on at least an annual basis.</p> <p>Procedures for public consultations: Any methodology changes that are deemed material by the IMC will be subject to public consultation. Stakeholders will be informed of the consultation by notification and an announcement will be made on the DAX website. Material changes can occur where there has been a structural change in the economic interest and to reflect this change the benchmark itself needs amending. Other</p>

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			<p>material changes are where a benchmark changes its objective; changes its calculation methods; changes its compositions and weightings; changes the way it is operationally maintained e.g. changes the way it deals with certain corporate actions. The IGC will carefully take note of any opinions received during the one-month consultation period and take note of them in deciding whether to proceed with the proposed change.</p>
<p>1.7 Criteria and procedures used to determine the benchmark</p>	<p>Art. 27(2)(c) BMR</p>	<p>A benchmark statement shall contain at least 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;</p>	<p>The DAX Volatility Index Family uses as input data for equities official closing prices sourced from Thomson Reuters as well as data sourced directly from eligible stock exchanges. Index option prices are sourced directly from eligible derivative exchanges. Interest rates are sourced from Thomson Reuters. Foreign exchange rates are sourced from Thomson Reuters Benchmark Services. STOXX considers all this data as readily available. During a trading day, STOXX gives priority to the most recent traded intraday price. STOXX has no general criteria for minimum data requirements but, by continuously monitoring Transaction Data received, STOXX will be able to assess whether this data is adequate. If STOXX</p>

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			<p>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. STOXX does not use any models or methods of extrapolation in relation to Input Data. Periodic reviews of all benchmarks are undertaken to ensure their current constituents are best suited to measure their defined market or economic reality. Where the review process requires adjustments to a benchmark’s constituents to be made, a rebalancing will be undertaken. STOXX will inform stakeholders of this rebalancing by means on an index update announcement. This announcement will state the constituent additions and deletions for each affected index and the date on which these changes will become effective.</p>
<p>1.8 Controls and rules that govern any exercise of judgement or discretion</p>	<p>Art. 27(2)(d) BMR; Art. 1(4) RTS</p>	<p>A benchmark statement shall contain at least 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.</p>	<p>The exercise of judgement or discretion is subject to certain controls and rules which are designed to ensure a consistency of approach. In general; a body or person(s) exercising discretion must not be affected by any conflict of interest and must possess the requisite skills and knowledge necessary to exercise such discretion; all the facts and</p>

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		<p>In specifying the controls and rules that govern any exercise of judgement or discretion by the administrator or any contributors in calculating the benchmark or benchmarks, the benchmark statement shall include an outline of each step of the process for any ex post evaluation of the use of discretion, together with a clear indication of the position of any person(s) responsible for carrying out the evaluations;</p>	<p>circumstances must be 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 only the relevant facts and circumstances, and must ignore irrelevant facts and circumstances.</p> <p>Should any ex post evaluation of the use of discretion be required, STOXX will maintain a written record of all the circumstances in which judgement has been used by the IOC, IMC and, if applicable, any comments received from the IGC. For further information please refer to Statement 1.3.</p>
<p>1.9 Determination in periods of stress</p>	<p>Art. 27(2)(e) BMR</p>	<p>A benchmark statement shall contain at least 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.</p>	<p>Certain external events can make it difficult or impossible to trade securities on certain Stock Exchanges. In such circumstances it may be impossible for STOXX Ltd. to follow its prescribed methodology. Where a period of stress is only temporary, e.g. an exchange outage, then the input price used for a constituent will default to the last traded price. Where an affected constituent continues to trade on another venue, the benchmark may no longer be an accurate representation of the economic reality.</p>

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			<p>Where a period of stress is more prolonged, then a Limitation has occurred and the IGC will then exercise Discretion in how to rectify it. In exercising Discretion, the IGC will ensure that any decisions taken will ensure the preservation of market integrity and the reliability of the benchmark by avoiding any undue market impact thus minimising any potential Limitations. All decisions taken by the IGC will be communicated to stakeholders on a timely basis by notification and by announcement on the STOXX website. If the conditions are expected to persist for a long period of time an index consultation, as outlined in Statement 1.6, may need to be enacted.</p>
<p>1.10 Procedures for dealing with errors</p>	<p>Art. 27(2)(f) BMR</p>	<p>A benchmark statement shall contain at least 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.</p>	<p>The DAX Volatility Index Family is recalculated without delay whenever an error in Input Data is detected and it is technically and operationally feasible to do so. An index may need to be suspended whilst an error is being investigated and corrected. All users of the benchmark are notified immediately of a benchmark suspension and further notified prior to resumption. When a redetermination occurs, users are fully notified when the</p>

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			index redetermination has been applied retrospectively.
1.11 Identification of potential limitations	Art. 27(2)(g) BMR; Art. 1(3) RTS	A benchmark statement shall contain at least the identification of potential limitations of the benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs. In defining the potential limitations of the benchmark [and the circumstances in which the measurement of the market or economic reality may become unreliable, the benchmark statement shall include at least:	Potential Limitations in the DAX Volatility Index Family occur when a significant proportion of the constituent securities which make up one of the underlying indices of a family member has no official closing prices available. These Limitations can occur during periods of market stress as outlined in Statement 1.9. However, Limitations may occur due to technical reasons, for example the inability of a stock exchange to publish a close price due to a computer outage.
		(a) a description of the circumstances in which the administrator would lack sufficient input data to determine the benchmark in accordance with the methodology;	(a) STOXX uses official closing levels for calculation of all the underlying indices of all family members and a cascading mechanism to determine the most suitable price for listed derivatives. Where limitations exist, it may be necessary to use last traded prices or exchange settlement prices when calculating the value of an underlying index or underlying listed derivative. This ensures that the value of financial instruments and the pay-offs

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			calculated for financial contracts can be determined
		(b) where relevant, a description of instances when the accuracy and reliability of the methodology used for determining the benchmark can no longer be ensured, such as when the administrator deems the liquidity in the underlying market as insufficient;	(b) Not Applicable
		(c) any other information that administrator reasonably considers to be relevant or useful to help users and potential users to understand the circumstances in which the measurement of the market or economic reality may become unreliable, including a description of what might constitute an exceptional market event.	(c) Benchmarks in the DAX Volatility Index Family may become unreliable due to an exceptional market event that causes a significant proportion of the underlying securities which comprise an underlying index to become suspended from trading for reasons such as delisting, nationalisation, insolvency, or administration. Where an exceptional market event occurs; STOXX will use discretion, as detailed in Section 1.3, to ensure that the exceptional market event is dealt

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			with in a way that best reflects the economic or market reality that the affected benchmarks aim to measure.
1.12 ISINs	Art. 1(1)(b) RTS	The benchmark statement shall state, where available, the international securities identification number (ISIN) of the benchmark or benchmarks; alternatively, for a family of benchmarks, the statement may provide details of where the ISINs are publicly accessible free of charge;	STOXX assigns ISIN codes to all Benchmarks, these numbers are freely available and can be found in the Vendor Code sheet on the DAX website, https://www.dax-indices.com/resources .
1.13 Contributions	Art. 1(1)(c) RTS	The benchmark statement shall state whether the benchmark, or any benchmark in the family of benchmarks, is determined using contributions of input data;	No benchmark in the DAX Volatility Index Family is determined using contributions of Input Data.
1.14 Type of benchmark	Art. 1(1)(d) RTS	The benchmark statement shall state whether the benchmark or any benchmark in the family of benchmarks qualifies as one of the types of benchmarks listed under Title III of Regulation (EU) 2016/1011, including the specific provision by virtue of which the benchmark qualifies as that type.	The DAX Volatility Index Family does not include an Interest Rate Benchmark under Article 3(1) (22), neither does it include a Commodity Benchmark under Article 3(1) (23) nor a Regulated Data Benchmark as some prices are sourced from Trading Venues other than those prescribed under Article 3(1) (24)(a) BMR. Any benchmarks within the family deemed critical or

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			significant or listed in Section 6 under additional information.
2. Specific Disclosure requirements for regulated data benchmarks			
	Art. 2 RTS	In addition to the information to be included pursuant to Article 1, for a regulated-data benchmark or, where applicable, family of regulated-data benchmarks, the benchmark statement shall state at least the following in its description of the input data:	
2.1 Sources of input data	Art. 2(a) RTS	the source(s) of the input data used	Not Applicable.
2.2 Type of input data source	Art. 2(b) RTS	for each source, the relevant type as listed in Article 3(1) (24) of Regulation (EU) 2016/1011	Not Applicable.
3. Specific Disclosure requirements for interest rate benchmarks			
	Art. 3 RTS	In addition to the information to be included pursuant to Article 1, for an interest rate benchmark or, where applicable, family of interest rate benchmarks, the benchmark statement	

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		shall include at least the following information:	
3.1 Application of Annex I BMR	Art. 3(a) RTS	a reference alerting users to the additional regulatory regime applicable to interest rate benchmarks under Annex I to Regulation (EU) 2016/1011	Not Applicable.
3.2 Compliance with Annex I BMR	Art. 3(b) RTS	a description of the arrangements that have been put in place to comply with that Annex.	Not Applicable.
4. Specific disclosure requirements for commodity benchmarks			
	Art. 4 RTS	In addition to the information to be included pursuant to Article 1, for a commodity benchmark or, where applicable, family of commodity benchmarks, the benchmark statement shall at least:	
4.1 Application of Title II or Annex II BMR	Art. 4(a) RTS	indicate whether the requirements of Title II of, or Annex II to, Regulation (EU) 2016/1011 apply to the benchmark, or family of benchmarks as prescribed by Article 19 of that Regulation;	Not applicable.

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4.2 Explanation for application of Title II or Annex II BMR	Art. 4(b) RTS	include an explanation as to why Title II of or, as the case may be, Annex II to that Regulation applies	Not applicable.
4.3 Definitions of relevant underlying physical commodity	Art. 4(c) RTS	include in the definitions of key terms a concise description of the criteria that define the relevant underlying physical commodity;	Not applicable.
4.4 Place of publication of explanations subject to paragraph 7 of Annex II BMR	Art. 4(d) RTS	where applicable, indicate where the explanations are published that the administrator is required to publish under paragraph 7 of Annex II to that Regulation	Not applicable.
<p>5. Specific disclosure requirements for critical benchmarks</p>			
	Art. 5 RTS	In addition to the information to be included pursuant to Article 1, for a critical benchmark, or, where applicable, a family of benchmarks that contains at least one critical benchmark, the benchmark statement shall include at least the following information:	

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5.1 Reference regarding application of enhanced regulatory regime	Art. 5(a) RTS	references alerting users to the enhanced regulatory regime applicable to critical benchmarks under Regulation (EU) 2016/1011;	Not applicable.
5.2 Way of information of any delay in publication	Art. 5(b) RTS	a statement indicating how users will be informed of any delay in the publication of the benchmark or of any re-determination of the benchmark and indicating the (expected) duration of measures.	Not applicable.
6. Additional Information			
	Art. 1(8) RTS	Administrators may include additional information at the end of their benchmark statement provided that, if this is done by referring to a published document containing the information, the document shall be one that is accessible free of charge.	Full methodology documents as well as vendor reference codes for all component members of the DAX Volatility Index Family can be found on www.dax-indices.com/resources . This family contains no significant or critical benchmarks.

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7. Key Term Definitions	Art. 27(2) BMR	A benchmark statement shall contain at least: the definitions for all key terms relating to the benchmark	See below for Glossary of Key Terms

Key Term	Definition
Gross Return Index	Shall mean an Index in which dividend payments are fully reinvested, calculated with a full dividend. Gross Return Indices are labelled accordingly in the Vendor Code Sheet.
Input Data	Shall mean the data in respect of the value of one or more Constituent Elements, or prices, including estimated prices, quotes, committed quotes or other values, used by STOXX to determine an Index.
Insufficient Rule	Shall mean the absence of a methodology rule, provision or procedure which leads to the failure of 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 replicated by a long portfolio tracking the Index; insufficient available Constituent Elements to fulfil the requirements of the Index Methodology; or market disruption which results in the performance of the Index being unable to be tracked.
Limitation	Shall refer to circumstances where the Index Methodology contains an Insufficient Rule or Unclear Rule or if it fails to produce Index Values as intended. Examples: Data Insufficiency; Extreme Market Events.
Net Return Index	Shall mean an Index in which dividend payments are fully reinvested, calculated with a dividend minus STOXX Withholding Tax. Net Return Indices are labelled accordingly in the Vendor Code Sheet.
Price Index	Shall mean an Index which measures the price(s) of constituents and where dividend payments/coupon payments are not invested into the Index. All Price Indices are labelled accordingly in the Vendor Code Sheet.
Trading Venue	Shall have exchanges and other trading platforms.

Unclear Rule	Shall mean a situation in which a rule leaves multiple possible interpretation on how it shall be applied to a specific situation.
Vendor Code Sheet	Shall mean a sheet which contains information on certain Indices, <i>inter alia</i> the applicable Dissemination Calendars, which are available under https://www.dax-indices.com/ressourcen