

METHODOLOGY POLICY

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1 PURPOSE

The Benchmarks Regulation (Regulation EU 2016/1011 of the European Parliament and of the Council of 8 June 2016) ('BMR') gives rise to a number of obligations for the Index Administrator. These address general principles of governance accuracy, integrity (including adequate governance arrangements to control conflicts of interest and to safeguard confidence in the integrity of an Index), reliability and independence of Indices, as well as transparency in the Index Methodology. One key element of Solactive AG's response to the regulatory requirements is the implementation of a robust, controlled and auditable Index approval and methodology change process.

This document describes the procedure to govern the process of developing new Indices (New Index Approval Process (NINA)), as well as to govern the situations where a change of the methodology is requested.

2 SCOPE

This policy applies globally to all Indices administered by Solactive.

3 GENERAL PRINCIPLES

The term Index Methodology is to be understood as any set of rules that directly or indirectly regulate the administration, maintenance and calculation of Indices (including the selection and rebalancing of constituents). This includes:

- Index Guidelines;
- the Bond Methodology;
- the Equity Methodology;
- the Input Data Policy;
- the Correction Policy;
- the Termination Policy; and
- this Methodology Policy with regard to the procedure for methodology changes.

The Index Methodology is of utmost importance for administrating and calculating, reliable and accurate Indices. A concise and well-documented Index Methodology provides clients and stakeholders with the possibility to thoroughly assess any Index's suitability for their needs, and to understand the ongoing maintenance and calculation procedures.

To ensure the accuracy, integrity, reliability, independence and transparency of the Index Methodology, a process for the creation and approval of new Indices (New Index Approval Process (NINA)) has been implemented, as well as a process to handle a change of the methodology.



4 PROCEDURES

4.1 NEW INDEX APPROVAL PROCESS (NINA)

The New Index Approval Process is part of the administrator's control framework and designed to address the BMR requirements in terms of the setup (including transparency of the Index Methodology), management and operation of a benchmark. It needs to be initially approved and regularly reviewed (at least annually) by the Oversight Committee. To perform effective oversight on all aspects of the provision of Solactive's benchmarks, the Oversight Committee is to be informed of every launch or start of the live calculation of a benchmark. The Oversight Committee can also check compliance with the New Index Approval Process.

(a) Stakeholders and Responsibilities

Product Development: Product Development Teams are responsible for completing the Index development process for Solactive Indices on their own or in close cooperation with clients, as appropriate. As part of this process, the Index Methodology will be defined and documented, and adherence to the BMR requirements will be assured.

Operations: The ongoing maintenance and management of live Indices are the responsibility of the Operations Team. In some cases, the initial set-up of the Index in the Index calculation may be performed by an Ops team, while PD may perform the initial set-up in other cases. However, in all cases, Ops will be contacted prior to initial set-up to ensure that the proposed Index is operationally feasible. They will ensure that a proposed Index is operationally feasible, and will then implement the defined Index Methodology within the Solactive Index calculation platform.

Compliance: The Compliance Team ensures that the business units implement procedures and controls to provide effective adherence to the requirements of the BMR. This includes performing regular controls that staff members have the relevant qualifications, that adequate procedures are implemented and followed, and escalating to management in the case of non-compliance.

Oversight Committee: The Oversight Committee is responsible for the ad hoc review of Index Methodologies (e.g. in case of complaints or occurrence of extraordinary events in respect of the relevant benchmark). In addition, it is responsible (inter alia) for the oversight of the administrator's control framework, and the management and operation of the benchmark.

(b) NINA – Procedure

The New Index Approval Process (NINA) will follow the steps described in detail as follows:

(aa) Step 1 - Index Development

All Index development activities will be managed by the respective Product Development Team. Two distinct cases may be considered for Index development:



- Solactive Index Development. This is started at the initiative of the Product Development Team, and they work on an iterative development process without the involvement of a client.
- Client Index Development. The Index is developed together with a client, who may have varying degrees of involvement, ranging from very passive, to highly iterative and interactive involvement.

It may be the case that other teams within Solactive are occasionally engaged in the activity of Index development alongside their normal responsibilities (such as research). In these cases, they should be subject to all of the requirements, tasks and processes described here for Product Development.

In all cases, Product Development Teams will work on the definition of draft Index Guidelines describing the Index Methodology. The Index Guideline will be based on standard Index Guideline Templates (as described in the Error! Reference source not found. section below).

In the case of any required deviation from the Index Guideline Template, Product Development Teams will obtain guidance from Compliance and document the rationale for the required deviation. In such cases, Compliance will also be requested to provide approval of the final draft Index Guideline (to be documented at the approval stage as described below). However, such Compliance approval must be provided via email and will be limited to the deviation from the Index Guideline Template (it will not extend to an entirely new Index Guideline).

(bb) Step 2 - Product Development Approval

Index Development: The Index development process may be iterative, requiring numerous stages of enhancement until a final Index Guideline draft is produced. During the Index development process, the PD Team will consider a number of key regulatory requirements, including:

- fulfilment of methodology requirements (referring to Articles 12 and 13 of the BMR);
- determination and requirements of the Input Data used, and ensuring that necessary contractual arrangements, including licenses, are in place (Article 11 of the BMR);
- identification of any other service providers (in particular for delivery of selection data and dissemination/publication of Index levels and portfolio composition), and ensuring that the necessary contractual arrangements are in place (Article 10 of the BMR); and
- identification of any conflicts of interest (Article 4 of the BMR).

The list of Input Data and service providers for which we have valid license and contractual agreements in place will be maintained and made available by Legal.

Any relevant conflicts of interest will be listed and checked against the conflicts of interest register maintained by Compliance. In the case that a conflict (or potential conflict) of interest is identified that is not contained in the register, this will be immediately reported to Compliance. They will assess the conflict and if necessary, update the conflicts of interest register.

Further details on the exact regulatory requirements to be checked will also be part of the training described in the relevant section below.

Index Approval: Once the Index development process is materially complete, the draft Index Guideline will be finalized and a formal approval process completed at this stage. The Product Development Team will



confirm that each of the points mentioned above have been complete and this will be documented. If appropriate, the rationale (and approval from Compliance) of any deviations from the Index Guideline Template will also be documented in the checklist.

If the necessary contractual or service level documentation is not available for Input Data and/or other service providers respectively, PD will initiate onboarding with Compliance and Legal. The approval process may still proceed, but final approval and Index calculation will not be possible until these are resolved.

Documentation Requirements: The approval checklist will be stored along with any supporting documentation, and, in particular, approval emails from relevant sign-off parties in a non-modifiable format in a central file location accessible to the PD, Ops and Compliance teams. Compliance will have access to the filed documentation and will therefore easily be able to locate the relevant approval evidence when required.

(cc) Step 3 – Operational Acceptance

The final Index Guideline draft will be reviewed by the respective Ops team. They will ensure that the Index Methodology is operationally feasible (including the application of appropriate calculation, selection and rebalancing mechanisms). In the case of any issues or concerns, this will be discussed with PD until a resolution can be found that meets not only the regulatory requirements, but also operational feasibility of the Index under approval. This may result in a re-engagement by the Product Development Team with the client, and changes to the methodology, which may then require the approval process to be restarted from Step 1.

It should be standard practice that Operations Teams are involved at an early stage in the Product Development lifecycle, avoiding any surprises or last-minute rejections. Furthermore, Operations Teams may be involved in the drafting of the Index Guidelines prior to their finalization.

The Ops team will confirm their operational acceptance via e-mail to PD, who will then update the respective checklist to document the operational acceptance. If ISINs are assigned at this stage, they will be recorded and updated in the respective checklist.

Initial set-up of the Index in the Index Calculation Platform may either be performed directly by the Product Development Team, or, following a formal handover, by the respective Operations Team.

Note that the operational acceptance as part of the Index Approval process is completely separate to the maintenance activities that will then be performed. For example, it may be necessary for Ops to operationally accept a new Index during the approval process that is then not immediately implemented and maintained by Ops. In such cases, there may be a limited transition period following Index Approval where the Index Calculation is overseen by the PD Team, until such time that it can be handed over.

(dd) Step 4 – Compliance Approval

A compliance control will be performed to ensure that each step in the defined Approval Process has been performed correctly. This control will address the completeness and plausibility of the Index (or family of



Indices) under approval, and will also ensure that a conflicts of interest check has been conducted. It will not address the material correctness or functioning of the respective Index (or family of Indices).

Depending on the outcome of the compliance control, it may be necessary to update the conflicts of interest register, or take corrective actions, such as reinforcing training on the application of the New Index Approval process.

The compliance control is not expected to be performed for every new Index that is approved. As the compliance control is focused on correct application of the New Index Approval process, it will be sufficient for this to be in the form of ex-post spot checks.

(ee) Step 5 – Finalization of Process

Following receipt of the feedback and approval from Ops and Compliance, PD will finalize the Index Guidelines and produce the respective Benchmark Statement.

Once approval is complete, PD will ensure that the Index Guidelines and Benchmark Statement are published on the Solactive website, and only then will the Index Calculation be able to start. At the same time, PD will also save the Index Guideline and Benchmark Statement in a non-modifiable format in a central file location accessible to the PD, Ops and Compliance teams.

The Product Development Team will also provide the Index Guideline, Benchmark Statement and approval checklist to the Oversight Committee for acknowledgement. This acknowledgement is not part of the approval process itself. It will be sufficient that the Oversight Committee formally documents acknowledgement of all Index approvals in the previous period on a regular basis.

(c) Index Guideline Templates

A template will be used to standardize the documentation process (the 'Index Guideline Template'). The templates will provide a fixed format, pre-defined fixed text blocks and variable fields that will be completed for each Index (or family of Indices). The variable fields will, inter alia, cover items such as Index objectives and selection/rebalancing methodologies. Any descriptive text fields will be completed following specified standards to ensure consistency from one Index Guideline to another. The Index Guideline Template, along with guidance for the key descriptive text fields, will be approved by Compliance and included in the training described in the section above.

No adjustments or changes to the Index Guideline Templates will be allowed, or new templates created, unless the specific approval of Compliance is given (referring to Step 1 in the New Index Approval Process section above). In this case, the change and formal approval will be documented and stored in a centrally available file location. The updated template will replace the version available to the respective PD teams, and only the new version will be used from this point on.

The Index Guideline Template and, based on the template, the final Index Guideline include, at minimum, the following information:



- a description of the objective or strategy of the Index and the market or economic reality that it is intended to measure;
- the currency or other unit of measurement of the Index;
- the type of Input Data;
- a description of the constituents of the Index and the criteria used for selecting and weighting them;
- a description of situations in which discretion may be exercised (typically in the context of selection of Index constituents for rebalancing and upon occurrence of extraordinary events);
- whether the Index takes into account reinvestment of dividends or coupons paid by its constituents;
- potential limitations of the methodology and descriptions of processes and procedures to be applied in exceptional circumstances, including in the case of market disruptions or in periods of stress or where transaction data sources may be insufficient, inaccurate or unreliable; and
- a description of the process for regular review of the methodology and potential changes to ensure that it remains representative of the relevant market or economic reality the Index is intended to reflect.

4.2 PROCEDURE FOR METHODOLOGY CHANGES

The methodology of an Index is determined once (at the time of creation of the Index) and later change is generally not foreseen. However, if indicated by the regular review, a change of the Index Methodology may be necessary and not avoidable (e.g. if the underlying market or economic reality has changed since the launch of the Index, or if the present Methodology is based on obsolete assumptions and factors, and no longer reflects the reality as accurately, reliably and appropriately as before).

It may also be that during the maintenance and calculation of an Index over a longer period of time, potential improvements to the Methodology are detected that were not foreseen during the initial design phase. Such changes usually amount to a refinement of certain aspects, for example a modification of selection and rebalancing criteria or the treatment of corporate actions. Further practical considerations are also taken into consideration at this stage, such as the suitability of the Index for its intended use as well as the ability or continued ability of users of the Index to hedge any exposure resulting from the issuance of financial instruments linked to the Index in accordance with existing market practice and/or convention.

(a) Classification of the Change

Solactive clearly distinguishes between clarifications, non-material changes and material changes to the Index Methodology.



Clarification: a Clarification is understood as a minor change to the methodology document (e.g. Index Guideline) that does not adjust/amend the methodology of the Index (e.g. typos, a change in the layout or construction of the text, an update of certain figures or an amendment of a disclaimer).

Non-Material Change: a Non-Material Change is understood as a change not affecting the core of the Index Methodology (e.g. changes to the adjustment period of the Index).

Material Change: a Material Change is understood as a change to the Index Methodology that may substantially affect the integrity of the index and its continued comparability over time. Such change affects the core of the Index Methodology. This is particularly the case if such change relates, inter alia, to the number of constituents of the Index, the minimum market capitalization of the Index constituents, the minimum liquidity of the Index constituents or the qualitative selection criteria of the Index constituents.

(b) Procedure for a Clarification

The Ops team operationally responsible for the Index will evaluate the identified error in the Index Guideline. A Clarification can only take place if the potential errors are objectively identifiable from the Index Guideline. Such errors can be corrected without informing the Oversight Committee or Compliance. The correction made and justification as to why it is a clear error must be documented (including the names of the employees involved in the assessment of the error) and filed. A dual control principle shall be applied to the assessment of the potential error. In the case of alleged typos in data, figures or formulas, special care must be taken in the evaluation. For example, it is not a sufficient explanation for an error that the Index is set up in the system differently from the description in the guideline.

Once the above steps have been carried out, the respective Index Guideline will be updated. No announcement is required.

(c) Procedure for a Change

Any proposal for a methodology change has to be submitted to the Oversight Committee. Such proposal needs to contain detailed information for the requirement of such change, including a justification as to why the amendment is necessary, as well as a concrete draft of the amendments.

The Oversight Committee may require additional information where necessary, and may also request an assessment of the practicality of the implementation.

(i) Classification of the Change

Based on this information, the Oversight Committee will decide whether the proposed change is a Non-Material Change or a Material Change ('Classification') and whether the market or economic reality the Index is intended to reflect is represented in a more suitable manner after the adjustment ('Alterability').

In relation to the Alterability, the Oversight Committee may take the following aspects, inter alia, into consideration:

- the breadth and depth of the use of the Index and the nature of the stakeholders;



- the proposed change has to be consistent with the overriding objective of Solactive ensuring the continued integrity of the respective Index;
- the change has to be consistent with the design of the Index;
- the original intent or function of the Index shall not be fundamentally altered;
- the proposed change has to be consistent with the Index continuing to achieve its stated Index objective and continuing to appropriately measure the underlying market or economic reality;
- the economic impact of the change;
- market impact on composition members;
- operational impact on market participants resulting from the change; and
- transaction costs and estimated turnover resulting from the change.

(ii) Procedure of the Change

Depending on the Classification, the following processes must be observed:

Non-Material Change: Based on its thorough assessment of the factual situation, the alleged improvements and other implications of the proposed methodology change, the Oversight Committee will take a decision to either approve or disapprove the Non-Material Change to methodology. This decision is taken in accordance with the Terms of Reference of the Oversight Committee.

Any such decision is duly documented and, in the case the change has been approved, announced (in accordance with the procedure described in the Announcement of the Change section below). The respective document will be amended. The change may be implemented as of the next Index rebalancing date. However, in urgent cases, immediate implementation may be necessary.

Material Change: In the case of a Material Change, a market consultation regarding this Material Change shall be initiated. Solactive will set up and publish a public announcement of the market consultation, consisting of a detailed description of the proposed change(s). This market consultation document shall contain sufficient information, enabling stakeholder to assess the impact of the proposed changes. The market consultation procedure will provide advance notice and a clear timeframe that gives stakeholders sufficient opportunity to analyze and comment on the impact of such proposed material changes, having regard to Solactive's assessment of the overall circumstances.

The Oversight Committee may delegate the responsibility for conducting the market consultation (i.e. for contacting the relevant stakeholders and subscribers and collecting the feedback) to the Ops team operationally responsible for the Index. At its sole discretion, Solactive may make available a summary of the stakeholders' comments.

Taking into account the stakeholders' comments, the Oversight Committee will decide whether the proposed change is approved and how the changes will be reflected in the respective document. This decision is taken in accordance with the Terms of Reference of the Oversight Committee. Any such decision is duly documented and, in the case the change has been approved, announced (in accordance with the procedure described in Announcement of the Change section below). The change may be implemented as



of the next Index rebalancing date. However, in urgent cases, immediate implementation may be necessary.

The relevant stakeholders will be informed of the change in writing in advance of the implementation, and the respective document will be amended.

(iii) Announcement of the Change

The change will be documented and published on the Solactive website (in advance of implementation). The respective notification and announcement will specify the concrete details of the change (e.g. why the change is occurring and when the change is intended to apply). Solactive will announce the change in a timely manner and provide for an implementation period that provides sufficient time for potential adjustments users of the Index may need to make to account for the change.

Solactive will seek to announce the change at least 10 business days prior to implementation. However, in urgent cases, immediate implementation may be necessary. All changes to the methodology (including changes in urgent cases) will require a minimum notice period of one day.

Taking into account the specific circumstances of the individual situation, the period for implementation may be extended.

5 DEFINITIONS

For the purpose of this document, the defined terms used herein shall have the following meanings:

'BMR' means Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on Indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and amending Directives 2008/48/EC and 2014/17/EU and Regulation (EU) No 596/2014.

'Index' (or 'Indices') refers to an index as defined in Article 3(1)(1) of the BMR.

'Index Guideline Template' is defined in Section 4.1. (c).

'Index Methodology' is defined in Section 3.

'Input Data' means the data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by an administrator to determine an Index. FX rates are also considered Input Data, provided that such FX rates are used every time the level of an Index is determined.

'Operations Team' (or 'Ops') means the team within Solactive that is responsible for the day-to-day maintenance of an Index, including determination and distribution of Index levels, as well as ordinary and extraordinary adjustments, for example, after the occurrence of corporate actions with regard to the constituents of an Index or in the course of the regular rebalancing of an Index.

'Oversight Committee' means a committee composed of staff from Solactive and its subsidiaries that is responsible for decisions regarding any amendments to the rules or any termination of the Index.



Methodology Policy

'Product Development Team' (or 'PD') means the team within Solactive that is responsible for the development of the methodology for determining an Index.

'Record Keeping Policy' means Solactive's policy governing the processes to meet the record keeping requirements under Article 8 of the BMR.

'Solactive' means Solactive AG and its subsidiaries.

'Termination Policy' means Solactive's policy governing the processes for termination of an Index.

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