

INDEX GUIDELINE

SOLACTIVE NDX FUTURES EXCESS RETURN INDEX

Version 1.0

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TABLE OF CONTENTS

Introduction	3
1. Index Specifications	4
1.1. Scope of the Index	4
1.2. Identifiers and Publication	4
1.3. Initial Level of the Index	4
1.4. Prices and calculation frequency	4
1.5. Licensing.....	5
2. Replacement of Active Contract.....	6
2.1. Replacement process	6
2.2. Roll Schedule.....	6
2.3. Weighting of the index components	7
2.4. Time Weighted Average Price (TWAP).....	7
3. Calculation of the Index	8
3.1. Index formula	8
3.2. Accuracy.....	8
3.3. Recalculation.....	8
3.4. Market Disruption.....	9
4. Miscellaneous	10
4.1. Discretion	10
4.2. Methodology Review.....	10
4.3. Changes in calculation method.....	10
4.4. Termination	11
4.5. Index Committee	11
5. Definitions.....	12
6. History of Index Changes	14
Contact.....	15



INTRODUCTION

This document (the "**GUIDELINE**") is to be used as a guideline with regard to the composition, calculation and maintenance of the Solactive NDX Futures Excess Return Index (the "**INDEX**"). Any amendments to the rules made to the GUIDELINE are approved by the INDEX COMMITTEE specified in Section 5.5. The INDEX is owned, calculated, administered, and published by Solactive AG ("**SOLACTIVE**") assuming the role as administrator (the "**INDEX ADMINISTRATOR**") under the Regulation (EU) 2016/1011 (the "**BENCHMARK REGULATION**" or "**BMR**"). The name "Solactive" is trademarked.

The text uses defined terms which are formatted with "SMALL CAPS". Such Terms shall have the meaning assigned to them as specified in Section 6 (Definitions).

The GUIDELINE and the policies and methodology documents referenced herein contain the underlying principles and rules regarding the structure and operation of the INDEX. SOLACTIVE does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the INDEX nor the level of the INDEX at any certain point in time nor in any other respect. SOLACTIVE strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for SOLACTIVE – irrespective of possible obligations to issuers – to advise third parties, including investors and/or financial intermediaries, of any errors in the INDEX. The publication of the INDEX by SOLACTIVE does not constitute a recommendation for capital investment and does not contain any assurance or opinion of SOLACTIVE regarding a possible investment in a financial instrument based on this INDEX.



1. INDEX SPECIFICATIONS

1.1. SCOPE OF THE INDEX

The INDEX tracks the performance of equity future contracts i.e. INDEX COMPONENT(S). The exposure to INDEX COMPONENT rolls over a certain number of days from the ACTIVE CONTRACT into the NEXT ACTIVE CONTRACT.

1.2. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Solactive NDX Futures Excess Return Index	DE000SLOKU89	USD	ER*	.SOLNDXER	SOLNDXER Index

*ER means that the Index is calculated as excess return

The INDEX is published on the website of the INDEX ADMINISTRATOR (www.solactive.com) and is, in addition, available via the price marketing services of Boerse Stuttgart GmbH and may be distributed to all of its affiliated vendors. Each vendor decides on an individual basis as to whether it will distribute or display the INDEX via its information systems.

Any publication in relation to the INDEX (e.g. notices, amendments to the GUIDELINE) will be available at the website of the INDEX ADMINISTRATOR: <https://www.solactive.com/news/announcements/>.

1.3. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 2002-04-01 the START DATE, is 92.4654745506536. Historical values from the 2024-01-30, the LIVE DATE, will be recorded in accordance with Article 8 of the BMR. Levels of the INDEX published for a period prior to the LIVE DATE have been back-tested.

1.4. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated on each CALCULATION DAY from 09:30 to 16:00 EST based on the TRADING PRICES on the EXCHANGES on which the INDEX COMPONENT(S) are listed.

In addition to the intraday calculation a closing level of the INDEX, the TWAP, for each CALCULATION DAY is also calculated. If TWAP for any INDEX COMPONENT(S) is unavailable for a CALCULATION DAY, respective



SETTLEMENT PRICE is be used. In case the INDEX COMPONENT(S) has no SETTLEMENT PRICE, such a day will be treated as a MARKET DISRUPTION DAY and the level of the INDEX will not be published by SOLACTIVE.

1.5. LICENSING

Licenses to use the INDEX as the underlying value for financial instruments, investment funds and financial contracts may be issued to stock exchanges, banks, financial services providers and investment houses by Solactive.



2. REPLACEMENT OF ACTIVE CONTRACT

INDEX COMPONENT(S) are selected according to the ROLL PERIOD specified in Section 2.1 and in accordance with the ROLL SCHEDULE defined in Section 2.2.

2.1. REPLACEMENT PROCESS

The replacement of the ACTIVE CONTRACT by the NEXT ACTIVE CONTRACT will be implemented over a “NRoll”-day ROLL PERIOD. The ROLL PERIOD starts on Roll Start, which is a TRADING DAY preceding the Expiry Day of the ACTIVE CONTRACT. The CONTRACT ROLL WEIGHT of the ACTIVE CONTRACT is then decreased by 1/NRoll after the Close of Business of each TRADING DAY of the ROLL PERIOD starting at 100% while the CONTRACT ROLL WEIGHT of the NEXT ACTIVE CONTRACT is increased by 1/NRoll after the Close of Business of each TRADING DAY of the ROLL PERIOD starting at 0%. After the end of the ROLL PERIOD (End Roll Date included) the NEXT ACTIVE CONTRACT becomes the ACTIVE CONTRACT.

Base RIC	Number of Roll Days (NRoll)	Exchange	Roll Start
0#NQ:	1	XCME	5 Business Days before last TRADING DAY

2.2. ROLL SCHEDULE

The ACTIVE CONTRACT and the NEXT ACTIVE CONTRACT are selected based on the current/next month as follows:

ACTIVE CONTRACT:

Contract/Month 1 2 3 4 5 6 7 8 9 10 11 12

0#NQ: H H H M M M U U U Z Z Z

NEXT ACTIVE CONTRACT:

Contract/Month 1 2 3 4 5 6 7 8 9 10 11 12

0#NQ: H H M M M U U U Z Z Z H+

A “+” defines a contract of the following year.



The following naming convention of the contracts holds:

Month	MAR	JUN	SEP	DEC
Identifier	H	M	U	Z

2.3. WEIGHTING OF THE INDEX COMPONENTS

The weighting of the INDEX COMPONENT(S) in the INDEX is executed as described in Section 2.1.

2.4. TIME WEIGHTED AVERAGE PRICE (TWAP)

Each regular price tick n (and total of N ticks), which arrive between the TIME WINDOW START and TIME WINDOW END will be used in the calculation of the TWAP on TRADING DAY t .

A regular price tick is a tick which is associated with an executed trade. Hence trades without volume (or zero volume) and cancelled trades are excluded from the TWAP calculation. Furthermore, block trades are excluded from the TWAP calculation.

The TWAP, $TWAP_t^c$, as of TRADING DAY t of FUTURE CONTRACT c is calculated according to the following formula:

$$TWAP_t^c = \frac{\sum_{n=1}^N Px_{n,t}^c}{N}$$

Where:

$Px_{n,t}^c$: is the TRADING PRICE of the n -th RELEVANT TICK of FUTURE CONTRACT c on CALCULATION DAY t .

If the INDEX ADMINISTRATOR does not receive any price ticks within the TIME WINDOW START and TIME WINDOW END, the INDEX ADMINISTRATOR will determine the REFERENCE PRICE the following way:

- 1) If there are no ticks, the REFERENCE PRICE will be the SETTLEMENT PRICE as of TRADING DAY t .

Name	Time Window Start	Time Window End	Exchange Time Zone
Solactive NDX Futures Excess Return Index	09:30:00	16:00:00	America/New_York



3. CALCULATION OF THE INDEX

3.1. INDEX FORMULA

The INDEX is calculated on any given TRADING DAY t and published in INDEX CURRENCY in accordance with the following formula:

$$I_t = I_{t-1} \cdot \left(\frac{CRW_t^c \times TWAP_t^c}{TWAP_{t-1}^c} + \frac{CRW_t^{nc} \times TWAP_t^{nc}}{TWAP_{t-1}^{nc}} \right)$$

where:

I_{t-1} is the INDEX level on the TRADING DAY immediately preceding TRADING DAY t with $I_{Index\ Start\ Date} = 100$

CRW_t^c is the CONTRACT ROLL WEIGHT of the ACTIVE CONTRACT, c , on TRADING DAY t .

CRW_t^{nc} is the CONTRACT ROLL WEIGHT of the NEXT ACTIVE CONTRACT, nc , on TRADING DAY t .

$TWAP_t^c$ is the TWAP of the ACTIVE CONTRACT, c , on TRADING DAY t .

$TWAP_t^{nc}$ is the TWAP of the NEXT ACTIVE CONTRACT, nc , on TRADING DAY t .

With:

TRADING DAY "t"	$CRW_{c,t}$	$CRW_{nc,t}$
"Roll Start Date" / "Roll End Date"	0.0%	100.0%
t is not in the Roll Period	100.0%	0.0%

3.2. ACCURACY

The level of the INDEX will be rounded to 3 decimal places.

3.3. RECALCULATION

SOLACTIVE makes the greatest possible efforts to accurately calculate and maintain its indices. However, errors in the determination process may occur from time to time for variety reasons (internal or external) and therefore, cannot be completely ruled out. SOLACTIVE endeavors to correct all errors that have been identified within a reasonable period of time. The understanding of "a reasonable period of time" as well as the general measures to be taken are generally depending on the underlying and is specified in the



Solactive Correction Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/correction-policy/>.

3.4. MARKET DISRUPTION

In periods of market stress SOLACTIVE calculates its indices following predefined and exhaustive arrangements as described in the Solactive Disruption Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/disruption-policy/>. Such market stress can arise due to a variety of reasons, but generally results in inaccurate or delayed prices for one or more INDEX COMPONENT(S). The determination of the INDEX may be limited or impaired at times of illiquid or fragmented markets and market stress.



4. MISCELLANEOUS

4.1. DISCRETION

Any discretion which may need to be exercised in relation to the determination of the INDEX (for example the determination of the INDEX UNIVERSE (if applicable), the selection of the INDEX COMPONENTS (if applicable) or any other relevant decisions in relation to the INDEX) shall be made in accordance with strict rules regarding the exercise of discretion or expert judgement.

4.2. METHODOLOGY REVIEW

The methodology of the INDEX is subject to regular review, at least annually. In case a need of a change of the methodology has been identified within such review (e.g. if the underlying market or economic reality has changed since the launch of the INDEX, i.e. if the present methodology is based on obsolete assumptions and factors and no longer reflects the reality as accurately, reliably and appropriately as before), such change will be made in accordance with the Solactive Methodology Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.

Such change in the methodology will be announced on the SOLACTIVE website under the Section "[Announcement](https://www.solactive.com/news/announcements/)", which is available at <https://www.solactive.com/news/announcements/>. The date of the last amendment of this INDEX is contained in this GUIDELINE.

4.3. CHANGES IN CALCULATION METHOD

The application by the INDEX ADMINISTRATOR of the method described in this document is final and binding. The INDEX ADMINISTRATOR shall apply the method described above for the composition and calculation of the INDEX. However, it cannot be excluded that the market environment, supervisory, legal and financial or tax reasons may require changes to be made to this method. The INDEX ADMINISTRATOR may also make changes to the terms and conditions of the INDEX and the method applied to calculate the INDEX that it deems to be necessary and desirable in order to prevent obvious or demonstrable error or to remedy, correct or supplement incorrect terms and conditions. The INDEX ADMINISTRATOR is not obliged to provide information on any such modifications or changes. Despite the modifications and changes, the INDEX ADMINISTRATOR will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.



4.4. TERMINATION

SOLACTIVE makes the greatest possible efforts to ensure the resilience and continued integrity of its indices over time. Where necessary, SOLACTIVE follows a clearly defined and transparent procedure to adapt Index methodologies to changing underlying markets (see Section 5.2 "Methodology Review") in order to maintain continued reliability and comparability of the indices. Nevertheless, if no other options are available the orderly cessation of the INDEX may be indicated. This is usually the case when the underlying market or economic reality, which an index is set to measure or to reflect, changes substantially and in a way not foreseeable at the time of inception of the index, the index rules, and particularly the selection criteria, can no longer be applied coherently or the index is no longer used as the underlying value for financial instruments, investment funds and financial contracts.

SOLACTIVE has established and maintains clear guidelines on how to identify situations in which the cessation of an index is unavoidable, how stakeholders are to be informed and consulted and the procedures to be followed for a termination or the transition to an alternative index. Details are specified in the Solactive Termination Policy, which is incorporated by reference and available on the SOLACTIVE website: <https://www.solactive.com/documents/termination-policy/>.

4.5. INDEX COMMITTEE

An index committee composed of staff from SOLACTIVE and its subsidiaries (the "**INDEX COMMITTEE**") is responsible for decisions regarding any amendments to the rules of the INDEX. Any such amendment, which may result in an amendment of the GUIDELINE, must be submitted to the INDEX COMMITTEE for prior approval and will be made in compliance with the Methodology Policy, which is available on the SOLACTIVE website: <https://www.solactive.com/documents/methodology-policy/>.



5. DEFINITIONS

“**ACTIVE CONTRACT**” means with respect to a TRADING DAY, the Futures Contract that is traded on such TRADING DAY, given in the ROLL SCHEDULE under Section 2.2.

“**CONTRACT ROLL WEIGHT**” is as determined in Section 2.1.

“**EXCHANGE**” has the meaning as defined in Section 2.1.

“**INDEX ADMINISTRATOR**” shall have the meaning as defined in Section “Introduction”.

“**INDEX CALCULATOR**” is Solactive or any other appropriately appointed successor in this function.

“**INDEX COMPONENT**” is any contract currently included in the Index with base as defined in Section 2.1.

“**INDEX CURRENCY**” is the currency specified in the column “Currency” in the table in Section 1.2.

“**INDEX START DATE**” shall have the meaning as defined in Section 1.3.

“**LIVE DATE**” shall have the meaning as defined in Section 1.3.

“**MARKET DISRUPTION DAY**” shall have the meaning as defined in section 3.4.

“**NUMBER OF ROLL DAYS**” as specified in section 2.1.

“**NEXT ACTIVE CONTRACT**” means with respect to a TRADING DAY the subsequent contract that will be traded, given in the ROLL SCHEDULE under Section 2.2.

“**ROLL SCHEDULE**” shall have meaning as defined in Section 2.2.

“**ROLL START**” is the defined in Section 2.2.

“**ROLL START DATE**” is the defined in Section 2.2.

“**ROLL END DATE**” is a TRADING DAY which is NUMBER OF ROLL DAYS after ROLL START DATE.

“**ROLL PERIOD**” means all the TRADING DAY(s) between ROLL START DATE (included) and ROLL END DATE (included), as defined in Section 2.1.

“**TWAP**” is the time weighted average price with respect to an INDEX COMPONENT and a TRADING DAY, the as defined in section 2.4.

“**TIME WINDOW START**” shall have meaning as defined in Section 2.4.

“**TIME WINDOW END**” shall have meaning as defined in Section 2.4.

“**TRADING DAY**” is with respect to the Index and an INDEX COMPONENT, a day on which the relevant EXCHANGE is open for trading (or a day that would have been such a day if a market disruption had not occurred), excluding days on which trading may be ceased prior to the normal EXCHANGE closing time. The INDEX Calculator is ultimately responsible as to whether a certain day is a TRADING DAY with regard to the Index or an INDEX COMPONENT, or in any other connection relating to this document.



“SETTLEMENT PRICE” in relation to a Futures Contract, the official settlement price as provided by the EXCHANGE.



6. HISTORY OF INDEX CHANGES

Version	Date	Description
1.0	19 January 2024	Index Guideline creation (<i>initial version</i>)

CONTACT

Solactive AG
German Index Engineering
Platz der Einheit 1
60327 Frankfurt am Main
Germany

Tel.: +49 (0) 69 719 160 00

Fax: +49 (0) 69 719 160 25

Email: info@solactive.com

Website: www.solactive.com

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