

Rules for the Management of the ROBO Global[®] Robotics and Automation Index Series

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1. Introduction

- 1.1. These Guidelines are to be used with respect to the composition, calculation and management of the ROBO Global[®] Robotics and Automation Index Series.
- 1.2. Robotics & Automation are firmly set on a long-term growth trajectory, supported by a unique combination of accelerating technological advances and powerful macro factors. Rapid developments in technologies such as computing and artificial intelligence, motion control, machine vision and learning, enable an increasingly broad range of applications throughout the global economy. Meanwhile, aging demographics and the emergence of a new, enormous class of increasingly demanding consumers will continue to drive efforts to boost productivity and quality across markets. The ROBO Global[®] indices' objective is to provide investors with comprehensive, transparent and diversified benchmarks representing the global value chain of robotics, automation and enabling technologies. The index methodology follows a modified equal weighting scheme and rebalances on a quarterly basis to respond to changes in the technological and competitive landscapes and maintain diversification. Including the leading players in a proportionate and modified equal weighted fashion ensures that the indices capture the growth trend while minimizing company-specific risk. The indices are designed and maintained by ROBO Global[®] LLC.
- 1.3. The index series' benchmark administrator is ROBO Global[®] LLC.

1.4. The index series comprises the following indices:

Index	Calculation Currency	Calculation Method	Symbol / ISIN	History	Live Calculation
ROBO Global® Robotics and Automation Price Index	USD	Price Return	.ROBO	31.12.2002	02.08.2013
			DE000SLA02U8		
ROBO Global® Robotics and Automation TR Index	USD	Net Total Return	.ROBOTR	31.12.2002	02.08.2013
			DE000SLA02V6		
ROBO Global® Robotics and Automation UCITS Index	USD	Net Total Return	.ROBOT	31.12.2003	16.06.2014
			DE000SLA4RB7		
ROBO Global® Robotics and Automation UCITS Price Return Index	USD	Price Return	.ROBOTPR	31.12.2003	25.06.2014
			DE000SLA5RB4		
ROBO Japan Robotics and Automation UCITS Index	JPY	Net Total Return	.ROBOJP	31.12.2003	15.10.2015
			DE000SLA1DW9		
ROBO Japan Robotics and Automation UCITS Index (PR)	JPY	Price Return	.ROBOJPPR	31.12.2003	15.10.2015
			DE000SLA1DX7		
ROBO Global® Robotics and Automation UCITS Hedged to Yen Index	JPY	Net Total Return	.ROBOYN	19.12.2003	01.12.2016
			DE000SLA2W21		
ROBO Global® Robotics and Automation UCITS Hedged to Yen Price Return Index	JPY	Price Return	.ROBOYNPR	19.12.2003	01.12.2016
			DE000SLA2W39		

Index Descriptions

- 1.5. ROBOT, ROBOTPR, ROBO, and ROBOTR benchmark the entire value chain of robotics, automation, and enabling technologies across 12 sub sectors and over 15 geographies.
- 1.6. ROBOYN and ROBOYNPR benchmark the entire value chain of robotics, automation, and enabling technologies across 12 sub sectors and over 15 geographies, with returns hedged to YEN.
- 1.7. ROBOJP and ROBOJPPR focus on ROBOT members that are listed on eligible Japanese exchanges.

2. Index Management

Index Management Committee

- 2.1. The Index Management Committee is responsible for the management and implementation of these rules, for their continuing fitness for purpose, and therefore for any periodic amendments thereto. It is also responsible for overseeing the actions of the Supervisory Index Committee and the index calculation agent, and in the event of the rules not providing a clear process for the management of any situation, for determining the process to be followed, if appropriate after reference to the Index Consultative Group and / or Supervisory Index Committee.
- 2.2. The committee is composed of a chairman appointed by ROBO Global[®] LLC, and of ROBO Global[®] LLC staff. Additionally, there is independent expert representation from the index industry, and one staff member from the index calculation agent is invited to attend in a non-voting capacity.
- 2.3. Members of the Index Management Committee may at any time recommend changes to these Rules (including the Index construction criteria) by submitting any proposed changes for consideration and approval in advance of the next quarterly Scheduled Determination Date. Except in exceptional circumstances new rules and rules adjustments will become effective after the following review, and after being announced via the methods outlined in paragraph 2.4.
- 2.4. Following approval by the Index Management Committee, such changes shall be implemented by way of an update to these rules, which shall be published on www.roboglobal.com and www.solactive.com/?s=Global&index=DE000SLA4RB7
- 2.5. The Index Management Committee convenes on a quarterly basis between the collection date for review determination data and the implementation of each quarterly review.

Index Consultative Group

- 2.6. The Index Consultative Group is convened by ROBO Global[®] LLC on a regular basis, to provide independent advice into the indices' design, fitness for purpose, and into the practical implementation of the rules. Its members are appointed by ROBO Global[®] LLC and are drawn from those with particular knowledge of and expertise in robotics and automation, and from users of the indices.

Calculation Agent

- 2.7. Where an extraordinary event occurs or is occurring, the Calculation Agent shall be responsible for implementing the procedures described in Section 5 of these rules.
- 2.8. Where an index calculation error occurs, the Calculation Agent is responsible for informing the Index Management Committee at the earliest possible opportunity, and for agreeing with them the approach to be taken for resolution.

3. Classification of Companies

The ROBO Global® Database

- 3.1. ROBO Global® created and maintains a unique and broad database of companies across the globe who have a portion of their business and revenue associated with robotics and automation. This database has over one decade of history and captures the entire value chain of robotics, automation, artificial intelligence and other enabling technologies specific to the industry.

ROBO Global® Industry Classification

- 3.2. In the absence of a benchmark industry classification system for identifying companies engaged in the global robotics and automation industry, the ROBO Global® Industry Classification was created by ROBO Global® in consultation with industry experts from its Advisory Board.
- 3.3. ROBO Global® Industry Classification identifies sub-sectors of high relevance and high growth to the robotics and automation Industry, and will expand over time. These sub-sectors are intended to capture companies throughout the “value chain”. The value chain includes not just the manufacture and deployment of robots and automated systems but also the enabling technologies such as sensing, computing, software, motion control, among others. To be eligible for potential index inclusion companies must first pass through the following three-tiered process.
- 3.4. ROBO Global® observes and may exclude companies if there is an unacceptable risk that the company contributes to or is responsible for serious human rights violations, severe environmental damage, and other particularly serious violations of fundamental ethical norms, including the production of weapons that violate fundamental humanitarian principles through their normal use.

Industry Classification Structure Summary

- 3.5. Tier 1 - In the first instance, ROBO Global® aims to identify publicly listed companies (globally) from the ROBO Global® Database that derive a substantial or a material and growing proportion of their revenues from robotics-related and/or automation-related products and/or services.
- 3.6. Tier 2 – sub-classification as “bellwether” or “non-bellwether”: “Bellwether” are well established leading companies, whose core business is directly related to robotics and automation, typically they will operate on a global scale. These companies are also referred to as “pure plays”. “Non-bellwether” companies have a distinct portion of their business and revenue in robotics and automation and the potential to grow within this space through innovation and/or market adoption of their products and/or services.
- 3.7. Tier 3 – sub-classification of sectors: Companies within the ROBO Global® Industry Classification are organized into several sub-sectors which are expected to increase in number as the robotics and automation industry continues to evolve. Currently, ROBO Global® has identified the following 12 sub-sectors within the ROBO Global® Industry Classification which can be easily bifurcated into either Technology or Applications.

- Technology - captures all index companies that manufacture or provide services related to any machinery, equipment, devices or sensors supporting a robot performing its task. It also includes those companies that provide key-enabling software and processing technologies used to advance the conversion to autonomous systems. Essentially, the aim is to identify companies that manufacture, service or distribute the components that enable robots to sense, process and act."
- Applications - highlights all index companies that incorporate multiple robotic and automation technologies into their product or manufacturing process to improve efficiency in traditional business lines as well the development of entirely new business proposition

Technology:

Sensing
 Actuation
 Computing, Processing & AI
 Integration

Applications:

Manufacturing & Industrial Automation
 3D Printing
 Logistics Automation
 Food & Agriculture
 Security & Surveillance
 Energy
 Healthcare
 Consumer Products

- 3.8. Companies believing they are eligible for inclusion in the ROBO Global® Industry Classification System under the rules above, or that they are more appropriately classified in a different subsector, should apply in writing to the Index Management Committee, care of ROBO Global® at indexcommittee@roboglobal.com.
- 3.9. Please refer to www.roboglobal.com for more information relating to the ROBO Global® Industry Classification.

4. Index Reviews

- 4.1. The indices are reviewed quarterly, using data from the close of business on the determination date.

Index	Tickers	Determination date	Rebalance date
ROBO Global [®] Robotics and Automation UCITS Index Family	ROBOT ROBOTPR	Five business days before the third Friday of March, June, September or December. ¹	Third Friday of March, June, September or December. ²
ROBO Japan Robotics and Automation UCITS Index Family (including hedged indices)	ROBOJP ROBOJPPR ROBOYN ROBOYNPR	Five business days before the third Friday of March, June, September or December. ³	Third Friday of March, June, September or December. ⁴
ROBO Global [®] Robotics and Automation Price Index Family	ROBO ROBOTR	Five business days before the third Friday of March, June, September or December. ⁵	Last business day of March, June, September or December.

- 4.2. From the determination date until the rebalance date, the number of shares used for each index constituent is fixed and not changed unless a corporate event occurs.
- 4.3. The new constituent composition and index weightings are applied on the corresponding rebalance date.
- 4.4. The proposed composition of each index and *indicative* weightings of each of the index' constituents (including details relating to the companies that are being included in/removed from the Index) shall be announced by the

¹ A complete definition is included in the appendix.

² A complete definition is included in the appendix.

³ A complete definition is included in the appendix.

⁴ A complete definition is included in the appendix.

⁵ A complete definition is included in the appendix.

calculation agent on the relevant determination date (i.e. in advance of the corresponding scheduled rebalance date).

- 4.5. The calculation agent shall publish all details relating to the rebalance of the Index (i.e. the *actual* weights) on the business day after each relevant rebalance date.

Constituent eligibility

- 4.6. All companies listed within the ROBO Global[®] Industry Classification pass through a series of eligibility screens before they can become an Index Constituent. The selection of the Index Constituents from the list of companies classified within the ROBO Global[®] Industry Classification is carried out by the calculation agent in accordance with the following predetermined rules and objective criteria:
- 4.7. Companies not publicly traded on an eligible exchange are ineligible for inclusion in the Index.
- 4.8. The list of eligible exchanges is maintained by and can be revised by the Index Management Committee. Any such revisions to the list of eligible exchanges shall be effective at the determination date after the next occurring determination date, and published on www.roboglobal.com and www.solactive.com/?s=Global&index=DE000SLA4RB7
- 4.9. Companies which are not currently an Index Component with a Market Capitalization of less than USD 200,000,000 as at the relevant Determination Date are ineligible for inclusion in the Index. Companies which are currently an Index Component with a Market Capitalization of less than USD 100,000,000 as at the relevant Determination Date are ineligible for inclusion in the Index.
- 4.10. Companies which are not currently an Index Component with a trailing 3-month composite average daily value traded as at the relevant Determination Date is less than USD 1,000,000 are ineligible for inclusion in the Index. Companies which are currently an Index Component with a trailing 3-month average daily value traded as at the relevant Determination Date is less than USD 700,000 are ineligible for inclusion in the index. Constituent companies whose trailing 3-month average daily value traded as at the relevant Determination Date is between USD 700,000 and USD 850,000 at two consecutive reviews are ineligible for inclusion in the Index.

Constituent Selection

- 4.11. Each index comprises a minimum of 65 index constituents with at least 15 “bellwether” stocks and 45 “non-bellwether” stocks. If fewer than this number are available the Index Management Committee retains the right to reduce the eligibility requirements above until the required number of constituents are eligible. Note this criteria does not apply to ROBOJP or ROBOJPPR.
- 4.12. Each index has a maximum of 200 index constituents with a cap of 80 “bellwether” stocks and 120 “non-bellwether” stocks. If a greater number are eligible, the relevant number of constituents from each category are selected in reverse order of market capitalisation. Note this criteria does not apply to ROBOJP or ROBOJPPR.

- 4.13. If the above constraints are met, the index comprises all remaining eligible constituents.

Constituent Weights

- 4.14. Stocks identified as “bellwether” within the ROBO Global[®] Industry Classification have a fixed cumulative allocation of 40% within the Index at each review;
- 4.15. Stocks identified as “non-bellwether” within the ROBO Global[®] Industry Classification have a fixed cumulative allocation of 60% within the Index at each review;
- 4.16. Within each of the “bellwether” and “non-bellwether” segments of the Index, stocks are equally weighted.
- 4.17. The weighting scheme used for the UCITS indices aims to ensure UCITS compliance at each index review. Should the application of the scheme to the UCITS indices appear at some future time unlikely to achieve compliance, the Index Management Committee will amend the rules to resolve this, following the procedures and notifying users of those changes as indicated in paragraphs 2.4 and section 6.

5. Calculation of the Indices

- 5.1. The calculation agent is responsible for calculating and publishing the indices.

Index formula

- 5.2. Each index closing level on business day t , $Index_t$, is calculated in accordance with the following formula:

$$Index_t = \sum_{i=1}^{N_{t-1}} x_{t-1}^i * p_t^i * FX_t^i \quad (\text{Equation 1})$$

Where:

- x_{t-1}^i The number of shares of index constituent i on business day $t - 1$
 p_t^i Trading price of index constituent i on business day t
 FX_t^i 1 (one) unit of the local currency of index constituent i converted into the index currency on business day t at the official WM/Reuters rate as published at 4pm UK time.
 N_{t-1} The index constituents existing as of business day $t - 1$

Accuracy

- 5.3. The value of each index will be rounded to two decimal places.
5.4. The number of shares of index constituents will be rounded to six decimal places.
5.5. Trading prices will be rounded to four decimal places.

Extraordinary Events

- 5.6. Indices shall be adjusted for systematic changes in prices, once these become effective. This requires the new number of shares of the affected index constituent to be calculated on an ex-ante basis. Following the Supervisory Index Committee's decision, the relevant index is adjusted for distributions, capital increases, rights issues, splits, par value conversions and capital reductions as outlined below.
This procedure ensures that the first ex quote can be properly reflected in the calculation of the relevant Index. This ex-ante procedure assumes the general acceptance of the index calculation formula as well as open access to the parameter values used. The calculation parameters are provided by the calculation agent.
- 5.7. The trading price for an affected index constituent on the day an extraordinary event comes into effect, is the last available market price for this index constituent quoted on the exchange on the day the event occurred (or, if a market price is not available for the day the event came into effect, the last available market price quoted on the exchange on a day specified as appropriate by the calculation agent) and this price is used as the trading price of the particular index constituent until the next rebalance date.
- 5.8. When an index constituent's trading has been halted, the calculation agent shall hold the affected index constituent at its most recent closing price until trading is resumed or it is officially delisted. Determination for removal will be made on a case-by-case basis and based upon reasonable likelihood of trade

resumption and likelihood of residual value returned to stock holders. The Supervisory Index Committee will consult with the Index Management Committee when determining its fair value. Should removal be deemed appropriate, announcement will be made at zero value (for system purposes the actual value used is .0001, in local currency).

- 5.9. Stocks that are scheduled for inclusion in/removal from the Index but which are halted or suspended prior to rebalance will have their scheduled updates postponed and will be monitored for trade resumption. Once trading resumes, these securities changes will be announced and will have their positions updated accordingly. Depending on the nature of the halt or suspension, the Supervisory Index Committee may, after consultation with the Index Management Committee, decide to delete the affected security from the index.
- 5.10. In the event of the insolvency of an index constituent, the index constituent shall remain in the index until the next rebalance date. As long as a market price for the affected index constituent is available on a business day, this shall be applied as the trading price for the relevant index constituent on the relevant business day, as determined in each case by the calculation agent. If a market price is not available on a business day, the trading price for this index constituent is set to zero per above. The Supervisory Index Committee may, after consultation with the Index Management Committee, also decide to eliminate the respective index constituent at an earlier point in time prior to the next rebalance date if there is no reasonable expectation that the Index Constituent will emerge from Insolvency in the near future.
- 5.11. Table 1 below summarizes **potential** events for which adjustments may be made by the Calculation Agent.

Event	Adjustment	Adjustment Treatment
Cash/Special or Extraordinary Distributions	Yes	The distribution is reinvested in that stock.
Return on Capital	Yes	The distribution is reinvested in that stock.
Stock Distribution	Yes	Where shareholders receive “B” new shares for every “A” share held, the Number of Shares is adjusted by multiplying the original Number of Shares by the quotient of (a) the sum of A and B <i>divided</i> by (b) A.
Stock Split	Yes	Where shareholders receive “B” new shares for every “A” share held, the Number of Shares is adjusted by multiplying the original Number of Shares by the quotient of B <i>divided</i> by A.
Share Repurchase	No	No Adjustment.

Acquisition or Merger (Target Company is in the Index)	Yes	If acquired share is Delisted (as defined below), the cash proceeds from the acquisition are reinvested proportionally (based on the current weight) among the other Index Constituents. Where shares are issued, such shares are deemed to be sold on the date of issuance and cash proceeds reinvested as described in the preceding sentence.
Acquisition or Merger (Acquirer is in the Index)	No	If the surviving company is already an Index Constituent, it is retained in the Index.
Acquisition or Merger (both Acquirer and Target Company are in the Index)	Yes	<p>If the acquired Index Constituent is Delisted (as defined below), they will be removed from the Index on the effective date as announced by Solactive. The Index is subject to further adjustments in accordance with the following cases.</p> <ul style="list-style-type: none"> • In case of a cash acquisition, the weight of the target company based on its last close price will be distributed pro rata across the remaining Index Constituents. • In case of a stock acquisition, the shares of the acquiring / surviving company will be increased according to the stock terms. • In case of a cash & stock acquisition, the cash portion will be reinvested pro rata across the remaining Index Constituents. The shares of the acquiring / surviving company will be increased according to the stock terms.

- 5.12. If a stock that is a constituent of an index is delisted, the cash value of such stock's position in the index, based on the latest available market price prior to the delisting, is reinvested proportionally (based on the current weights) among the other index constituents.
- 5.13. Note that if an index constituent is both (i) affected by an event listed in Table 1 and (ii) delisted, such constituent will be adjusted as described in Table 1. An index constituent will be deemed to be "delisted" when the exchange (as defined under "Market Disruption Events" below) for such constituent announces that the constituent ceases (or will cease) to be listed, traded or publicly quoted on the exchange for any reason and is not immediately re-listed, re-traded or re-quoted on any of the affiliated exchanges (or their respective successors); if the constituent is immediately re-listed, re-traded or re-quoted on

any such exchange or quotation system, such exchange or quotation system shall be deemed to be the exchange and the stock will not be deemed to be delisted.

- 5.14. For events not listed in Table 1 above, the calculation agent may make adjustments if it determines that the event could have a diluting or concentrative effect on the theoretical value of the underlying stock and would not otherwise be accounted for in the relevant index. Any such adjustments are publicly announced in advance wherever practicable.

Distributions

- 5.15. Distributions paid by index constituents are automatically re-invested into the relevant net total return index subject to the relevant withholding tax rate.
- 5.16. Any distributions shall trigger an adjustment of the number of shares of the corresponding index constituent. The new number of shares is calculated as follows:

$$x_t^i = x_{t-1}^i * \frac{p_{t-1}^i}{p_{t-1}^i - D_t^i} \quad (\text{Equation 2})$$

Where:

x_t^i	The Number of Shares of Index Constituent <i>i</i> on Business Day <i>t</i>
p_{t-1}^i	Trading Price of Index Constituent <i>i</i> on Business Day <i>t</i> – 1
D_t^i	Net Distribution Rate of Index Constituent <i>i</i> on Business Day <i>t</i>

Corporate actions

- 5.17. Following the announcement by an index constituent of the terms and conditions of a corporate action, the Supervisory Index Committee shall determine whether such corporate action has a dilution, concentration or other effect on the price of the index constituent.
- 5.18. Should such an effect be deemed to have occurred, the Supervisory Index Committee shall make the necessary adjustments to the affected index constituent and/or the formula for calculating the relevant index and/or to other terms and conditions of this document that is deemed appropriate in order to take into account the dilution, concentration or other effect and shall determine the date on which this adjustment shall come into effect.
- 5.19. For corporate actions not described herein, or combinations of different types of corporate events and other exceptional cases, the calculation agent reserves the right to determine the appropriate implementation method. Where practicable, the calculation agent will inform the Index Management Committee of its intentions prior to implementation, and in all cases will inform them of the actions taken.

Capital increases

- 5.20. Should there be a capital increase (from the index constituent's own resources or through cash contributions), the new number of shares shall be calculated as follows:

$$i) \quad x_t^i = x_{t-1}^i * \frac{p_{t-1}^i}{p_{t-1}^i - rB_{t-1}^i} \quad (\text{Eq.3.1}) \quad \text{ii)} \quad rB_{t-1}^i = \frac{p_{t-1}^i - B - N}{BV + 1} \quad (\text{Eq. 3.2})$$

Where:

x_t^i	Number of Shares of Index Constituent i on the day of the distribution
p_{t-1}^i	Trading Price on the day prior to ex-date
rB_{t-1}^i	Calculated value of rights issue
B	Price of rights issue
N	Distribution disadvantage
BV	Subscription ratio
$B = 0$	If capital is increased from the company's own resources.

The last Distribution paid or the announced Distribution proposal is applied as the Distribution disadvantage.

Share splits and par value conversions

- 5.21. Should there be share splits and par value conversions it is assumed that the prices shall change in ratio to the number of shares or to the par values. The new number of shares shall be calculated as follows:

$$x_t^i = x_{t-1}^i * \frac{N_{t-1}^i}{N_t^i} \quad (\text{Equation 4})$$

Where:

N_t^i	New par value of security class i (or new Number of Shares) on Business Day t
x_t^i	Number of Shares of affected Index Constituent i on Business Day t

Spin-offs

- 5.22. In case of a spin-off affecting an index component, the spun-off company is added to the relevant index based on the terms of the spin-off on the effective date and the initial company remains in its index. If the spun-off company is not eligible to remain in the Index, it will be removed from the Index after the first trading day and its weight will be reinvested back to the parent company
- 5.23. In the event that a spun-off company cannot be added for any other reason, the calculation agent will inform the Index Management Committee and announce the outcome on:

www.solactive.com/?s=Global&index=DE000SLA4RB7.

Calculation of the Indices in the event of a Market Disruption Event

- 5.24. One of more of the indices may not be calculated in the event of a market disruption event. If the market disruption event continues for a sustained period, the calculation agent calculates the Index value, taking into account the market conditions prevailing at this point in time, the last quoted trading price for each of the index constituents as well as any other conditions that it deems relevant for calculating a fair value Index value.

6. Exceptions to these Rules

- 6.1. The Calculation Agent shall apply the method described above for the composition and calculation of the indices. However it cannot be excluded that the market environment, supervisory, legal, financial or tax reasons may require unforeseen changes to be made to this method. Any such changes will be made in conjunction with the Index Management Committee and if appropriate, after consultation with the Index Consultative Group.
- 6.2. The ROBO Global[®] Index Management Committee may prescribe changes to the selection criteria and other rules governing the indices and the method applied to calculate the indices, which it deems to be necessary and desirable in order to prevent material errors or to remedy, and correct or supplement the rules currently described in these Guidelines.
- 6.3. ROBO Global[®] and the Calculation Agent shall ensure that any amendments to the methodology are updated and published as soon as possible after any changes to the indices are implemented and shall notify all persons who have licensed the use of the indices as far in advance of such implementation as reasonably practicable.
- 6.4. Despite the modifications and changes, the Calculation Agent will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.

7. Data Publication

- 7.1. All specifications and information relevant for calculating the indices are made available on www.solactive.com/?s=Global&index=DE000SLA4RB7. This includes the composition of the indices as well as the respective weightings of index constituents, which shall be published on a retrospective basis in respect of each rebalance date on the business day immediately following such rebalance date.

Distribution

- 7.2. The indices are published via the price marketing services of Boerse Stuttgart AG and are distributed to all affiliated vendors. Each vendor determines whether they will distribute/display the index data via their respective information systems.

Prices and calculation frequency

- 7.3. The indices are calculated on each business day⁶ based on the prices on the respective exchanges relevant to each index constituent. At any given point during the period in which the Index is calculated, the last traded prices of all index constituents are used. If there is no last traded price for an index constituent on a business day, the most recent last traded price on Reuters for the preceding business day is used in the calculation.
- 7.4. Where applicable, exchange prices of index constituents not listed in the index currency are converted using spot foreign exchange rates quoted by Reuters. Daily index closing levels are calculated using Reuters / WM Company closing spot rates as fixed at 4pm London time.
- 7.5. The indices are *real-time* indices. The ROBO Global[®] UCITS indices are calculated every business day from 8:00am to 4:30pm, London time. The ROBO Global[®] indices are calculated every business day from 8:00 to 4:30pm Eastern (USA) time. All are calculated every 15 seconds. In the event that data cannot be provided to the pricing services of Boerse Stuttgart AG, the publication of index values and any distribution thereof may be delayed.
- 7.6. The resolution of any incorrect calculation of the Index will be reported to the Index Management Committee who will discuss the appropriate resolution with the Calculation Agent. In general, indices shall be adjusted on a retrospective basis and announced on www.solactive.com/?s=Global&index=DE000SLA4RB7.

Licensing

- 7.7. Licenses to use the indices as the underlying value for derivative instruments may be issued to stock exchanges, banks, financial services providers and investment houses by ROBO Global[®].

⁶ Defined in Appendices

8. APPENDICES

1. Definitions

An “**Affiliated Exchange**” is with regard to an Index Constituent an exchange, a trading or quotation system on which options and futures contracts on the Index Constituent in question are traded, as specified by Solactive AG.

“**Business Day**” means a weekday on which the London Stock Exchange (for the ROBO Global[®] UCITS Indices) or the US NYSE (for the ROBO Global[®] Indices) is open.

“**Calculation Agent**” is Solactive AG or any appointed successor thereto.

“**Determination Date**” is the prevailing Business Day on which the respective Scheduled Determination Date occurred.

An “**Eligible Exchange**” is one which satisfies the following criteria as determined by the Index Management Committee and which shall be published on

www.solactive.com/?s=Global&index=DE000SLA4RB7:

- **Regulated:** The market must be regulated. Such a market is subject to supervision by an authority or authorities, duly appointed or recognised by the state in which it is located. The authority(ies) should generally have the power to impose capital adequacy rules, to supervise directly members of the market, to impose listing standards, to ensure transparency in dealings and to impose penalties where breaches of rules or standards occur. The clearance and settlement system for transactions should also be regulated and should have acceptable settlement periods.
- **Recognised:** The market must be recognised or registered by an authority or authorities, duly appointed or recognised by the state in which it is located.
- **Operating Regularly:** Trading must take place with reasonable frequency and the market should have regular trading hours. In assessing this criteria, reference shall be made to liquidity in the market, including the number of members/participants, and the ability of the market to provide fair prices on an ongoing basis.
- **Open to the public:** The market must be open to the public. The public should have direct or indirect access to the securities traded on the market. The degree to which overseas investors are permitted to invest and any rules which may impede the repatriation of capital or profits shall be taken into account when assessing whether this criteria is satisfied.

“**Exchange**” is, in respect of every Index Constituent, the respective primary exchange where the Index Constituent has its primary listing. The Committee may decide to declare a different stock exchange the “Exchange” for trading reasons, even if the Index Constituent is only listed there via a Stock Substitute.

“**Extraordinary Event**” shall be defined as:

- a Merger;
- a Takeover Bid;
- Trading Halt
- a Delisting;
- the Nationalisation of an Index Constituent, its business as a going concern or its assets; or
- Insolvency.

“Index Constituent” means (as of Business Day t) the shares included in the Index as of Business Day t

“Index Consultative Group” means the committee convened by ROBO Global® LLC whose roles and responsibilities are outlined in Section 2 of these Guidelines.

“Index Management Committee” means the committee at ROBO Global® LLC whose roles and responsibilities are outlined in Section 2 of these Guidelines.

The **“Index Currency”** is US-Dollars.

“Insolvency” occurs with regard to an Index Constituent if (A) all shares of the respective issuer must be transferred to a trustee, liquidator, insolvency administrator or a similar public officer as result of a voluntary or compulsory liquidation, insolvency or winding-up proceedings or comparable proceedings affecting the issuer of the Index Constituents or (B) the holders of the shares of this issuer are legally enjoined from transferring the shares.

“Market Capitalisation” is with regard to each of the companies in the ROBO Global® Industry Classification on a Determination Date or Rebalance Date the value of the relevant issued shares calculated by multiplying the Number of Shares outstanding by the share price and converting into the Index Currency.

A **“Market Disruption Event”** occurs if:

- one or more of the following events occurs or exists on a Trading Day prior to the opening quotation time for an Index Constituent:
- trading is suspended or restricted (due to price movements that exceed the limits allowed by the Exchange or an Affiliated Exchange, or for other reasons):
 - across the whole Exchange; or
 - in options or futures contracts on or with regard to an Index Constituent or an Index Constituent that is quoted on an Affiliated Exchange; or
 - on an Exchange or in a trading or quotation system (as determined by the Calculation Agent) in which an Index Constituent is listed or quoted; or
- an event that (in the assessment of the Calculation Agent) generally disrupts and affects the opportunities of market participants to execute on the Exchange transactions in respect of a share included in the Index or to determine market values for a share included in the Index or to execute on an Affiliated Exchange transaction with regard to options and futures contracts on these shares or to determine market values for such options or futures contracts; or
- trading on the Exchange or an Affiliated Exchange is ceased prior to the usual closing time (as defined below), unless the early cessation of trading is announced by the Exchange or Affiliated Exchange on this Trading Day at least one hour before
- the actual closing time for normal trading on the Exchange or Affiliated Exchange on the Trading Day in question or, if earlier.
- the closing time (if given) of the Exchange or Affiliated Exchange for the execution of orders at the time the quote is given; or
- a general moratorium is imposed on banking transactions in the country in which the Exchange is resident if the above-mentioned events are material in the assessment of the Calculation Agent, whereby the Calculation Agent makes his decision based on those circumstances that he considers reasonable and appropriate.

A **“Merger”** is:

- a change in the security class or a conversion of a share class that results in a transfer or an ultimate definite obligation to transfer all the shares in circulation to another legal entity;
- a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer to exchange shares with another legal person (except in a merger or share exchange under which the issuer of the relevant Index Constituent is the acquiring or remaining entity and which does not involve a change in security class or a conversion of all the shares in circulation);
- a takeover offer, exchange offer, other offer or another act of a legal person for the purposes of acquiring or otherwise obtaining from the issuer 100% of the shares issued that entails a transfer or the irrevocable obligation to transfer all shares (with the exception of shares which are held and controlled by the legal person); or
- a merger (either by acquisition or through forming a new structure) or a binding obligation on the part of the issuer of the shares or its subsidiaries to exchange shares with another legal entity, whereby the issuer of the share is the acquiring or remaining entity and it does not involve a change in the class or a conversion of the all shares issued, but the shares in circulation directly prior to such an event (except for shares held and controlled by the legal person) represent in total less than 50% of the shares in circulation directly subsequent to such an event.

“Nationalisation” is a process whereby all shares or the majority of the assets of the issuer of the shares are nationalised or are expropriated or otherwise must be transferred to public bodies, authorities or institutions.

“Net Distribution Rate” is the gross distribution rate paid out by a company adjusted for the relevant Withholding Tax Rate. It is calculated as 1 minus the applicable Withholding Tax Rate and/or other applicable tax rate currently prevalent in the respective country multiplied with the gross distribution rate.

“Normal Exchange Closing Time” is the time at which the Exchange or an Affiliated Exchange is normally closed on working days without taking into account after-hours trading or other trading activities carried out outside the normal trading hours.

“Number of Shares” is in respect of an Index Constituent and any given Business Day the number or fraction of shares included in the Index. It is calculated for any Index Constituent as the ratio of (A) the Percentage Weight of an Index Constituent multiplied by the Index value and (B) its Trading Price.

“Percentage Weight” of an Index Constituent is the ratio of its Trading Price multiplied by its Number of Shares divided by the Index value.

“Rebalance Date” is the prevailing Business Day on which the respective Scheduled Rebalance Date occurred.

“Scheduled Business Day” is a day on which commercial banks in the US are scheduled to be open.

“Scheduled Determination Date” is the Scheduled Business Day which is 5 (five) Scheduled Business Days prior to the Scheduled Rebalance Date.

“Scheduled Rebalance Date” is the third Friday in March, June, September and December which must be a Scheduled Business Day. If the third Friday is not a Scheduled Business Day then the third Thursday will be used in the same manner and so on.

“Stock Substitute” includes in particular American Depository Receipts (ADR) and Global Depository Receipts (GDR).

“Supervisory Index Committee” means the committee at the Calculation Agent whose roles and responsibilities are outlined in Section **Error! Reference source not found.** of these Guidelines

A **“Takeover Bid”** is a bid to acquire, an exchange offer or any other offer or act of a legal person that results in the related legal person acquiring as part of an exchange or otherwise more than 10% and less than 100% of the voting rights in respect of the issuer of the Index Constituent or the right to acquire these voting rights, as determined by the Calculation Agent based on notices submitted to public or self-regulatory authorities or other information considered by the Calculation Agent to be relevant.

A **“Trading Day”** is in relation to the Index or an Index Constituent a Trading Day on the Exchange (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 Calculation Agent is ultimately responsible as to whether a certain day is a Trading Day with regard to the Index or an Index Constituent or in any other connection relating to this document.

The **“Trading Price (or “Traded Price”)** in respect of a Trading Day is the closing price on the relevant Trading Day determined in accordance with the Exchange regulations. If the Exchange has no closing price for an Index Constituent, the Calculation Agent shall determine the Trading Price and the time of the quote for the share in question in a reasonable manner.

“Withholding Tax Rate” is the applicable withholding tax rate relevant to the Net Total Return Index. The currently prevalent Withholding Tax Rates are published on:
<http://www.solactive.com/documents-and-downloads/>

2. History of changes made to the Calculation Guidelines

Rebalance Date – 30 September 2014

In Section 2.2 (“Index Construction”), the following two changes were recorded and effective with respect to the calculation period beginning on 01 October 2014.

- the minimum trailing 3-month average daily value traded value was reduced from USD 1,000,000 to USD 500,000; and
- an additional filter was added as follows: “The Index requires a minimum of 65 Index Constituents with at least 15 “bellwether” stocks and 45 “non-bellwether” stocks.”

Rebalance Date – 19 December 2014

- Within the definitions section the definition for “Scheduled Rebalance Date” was changed from “*is the last Scheduled Business Day in March, June, September and December*” to the current definition.
- Within Section 2.1 (ROBO Global® Industry Classification), the 14 sub-sectors were updated to 13 sub-sectors and re-arranged under Technology and Applications. The previous list of sub-sectors is listed below for reference:
 - Machine navigation technology
 - Consumer robotics
 - Microcontrollers
 - Actuation technology
 - Technology manufacturing automation
 - Energy and subsea remotely operated vehicles (ROVs)
 - Machine vision and image recognition
 - Agriculture, logistics and material handling automation
 - Industrial automation software and equipment
 - Constituents, software and subsystem manufacturing
 - Military unmanned aircraft systems (UAS), defence and space
 - Healthcare robotics & automation products
 - 3D printing technology
 - Sensors, motion processing, & voice recognition

Rebalance Date – 22 June 2015

- Within the sub-sectors definitions, we renamed one sub-sector from “Military unmanned aircraft systems (UAS), defence and space” to “Security, UAS (unmanned aircraft systems) and Space”

Company name and other changes – 17 September 2015

- With effect from 17 September 2015, the company named “*ROBO-STOX Partners Ltd*” was rebranded and renamed “*ROBO Global Partners Ltd*” and the company named “*ROBO-STOX LLC*” was rebranded and renamed “*ROBO Global LLC*”.
- Also with effect from 17 September 2015, the following name changes were made to the index referenced in the Guidelines:
- The “*ROBO-STOX*[®] Global Robotics and Automation UCITS Index” was renamed “*ROBO Global*[®] Robotics and Automation UCITS Index”.
- The “*ROBO-STOX*[®] Global Robotics and Automation UCITS Price Return Index” was renamed “*ROBO Global*[®] Robotics and Automation UCITS Price Return Index”.
- In Section 2.1 (*ROBO Global*[®] Industry Classification), the sub-sector “*Security, UAS (unmanned aircraft systems) and Space*” was renamed “*Surveillance / Security*”.
- All references to “www.robostox.com” in the Guidelines were changed to “www.roboglobal.com”.

Rebalance Date – 18 December 2015

- In Section 2.2 (“Index Construction”), the following two changes were recorded and will be effective with respect to the calculation period beginning on 21st December, 2015
- the minimum Market Capitalization was reduced to USD 100,000,000 for Companies that are currently an Index Constituent (for Companies that are not an current Index Constituent, this remained as USD 200,000,000); and
- the minimum trailing 3-month average daily value traded value was reduced to USD 350,000 for Companies that are currently an Index Constituent (for Companies that are not an current Index Constituent, this remained as USD 500,000).

General Changes – 1 June 2017

- All *ROBO Global*[®] indices are now incorporated into this one Index Series Methodology for easy reference by our partners and other members of the industry. See the Table in Section 1 for the current index series details.
- General formatting and non-material changes were made throughout the document.
- The roles and responsibilities across the Index Management Committee, Supervisory Index Committee, Calculation Agent and *ROBO Global*[®] were clarified in greater detail throughout the document.
- Section 1 - The index series’ benchmark administrator is *ROBO Global*[®] LLC. All reference to *ROBO Global Partners Ltd* has been removed.
- Section 2 - We define in greater detail the composition of the ‘Index Management Committee’.

- Section 2 - We now reference and define the role of the 'Index Consultative Group'.
- Section 3 – We have merged the 'Computing' and 'Processing' sub-sectors under a new name of 'Computing, Processing and AI'.
- Section 3 - Our 'Agriculture' sub-sector is now defined as 'Agriculture & Food'.
- Section 3 - We made some general non-material updates to the ROBO Global® Industry Classification process.
- Section 3 - We now state our responsible investing policy
- Section 3 - We inserted a statement to allow both index constituents and non-index constituents to appeal their index membership status or industry classification status.
- Section 4 - The 3-month composite average daily value traded filter was adjusted
- Section 4 - We inserted the following wording: "From the determination date until the rebalance date, the number of shares used for each index constituent is fixed and not changed unless a corporate event occurs."
- Section 4 - We inserted a statement to clarify how index constituents are chosen should the index minimum or maximum number be breached.

3. Further information

For further information regarding the Index composition and calculation, please contact:

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or

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4. Legal

The names “ROBO Global®” and “Solactive” are trademarked. This document contains the rules regarding the structure and calculation of the ROBO Global® Robotics and Automation Index Series. Solactive AG is currently the calculation agent.

Solactive AG shall make every effort to implement such rules. Solactive AG does not offer any explicit or tacit guarantee or assurance, neither pertaining to the results from the use of the Index nor the Index value at any point in time nor in any other respect. The Index is calculated and published by Solactive AG without warranty, and Solactive AG shall strive to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG to notify third parties directly, including investors and/or financial intermediaries, of any errors in the Index. In case of any errors in the Index, the Solactive AG will announce such errors on its website. The publication of the Index by Solactive AG is not a recommendation for capital investment and does not indicate any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on the Index.