

# INDEX GUIDELINE

AQUANTUM SPCI EC INDEX METHODOLOGY

Version 1.2

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## INTRODUCTION

This document (the "GUIDELINE") is to be used as a guideline with regard to the composition, calculation and maintenance of the Aquantum SPCI EC Index (the "INDEX"). "SPCI" means Scarcity Premium Commodity Index relative to the Aquantum SPCI Index, whilst "EC" means Extended Capacity. Any amendments to the rules made to the GUIDELINE are approved by the OVERSIGHT COMMITTEE specified in Section 6.5. The INDEX is 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 7 (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 Aquantum SPCI EC Index is a commodity market-neutral index. It aims to track the return of a spread trading strategy, Programme 2 (the "STRATEGY"). The strategy trades commodity futures contracts (each a "CONTRACT"). The strategy has been trading live since October 2009.

The objective of the Index is to generate an absolute return by targeting convenience yields which are present in commodity markets. A convenience yield means a premium which the buyer of a commodity is ready to pay for prompt physical ownership of such commodity, usually due to seasonal factors such as supply and demand issues, weather related issues, and harvests.

## 1.2. INDEX METHODOLOGY

The Index is a market-neutral index linked to 18 different commodities (each an "INDEX COMMODITY"), meaning that its performance should not depend on the direction of any of the Index Commodities which underlie any of the Contracts used in the strategy.

The strategy is scheduled to trade long-short positions only if certain Contracts are available at the start of a monthly roll period (the "Roll Period").

In the context of this document, "buying" ("selling") means that long positions (short positions) in Contracts which underlie an Index Commodity are notionally established.

## 1.3. INDEX DESCRIPTION

The Aquantum SPCI EC Index is a USD denominated commodity market-neutral index. It is linked to N Index Commodities and trades simultaneous long-short positions in each Index Commodity.

The Index aims to produce an absolute return by targeting seasonal convenience yields.

The strategy forms the building blocks of the Index and consist of simultaneous long-short positions in Contracts which relate to the Index Commodities. The strategy is calculated separately for each Index Commodity.

In order to maintain a high degree of diversification, the Index is rebalanced monthly with the start of a new Roll Period based on the target weights (each a "TARGET WEIGHT") of the individual Index Commodities.

Each Roll Period consists of "M" roll days (the "ROLL DAYS" and each a "ROLL DAY") and the 1<sup>st</sup> Roll Day will be determined by the Index Administrator on a rule-based basis. This Methodology distinguishes between index roll days (each an "INDEX ROLL DAY" or "IRD") and commodity roll days (each a "COMMODITY ROLL DAY" or



“CRD”). An IRD means an Index Business Day on which positions are scheduled to be rolled; a CRD refers to a Business Day on which positions for a given Index Commodity are rolled in reality.

$IRD_{k=1}$  means the 1<sup>st</sup> scheduled Roll Day of a given Roll Period and  $CRD_{k=1, i}$  means the 1<sup>st</sup> Roll Day which falls on a Business Day on which positions for a particular Index Commodity  $i$  are actually rolled.<sup>1</sup>

Positions are opened and closed (as the case may be) over the course of  $M$  Roll Days in order to avoid exposure to a potentially adverse “SETTLEMENT PRICE” on a single “BUSINESS DAY”, and to reduce the impact of “HEDGING ACTIVITIES” on the market.

All long-short positions are opened “CASH NEUTRAL”, meaning that the long and the short leg of the position will have the same USD value at trade inception.

The strategy-positions are only scheduled to be opened for a particular Index Commodity if such Index Commodity's AQ 1st Contract is available at the start of the Roll Period. The strategy-positions are scheduled to be closed either (i) during  $M$  Index Business Days, starting on the Index Business Day (and including such Index Business Day) which precedes the relevant Index Commodity's next “LAST TRADE DATE” by  $H$  (“H” or “OFFSET VALUE”) Index Business Days, or (ii) during the next Roll Period, whichever of clause (i) and (ii) is earlier. A Last Trade Date refers to a date which is the earlier of (i) the “EXPIRY DATE” or (ii) the Index Business Day which immediately precedes the “FIRST NOTICE DATE”, as applicable for the Contracts which relate to the Index Commodity in question. All Offset Values are determined by the Index Administrator on a rule-based basis.

The same “LEVERAGE FACTOR” applies to the strategy if, with respect to a certain Index Commodity, positions for the strategy are opened concurrently during a given Roll Period. Where, for a given Index Commodity, no positions for the strategy are scheduled to be opened, no position is taken.

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<sup>1</sup>  $k = 1, \dots, M$



## 1.4. IDENTIFIERS AND PUBLICATION

The INDEX is published under the following identifiers:

Name	ISIN	Currency	Type	RIC	BBG ticker
Aquantum Scarcity Premium Commodity Index – Expanded Capacity	DE000SLA9W81	USD	ER	.AQPEECSP	AQPEECSP Index
Aquantum SPCI	DE000SLA9W73	USD	ER	.AQPESPCI	AQPESPCI Index
Aquantum SPCI-EC 6 Net	DE000SLA9W99	USD	ER	.AQPEEC6N	AQPEEC6N Index
Aquantum SPCI-EC 4 Net	DE000SLOFW84	USD	ER	.AQPEEC4N	AQPEEC4N 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](http://www.solactive.com)) and is, in addition, available via the price marketing services of Bloomberg Professional (the "BLOOMBERG PAGE") 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/>.

## 1.5. INITIAL LEVEL OF THE INDEX

The initial level of the INDEX on the 07/08/1997, the START DATE, is 100. Historical values from the 01/01/2020, 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.

## 1.6. PRICES AND CALCULATION FREQUENCY

The level of the INDEX is calculated for each CALCULATION DAY on a t+1 basis until 9am London time based on the TRADING PRICES on the EXCHANGES on which the INDEX COMPONENTS are listed. Should there be no current TRADING PRICE for an INDEX COMPONENT, please see section 5.8 for any actions taken. 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 AQUANTUM who is the owner of the index.



## 2. INDEX GOVERNANCE

### 2.1. INDEX COMMITTEE

The governance of the Index is overseen by the INDEX COMMITTEE. The committee consists of senior representatives from Solactive. The purpose of the Index Committee is to discuss, review and challenge all aspects of the Index determination process.

### 2.2. CHANGE IN METHODOLOGY OF THE INDEX

While the Index Sponsor currently employs the methodology described in this Methodology to calculate the Index Level, the Index Sponsor may determine that it is necessary to modify the Index methodology to:

- i) Take into account market, regulatory, juridical, financial, fiscal or other similar circumstances (including but not limited to, any changes to or any suspension or termination of or any other events affecting any Index Components) that arise;
- ii) Prevent an obvious or demonstrable error; or
- iii) Remedy, correct or supplement any incorrect or ambiguous provisions.

In such event that the Index Sponsor shall be entitled to modify or change the Index and any provision of this Methodology subject to the provisions of the following paragraph and in consultation with the Index Committee. Any such determination by the Index Sponsor will be, in the absence of manifest error, final, conclusive and binding.

If the Index Sponsor proposes to change the Index methodology, in that the proposed change will have, or is reasonably likely to have, an effect on the objectives of the Index, the underlying market or economic interests referenced by the Index, the Index Level, or method of calculating the Index Level, then the Index Sponsor will notify Index Product Investors in writing and make available details of the proposed change at least 10 Index Business Days in advance of the proposed change taking effect (such period, the "INDEX MODIFICATION CONSULTATION PERIOD"). Such details will be published on the Bloomberg Webpage and/or Solactive's Website. During the Index Modification Consultation Period, Index Product Investors may provide comments to the Index Sponsor in relation to the impact of change. Following the expiry of the Index Modification Consultation Period, the Index Sponsor will make available a summary of any comments received from Index Product Investors in relation to the change, and a summary of the Index Sponsor's responses to such comments, on the Bloomberg Webpage and/or on the Solactive's Website (unless the relevant Index Product Investor has requested confidentiality). Annual Review

The Index Methodology undergoes a formal review process at least once each year to ensure its design still promotes a representative and accurate measure of the markets the Index measures, as applicable. Any



changes are reviewed and approved by the Index Committee and announced on the Bloomberg Webpage and/or on the Solactive's Website.

### 2.3. INDEX ADMINISTRATION

The Index is calculated by Solactive following the close of business in Chicago (Illinois, USA) on each Index Business Day. The calculated Index Value will be disseminated via Solactive's Webpage and Bloomberg Webpage at no later than 9am London time on the following Index Business Day. In addition, Solactive may make available other public information via the Solactive Webpage & Bloomberg Webpage, as may be deemed appropriate or required in the course of providing information concerning the Index.

Any notifications concerning the Index and changes thereto, scheduled or otherwise, will be made available via Solactive's Webpage and Bloomberg Webpage.

Corrections to previously published Index Values shall also be published via Solactive's Webpage unless Solactive, in consultation with the Index Committee, deems these corrections to be immaterial to any investment tracking the Index.



## 3. ELIGIBLE COMMODITY CONTRACTS

The Index is designed to be investable and Hedging Activities should not negatively impact its performance. Therefore, all Contracts which refer to a certain commodity must meet specific criteria, the Eligibility Criteria, in order to qualify for inclusion into the Index as an Index Commodity.

### 3.1. GENERAL REQUIREMENTS

To be considered for inclusion into the Index, the Contracts which relate to a given commodity must satisfy the below requirements:

- a) the Contracts must be scheduled to trade daily on any of the Allowed Commodity Exchanges (each an "EXCHANGE");
- b) the Contracts must have a reliable price source (as determined in the discretion of Solactive); and
- c) daily Settlement Prices as well as trading volumes must be available for the Contracts via Bloomberg or Reuters.

There are no requirements as to the geography or currency of the Contracts. Non-USD denominated Contracts will be converted into USD.

### 3.2. LIQUIDITY REQUIREMENTS

The Index Commodities are limited to those for which Contracts satisfy the requirements listed in section 3.1 above.

Since the overall liquidity in commodity markets has increased significantly over the course of the last few years, all currently included Index Commodities are - as of the date of this Methodology - considered to satisfy the requirements listed in section 3.1 above. The currently included Index Commodities are hence considered suitable for the purpose of this Index.

### 3.3. CURRENT INDEX COMPOSITION

A sample composition of the Index is shown in Appendix I - Sample Index Commodities.

Contracts which are linked to metals (e.g. gold, palladium, platinum and silver) are excluded from the scope of the Index since they do not normally exhibit meaningful convenience yields.



### 3.4. MAXIMUM WEIGHTS & DIVERSIFICATION RULES

The "TARGET WEIGHT" of each Index Commodity,  $TW_i$ , must be (i) greater than or equal to 0.5% and (ii) less than or equal to 15%, i.e.  $0.5\% \leq TW_i \leq 15\%$ .



## 4. CONTRACT DETAILS

### 4.1. CONTRACT DETAILS

The Index is calculated based on Settlement Prices. Section 5.8 explains how the Methodology treats Disruption Events and holidays.

### 4.2. TRADED CONTRACTS & POSITIONING

The Index is permitted to include the AQ 1<sup>st</sup> Contract and the AQ 2<sup>nd</sup> (each an "AQ CONTRACT"). Moreover, the Index will only reference those Contracts which are Tradable Contracts (each a "TRADABLE CONTRACT").

#### Opening of Positions

Strategy- positions are scheduled to be opened during Roll Periods.

- Strategy-positions are, for a given Index Commodity, only scheduled to be opened if an AQ 1<sup>st</sup> Contract is available for such Index Commodity at the start of the Roll Period. Otherwise, no strategy-positions are opened for the Index Commodity in question.

#### Closing of Positions

- Strategy-positions are scheduled to be closed either (i) during M Index Business Days, starting on the Index Business Day (and including such Index Business Day) which precedes the relevant Index Commodity's next Last Trade Date by H Index Business Days, or (ii) during the next Roll Period, whichever of clause (i) and (ii) is earlier.

Starting as of May 5<sup>th</sup> 2020 no new positions will be opened for WTI Crude Oil (CL) anymore.

### 4.3. CONTRACT REPLACEMENT

If an Exchange terminates a Contract which is relevant to the strategy for any Index Commodity, or if it deletes a certain expiry month, or delists all Contracts of an Index Commodity, then Solactive in conjunction with the Index Committee will need to propose a change to the Index Methodology (as per Section 6.3).

Moreover, if an Exchange amends the properties of any Tradable Contract, e.g. such Contract's expiry rules, or if it changes its rulebook, opening times or any other regulation which may impact the definition of the AQ Contracts, then Aquantum in conjunction with the Index Committee shall decide what the AQ Contracts are.



If the Index Sponsor proposes to change the Index methodology, in that the proposed change will have, or is reasonably likely to have, an effect on the objectives of the Index, the underlying market or economic interests referenced by the Index, the Index Level, or method of calculating the Index Level, then the Index Sponsor will make available details of the proposed change at least 10 Index Sponsor Business Days in advance of the proposed change taking effect (such period, the "INDEX MODIFICATION CONSULTATION PERIOD"). Such details will be published on the Bloomberg Webpage and/or Solactive's Website. During the Index Modification Consultation Period, Index Product Investors may provide comments to the Index Sponsor in relation to the impact of change. Following the expiry of the Index Modification Consultation Period, the Index Sponsor will make available a summary of any comments received from Index Product Investors in relation to the change, and a summary of the Index Sponsor's responses to such comments, on the Bloomberg Webpage and/or on the Solactive's Website (unless the relevant Index Product Investor has requested confidentiality).



## 5. EXCESS RETURN INDEX CALCULATION

The Aquantum SPCI EC Index is calculated on each Index Business Day. The Index is based to a value of 100 (the "INDEX BASE VALUE") on 7 August 1997 (the "INDEX BASE DATE"); All results are rounded to the 10<sup>th</sup> decimal place.

### 5.1. LEVERAGES PERFORMANCE FOR THE STRATEGY

The initial step taken to determine the Index Value on any Index Business Day  $t$  requires the calculation of the leveraged Cash Neutral performances of the strategy for each Index Commodity  $i$ . On every Index Business Day  $t$ , for each Index Commodity  $i$  and  $CRD_{k,i}$ , the leveraged Cash Neutral performance of the strategy is calculated as per the below equation. With respect to the strategy, for each  $CRD_{k,i}$  and Index Commodity  $i$ , the leveraged Cash Neutral performance on Index Business Day  $t$  is given by the difference between the return of the long position and the return of the short position since the last  $CRD_{k,i}$ , multiplied by the Leverage Factor and added to 1.

$$Perf_{P2_{i,t,CRD_{k,i}}} = 1 + L_{i,P2} \times \left[ \frac{SP_{i,t,long,P2}}{SP_{i,t=CRD_{k,i},long,P2}} - \frac{SP_{i,t,short,P2}}{SP_{i,t=CRD_{k,i},short,P2}} \right]$$

$L_{i,P2}$  is the Leverage Factors which, for Index Commodity  $i$ , apply to the strategy, respectively. The Leverage Factors are given in Appendix VI – Leverage Factors.

$SP_{i,t,long,P2}$  means the Settlement Price of the Contract which the strategy is short for Index Commodity  $i$  (AQ 2<sup>nd</sup> Contract) on Index Business Day  $t$ .

For the avoidance of doubt, when  $t = CRD_{k,i}$ , then  $CRD_{k,i}$  refers to the last  $CRD_{k,i}$  which is  $< t$ .

With respect to a given Index Commodity,

- if positions for the strategy are closed prior to the start of the next Roll Period, then for the Index Commodity in question the last value of  $Perf_{P2_{i,t,CRD_{k,i}}}$  is kept constant until the following  $CRD_{k,i}$ ;
- if no positions for the strategy are opened, then for the Index Commodity in question  $Perf_{P2_{i,t,CRD_{k,i}}}$  is kept at a value of 100% until the following  $CRD_{k,i}$ .

As a consequence of the above, a value for  $Perf_{P2_{i,t,CRD_{k,i}}}$  exists on every Index Business Day  $t$  for each Index Commodity  $i$  and  $CRD_{k,i}$ .



## 5.2. STRATEGY BASKET – THE STRATEGY

The second step in determining the Index Value requires the calculation of a “Strategy Basket” for each Index Commodity  $i$  per  $CRD_{k,i}$  on every Index Business Day  $t$ . For each Index Commodity  $i$ , the Strategy Basket combines the performances of the strategy per  $CRD_{k,i}$ . For each Index Commodity  $i$  and  $CRD_{k,i}$  the value of the Strategy Basket on Index Business Day  $t$  is arrived at by adding the weighted strategy-performance. The performances are weighted using the applicable Active Weights (each an “Active Weight”) for the strategy for Index Commodity  $i$ .

$$S_{Basket_{i,t,CRD_{k,i}}} = m_{i,P2} \times Perf\_P2_{i,t,CRD_{k,i}}$$

Where:

$S_{Basket_{i,t,CRD_{k,i}}}$  means the value of the Strategy Basket for Index Commodity  $i$  on Index Business Day  $t$  per  $CRD_{k,i}$ .

$M_{i,P2}$  refer to the Active Weights which are applicable to the strategy for Index Commodity  $i$  (as given in Appendix V – Active Weights).

## 5.3. COMMODITY VALUE & COMMODITY BASKET

The third step in computing the Index Value on Index Business Day  $t$  requires the calculation of a “Commodity Value” and “Commodity Basket” for every Index Commodity  $i$ .

On every Index Business Day  $t$ , for each Index Commodity  $i$  the Commodity Value with reference to Roll Day  $k$  is given by the product of (i) the value of the Strategy Basket per  $CRD_{k,i}$  for Index Commodity  $i$  on Index Business Day  $t$  and (ii) the value of the “Relative Weight” for Index Commodity  $i$  per  $CRD_{k,i}$  on Index Business Day  $t$ .

$$C_{Value_{i,t,k}} = w_{i,t,CRD_{k,i}}$$

Where:

$C_{Value_{i,t,k}}$  means the Commodity Value with reference to Roll Day  $k$  for Index Commodity  $i$  on Index Business Day  $t$ .

$W_{i,t,CRD_{k,i}}$  refers to the Relative Weight of Index Commodity  $i$  per  $CRD_{k,i}$  on Index Business Day  $t$ .

The value of the Commodity Basket is calculated with reference to Roll Day  $k$  on Index Business Day  $t$  and is given by the sum of all those Commodity Values which also reference Roll Day  $k$  on Index Business Day  $t$ .



$$C_{Basket_{t,k}} = \sum_{i=1}^N C_{Value_{i,t,k}}$$

Where:

$C_{Basket_{t,k}}$  refers to the Commodity Basket for Roll Day k on Index Business Day t.

$C_{Basket_{t=07.08.1997,k=2,3}} = 1$

$C_{Basket_{t=08.08.1997,k=3}} = 1$

## 5.4. RELATIVE WEIGHT

The Relative Weight is used to rebalance the weight of each Index Commodity in the Index. Rebalancing occurs once per month during the Roll Period so that the relative weight of Index Commodity i stays close to its Target Weight. In order to calculate the Relative Weight of Index Commodity i with reference to Commodity Roll Day k for Index Business Day t+1, the Target Weight for the Index Commodity in question is multiplied by the product of the Strategy Baskets and Relative Weights for Commodity Roll Day k on

Index Business Day t, summed across those Index Commodities i whose Commodity Roll Day k coincides with Index Business Day t. The result is then divided by the sum of Target Weights over all Index Commodities i whose Roll Day k coincided with Index Business Day t. The value of the Relative Weight for Index Commodity i per  $CRD_k$  is calculated in accordance with the following equations:

- a) If Roll Day k for Index Commodity I occurs on Index Business Day t, then:

$$W_{i,t+1,CRD_{k,i}} = \frac{TW_i \times \sum_{i'=1}^N ISRD_{i',t,k} \times w_{i',t,CRD_{k,i'}} \times S_{Basket_{i',t,CRD_{k,i'}}}}{\sum_{i'=1}^N ISRD_{i',t,k} \times TW_{i'}}$$

- b) Else:

$$W_{i,t+1,CRD_{k,i}} = W_{i,t,CRD_{k,i}}$$

Where:

$ISRD_{i,t,k}$  on Index Business Day t is equal to "1" in case Roll Day k for Index Commodity I occurs on Index Business Day t. Else,  $ISRD_{i,t,k}$  is equal to "0".

$TW_i$  means the Target Weight for Index Commodity i.

$$W_{i,t=07.08.1997,CRD_{k=1,i}} = TW_i$$

$$W_{i,t=08.08.1997,CRD_{k=2,i}} = TW_i$$

$$W_{i,t=11.08.1997,CRD_{k=3,i}} = TW_i$$



Note that due to the Roll Period comprising more than 1 Roll Day, it is unlikely that Index Commodity *i* will match its Target Weight in the Index on Index Business Day *t*. The actual weight of each Index Commodity is likely to slightly deviate from its Target Weight.

## 5.5. THE INDEX VALUE

Excess Return Index (ERI) on Index Business Day *t* is equal to the sum of Commodity Baskets across all Roll Days *k*, multiplied by the relevant "BASKET WEIGHT" *p* for Roll Day *k* on Index Business Day *t*.

$$ERI_t = \sum_{k=1}^M p_{t,k} \times C\_Basket_{t,k}$$

Where:

$p_{t,k}$  refers to the Basket Weight applicable to Roll Day *k* on Index Business Day *t*. The Basket Weight *p* for Roll Day *k* is calculated in accordance with the following equations:

- a) If Index Business Day *t* coincides with a "BASKET REBALANCING DATE", then:

$$p_{t+1,k} = \frac{1}{M} \times \frac{ERI_t}{C\_Basket_{t,k}}$$

- b) If Index Business Day *t* does not coincide with a basket Rebalancing Date, then:

$$p_{t+1,k} = p_{t,k}$$

Basket Rebalancing Dates are scheduled to occur on the 7<sup>th</sup> Index Business Day each month. Such day is required to be a Business Day for all Index Commodities. If this is not the case, the Basket Rebalancing Date is scheduled to occur on the Index Business Day that immediately follows the 7<sup>th</sup> Index Business Day and which is a Business Day for all Index Commodities.

$$P_{t=07.08.1997, k=1,2,3} = 1/M \times 100$$

The value of the ERI is equal to 100 on the Index base Date, i.e.  $ERI_{07.08.01997} = 100$ .

## 5.6. 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/>.



## 5.7. DISRUPTION & HOLIDAYS

As the Index is designed to be investable, any event that would severely impact the Index or make its calculation impossible in practice shall be called a "Disruption Event" for the purpose of this Methodology.

Any Business Day or Index Business Day that is affected by a Disruption Event shall be called a "DISRUPTED DAY".

Without limitation, a Disruption Event may include:

- a) a severe trading interruption, or technical failure at the Exchange;
- b) a complete trading halt of any Contract, for example due to extraordinary market events;
- c) a "LIMIT EVENT" which occurs because a Contract price increases or decreases by such magnitude that it closes at its daily price limit set by the relevant Exchange;
- d) an unscheduled change of the NYSE Euronext Holiday & Hours schedule, for instance due to extraordinary market events; or
- e) any other event which, in the discretion of Solactive, severely impacts the Index and/or makes the calculation of the Index Value impossible in reality.

In cases of doubt, Aquantum will, in consultation with the Index Committee, decide whether or not a Disruption Event has occurred.

The calculation of the Index and therefore the dissemination of the Index Value may be delayed if a Disruption Event occurs. Should a Disruption Event continue for more than 5 Index Business Days, the Index Sponsor will calculate a good-faith Index Value on the 6<sup>th</sup> Index Business Day that follows the day on which the Disruption Event initially occurred.

- a) Should a Disruption Event occur on any Roll Day of a given Roll Period, then:
  - For the Index Commodity in question, the affected portion of the roll is traded on such Index Commodity's next Business Day which is not a Disrupted Day. This includes positions which are scheduled to be closed and also those which are scheduled to be opened.

Contracts which are referenced by the strategy are always opened and closed as packages. For the strategy, a position in the AQ 1<sup>st</sup> Contract must be opened and closed together with a position in the AQ 2<sup>nd</sup> Contract;

Examples: (A) Assume  $IRD_{k=1}$  is a Disrupted Day for a given Index Commodity and that the Disruption Event is linked to such Index Commodity's strategy-position. In such case no



strategy-positions for such Index Commodity are closed (opened) on the Disrupted Day, 2/3 are closed (opened) on the Index Commodity's next Business Day which is not a Disrupted Day and the remaining 1/3 is closed (opened) on the Business Day thereafter which is not a Disrupted Day. (B) Assume  $IRD_{k=1}$  and  $IRD_{k=3}$  are Disrupted Days for a given Index Commodity and that the Disruption Event is linked to the the strategy-positions. In such case, 2/3 of the strategy are closed (opened) on  $IRD_{k=2}$  if such day is not a Disrupted Day and the remaining 1/3 on the Index Commodity's Business Day which immediately follows  $IRD_{k=3}$  and is not a Disrupted Day (such day will then be  $CRD_{k=3}$  for the Index Commodity in question).

- b) Should a Disruption Event occur on any Index Business Day that is scheduled to be a closing-day for a certain strategy-position, then:
- For the affected Index Commodity, the affected portion of the strategy-position shall be closed on such Index Commodity's next Business Day.

If any Index Business Day is not a Business Day for all Index Commodities<sup>2</sup>, then this does not constitute a Disrupted Day and the following rules apply:

- a) Should any Roll Day of a given Roll Period not be a Business Day for all Index Commodities, then:
- Closing of existing positions: For the Index Commodity in question, the affected portion of the roll is closed on such Index Commodity's next available Business Day.
- Examples: In case  $IRD_{k=1}$  is not a Business Day for a given Index Commodity, then 2/3 of the existing strategy-positions for the affected Index Commodity are closed on the Index Commodity's next available Business Day and the remaining 1/3 on the Business Day thereafter. Should  $IRD_{k=1}$  and  $IRD_{k=3}$  both not be Business Days for a certain Index Commodity, then 2/3 of the existing strategy-positions are closed on  $IRD_{k=2}$  and the remaining 1/3 on the Index Commodity's Business Day which immediately follows  $IRD_{k=3}$  (such day will then be  $CRD_{k=3}$  for the Index Commodity in question).
- Opening of new positions: For the Index Commodity in question, the affected portion of the roll is opened on such Index Commodity's next Business Day which is also an Index Business Day.

Examples: In case  $IRD_{k=1}$  is not a Business Day for a given Index Commodity, then 2/3 of the new position for the affected Index Commodity shall be opened on  $IRD_{k=2}$  and 1/3 on  $IRD_{k=3}$ . If  $IRD_{k=2}$  is not a Business Day, then 1/3 of the new position for the affected Index Commodity is opened on  $IRD_{k=1}$  and 2/3 shall be opened on  $IRD_{k=3}$ . Should both  $IRD_{k=1}$  and

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<sup>2</sup> For instance if any Exchange is closed due to a local holiday.



IRD<sub>k=2</sub> not be Business Days for a given Index Commodity, M/M of the new position shall be opened on IRD<sub>k=3</sub>.

If the condition applies to all IRD<sub>k=1,...,M</sub>, then 3/3 of the new position shall be opened on the Index Commodity's next available Business Day which is also an Index Business Day.

- b) Should any day that is scheduled to be a closing-day for a certain strategy-position not be a Business Day for the Index Commodity in question, then:
- The affected portion of the roll for the Index Commodity in question is closed on such Index Commodity's next available Business Day which is not a Disrupted Day.
- c) Should a Disruption Event occur on the Index Business Day that is scheduled to be the third closing day for a certain strategy-position, then:
- For the affected Index Commodity, any existing strategy-positions shall be exited via the applicable spread markets on close, which, unlike the outright markets, are not subject to price limit trading halts. Consequently, the price levels inferred from the spread settlement are used in the index calculation for those positions that have been exited in this manner. For simplicity, the adjustment will be effected by applying the spread settlement differential to the near date leg of the strategy position, the far date leg will be marked to the official exchange settlement price. In the unlikely event the applicable spreads are not tradable at the close of the final strategy exit day, the positions will be exited at the earliest opportunity and the executed levels will be used in the index calculation.

From September 27, 2017 onwards: For the affected Index Commodity, any existing strategy-positions shall be exited via the applicable spread markets on close, which, unlike the outright markets, are not subject to price limit trading halts. Consequently, the price levels used in the index calculation shall be inferred from the Volume Weighted Average Price of the spread trades during the settlement window. For simplicity, the adjustment will be effected by applying the spread settlement differential to the near date leg of the strategy position, the far date leg will be marked to the official exchange settlement price.



## 6. MISCELLANEOUS

### 6.1. 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.

### 6.2. 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.

### 6.3. 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.



## 6.4. 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 6.2 "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/>.

## 6.5. OVERSIGHT

An oversight committee composed of staff from SOLACTIVE and its subsidiaries (the "OVERSIGHT 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 OVERSIGHT 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/>.



## 7. DEFINITIONS

“ACTIVE WEIGHT” means the weight which is applied to the strategy, as applicable, on any Index Business Day, as described and defined in Appendix V - Active Weights

“AGENTS” refers to third parties AQ may appoint to calculate, publish and/or maintain the Index.

“ASSETS UNDER MANAGEMENT” refers to the total outstanding USD value of all securities, financial instruments or other assets which are linked to the performance of the Index.

“AQ” means Aquantum Sarl.

“AQ’S WEBPAGE” means the website found at URL: [www.aquantumgroup.com](http://www.aquantumgroup.com).

“SOLACTIVE’S Webpage” means the website found at URL: <http://www.solactive.com/>

“AQ CONTRACT” means the AQ 1<sup>st</sup> Contract and/or AQ 2<sup>nd</sup> Contract, as the case may be.

“AQ 1<sup>ST</sup> CONTRACT” refers to a Tradable Contract which exists for a certain Index Commodity i at the start of a given Roll Period, which is determined by the INDEX ADMINISTRATOR on a rule-based basis.

“AQ 2<sup>ND</sup> CONTRACT” refers to a Tradable Contract which exists for a certain Index Commodity i at the start of a given Roll Period, which is determined by the INDEX ADMINISTRATOR on a rule-based basis and has an Expiration Date after the AQ 1<sup>ST</sup> CONTRACT.

“BASKET REBALANCING DATE” means the 7<sup>th</sup> Index Business Day of each calendar month if such day is a Business Day for all Index Commodities. Else, the Basket Rebalancing Date means the immediately following Index Business Day which is a Business Day for all Index Commodities.

“BASKET WEIGHT” means the factor which is used to rebalance the weight of Commodity Basket k on each Basket Rebalancing Date such that Commodity Basket k represents a weight of 1/M in the ERI.

“BLOOMBERG WEBPAGE” means the website found at AQPEECSP Index <GO> on the Bloomberg Terminal.

“BUSINESS DAY” means for each Index Commodity a day on which (i) the relevant Exchange for such Index Commodity is scheduled to open for trading for at least 3 hours and on which (ii) the relevant AQ Contracts are available for trading during the hours referred to in (i) and on which (iii) Settlement Prices for the AQ Contracts are published. An early closing of the Exchange, or an early closing of trading in some or all AQ Contracts of a certain Index Commodity, will not affect the characterisation of a day as a Business Day, provided that the circumstances set forth in (i) and (iii) exist.

“CASH NEUTRAL” means, in the context of a long-short trade, that the USD value of the long position is equal to the USD value of the short position at the time of trade inception.

“COMMODITY BASKET” means the value of the Commodity Basket which is calculated with reference to Roll Day k on Index Business Day t and is given by the sum of all those Commodity Values which also reference Roll Day k on Index Business Day t.



"COMMODITY LETTER" refers to the alphabetical letter(s) used to identify a commodity by convention (see Appendix III - Commodity & Expiry Letters).

"COMMODITY ROLL DAY" means for a particular Index Commodity and its Contracts a Business Day on which strategy-positions for such Index Commodity are actually rolled. Commodity Roll Days are scheduled to coincide with Index Roll Days, however, Commodity Roll Days may be different to Index Roll Days upon the occurrence of Disruption Events or holidays.

"COMMODITY VALUE" means for each Index Commodity and Roll Day  $k$  the value on Index Business Day  $t$  which is given by the product of (i) the Strategy Basket per  $CRD_{k,i}$  for Index Commodity  $i$  on Index Business Day  $t$  and (ii) the Relative Weight per  $CRD_{k,i}$  for Index Commodity  $i$  on Index Business Day  $t$ .

"CONTRACT" means for any commodity any futures contract that is traded on an Exchange and allows for either physical or cash settlement of such commodity.

" $CRD_{k,i}$ " means Commodity Roll Day  $k$  for Index Commodity  $i$  (see "Commodity Roll Day").

"DISRUPTED DAY" means, with respect to a Business Day or Index Business Day (as applicable), a day on which a Disruption Event occurs.

"DISRUPTION EVENT" means an event which severely impacts the Index and/or makes the calculation of the Index Value impossible in reality. In cases of doubt, Solactive will, in consultation with the Index Committee, decide whether or not a Disruption Event has occurred.

"ELIGIBILITY CRITERIA" means the criteria which Contracts of any commodity must satisfy in order to be considered for inclusion into the Index. The specific criteria are described in section 3.

"EXCESS RETURN INDEX" (also "ERI") refers to the Aquantum SPCI EC Excess Return Index (USD), i.e. the Index which does not include the additional return of investing in Treasury Bills in its performance. In the context of this Methodology, excess return means the return which is achieved in excess of the Treasury Bill Rate. Such return can be positive or negative.

"EXCHANGE" means an Allowed Commodity Exchange. All Allowed Commodity Exchanges are listed in Appendix IV-Allowed Commodity Exchanges.

"EXPIRY DATE" means the expiry date (also known as expiration date or maturity date) of any Contract as determined and published by the relevant Exchange.

"EXPIRY LETTER" means the alphabetical letter, assigned by convention, to describe the calendar month to which a Contract refers, as listed in Appendix III - Commodity & Expiry Letters.

"FIRST NOTICE DATE" means, with respect to any Contract, the first day on which a notice of intent to deliver a commodity can be made by the seller to the buyer (via the relevant clearing house) in order to satisfy the obligations of such Contract.

"H" refers to the Offset Value. With respect to a strategy-position of a particular Index Commodity, H means the number of Index Business Days which precede such Index Commodity's Last Trade Date and identifies



the start of the scheduled closing of the strategy-position in question. It is determined by the Index Administrator on a rule-based basis.

"HEDGING ACTIVITY" refers to the trading activity of market participants, e.g. banks or other financial institutions, which apply the Methodology in an attempt to hedge any obligations by replicating the Index. Hedging Activities can potentially impact Contract prices and hence the performance of the Index.

"INDEX" means the Aquantum SPCI EC Excess Return Index (USD).

"INDEX SPONSOR" means Aquantum Sarl.

"INDEX OWNER" means Aquantum Sarl.

"INDEX BASE DATE" means 7 August 1997.

"INDEX BASE VALUE" means the value the Index is based to on the Index Base Date. The Index Base Value is 100.

"INDEX BUSINESS DAY" means a day on which the Index Value is calculated and published by Solactive, as determined by the NYSE Euronext Holiday & Hours schedule.

"INDEX COMMITTEE" means the body described in section 5 in this Methodology.

"INDEX COMMODITY" refers to a commodity which is included in the Index. All Index Commodities are listed in Appendix I - Current Index Commodities.

"INDEX ROLL DAY" means for all Index Commodities and their corresponding Contracts an Index Business Day on strategy-positions, as applicable, are scheduled to be rolled. The first Index Roll Day is determined by the Index Administrator on a rule-based basis.

"INDEX VALUE" means the final numerical value for the Index, calculated and published on each Index Business Day and arrived at by applying the Methodology.

"IRD<sub>k</sub>" refers to an Index Roll Day k (see "Index Roll Day").

"LAST TRADE DATE" means for any Contract the earlier of (i) such Contract's Expiry Date or (ii) the Index Business Day which immediately precedes such Contracts First Notice Date, as applicable for the Index Commodity in question.

"LEVERAGE FACTOR" means for each Index Commodity the multiplicative factor which is applied to the performances of the strategy, as applicable and as given in Appendix VI – Leverage Factors.

"LIMIT EVENT" means that, on any Business Day, Solactive has determined that a Contract price has changed by such magnitude that it has reached its daily maximum or minimum price limit set by the relevant Exchange.

"M" means the number of Roll Days within a Roll Period. M is determined by the Index Administrator on a rule-based basis..

"METHODOLOGY" means the present document in its entirety including any published amendments.



"OFFSET VALUE" has the meaning given by "H".

"STRATEGY" means trading Programme 2.

"RELATIVE WEIGHT" means the weighting factor that is applied to each Strategy Basket and which is used to rebalance the weights of the individual Index Commodities in the Index.

"RELEVANT DECIMAL PLACES OF PRECISION" means, in the context of this Methodology, the number of decimal places to which any numerical value is rounded to and which Solactive deems necessary to use in order to arrive at the Index Value. Such number is used in every step of the Index calculation and is currently set to 10.

"REVIEW DATE" means both the regularly scheduled dates on which the Solactive reviews the Methodology, the Index and the market environment, as well as those dates on which an unscheduled (extraordinary) review is called for the purposes of determining any items which may be subject to adjustment in accordance with the Methodology, temporarily or otherwise.

"ROLL DAY" means a day during the Roll Period on which positions are scheduled to be rolled.

"ROLL PERIOD" means the period of time over which positions for the strategy are opened and/or closed (as applicable). Each Roll Period consists of M Roll Days and is determined by the Index Administrator on a rule-based basis. "SETTLEMENT PRICE" means the price at which a certain Contract has settled or closed on the Exchange on any Business Day and which market participants, in accordance with market practice, use to determine the price of such Contract. If an Exchange publishes a daily settlement price for a particular Contract, then such price will generally serve as the Settlement Price in the context of this Methodology unless, in the reasonable judgment of Solactive, such price reflects a manifest error.

"STRATEGY BASKET" means for each Index Commodity  $i$  and  $CRD_{k,i}$  the weighted basket of performances from the strategy on Index Business Day  $t$ . The performances of the strategy are combined based on their respective Active Weights.

"TARGET WEIGHT" means those weights which are determined by Solactive in consultation with the Index Committee for each Index Commodity as deemed appropriate, taking into consideration factors including, but not limited to, the objectives of the Index, the current and expected market environment, the maximum weight and diversification rules as explained in section 3.4, tradability, the impact of Hedging Activity, liquidity and regulation. The Target Weights are listed in Appendix I - Current Index Commodities.

"TRADABLE CONTRACT" means all such contracts which are predetermined by the INDEX ADMINISTRATOR.



## 8. APPENDIX I – SAMPLE INDEX COMMODITIES

The below table lists the Index Commodities together with their respective Target Weights and Exchanges.

Commodity Letter	Commodity Name	Exchange Name		Target Weight
		Short	Long	
C	Corn	CBOT	Chicago Board of	8.65921788%
BO	Soybean Oil	CBOT	Chicago Board of	1.11731844%
S	Soybeans	CBOT	Chicago Board of	5.02793296%
SM	Soybean Meal	CBOT	Chicago Board of	1.11731844%
W	Wheat	CBOT	Chicago Board of	3.63128492%
KW	KC HRW Wheat	KCBT	Chicago Board of	2.79329609%
LC	Live Cattle	CME	Chicago Mercantile	5.86592179%
LH	Lean Hogs	CME	Chicago Mercantile	2.51396648%
CC	Cocoa	ICE US	Intercontinental	1.39664804%
KC	Arabica Coffee	ICE US	Intercontinental	1.67597765%
CT	Cotton # 2	ICE US	Intercontinental	1.39664804%
SB	Sugar # 11	ICE US	Intercontinental	4.46927374%
CO	Brent Crude	ICE EU	Intercontinental	9.49720670%
CL	WTI Crude Oil	NYMEX	New York	10.89385475%
HO	ULS Diesel	NYMEX	New York	10.05586592%
XB	Gasoline	NYMEX	New York	9.77653631%
QS	Gas Oil	ICE EU	Intercontinental	9.21787709%
NG	Natural Gas	NYMEX	New York	10.89385475%



## 9. APPENDIX III – COMMODITY & EXPIRY LETTERS

The Index makes use of convention when referring to Index Commodities and Contracts which relate to a certain calendar month or Expiry Date.

Each Index Commodity and Expiry is assigned a letter (the “Commodity Letter” and “Expiry Letter”), or a combination of letters, in accordance with the below table.

Commodity Name	Commodity Letter
Corn	C
Soybean Oil	BO
Soybeans	S
Soybean Meal	SM
Wheat	W
KC HRW Wheat	KW
Live Cattle	LC
Lean Hogs	LH
Cocoa	CC
Arabica Coffee	KC
Cotton #2	CT
Sugar #11	SB
Brent Oil	CO
WTI Crude Oil	CL
ULS Diesel	HO
Gasoline	XB
Gas Oil	QS
Natural Gas	NG

Calendar Month	Expiry Letter
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z



## 10. APPENDIX IV – ALLOWED COMMODITY EXCHANGES

All currently Allowed Commodity Exchanges are listed in the below table. Only Contracts which are listed and traded on these Exchanges, and the commodities to which those Contracts relate, are considered for inclusion into the Index. The list of Allowed Commodity Exchanges will be reviewed on each Review Date.

Long Name of Exchange	Short Name of Exchange	Location
Chicago Mercantile Exchange	CME	USA
Chicago Board of Trade	CBOT	USA
Intercontinental Exchange – US	ICE US	USA
Intercontinental Exchange – EU	ICE EU	EU
New York Mercantile Exchange	NYMEX	USA



## 11. APPENDIX V – ACTIVE WEIGHTS

For each Index Commodity the Active Weights which are applicable to strategy on any Index Business Day are shown by the below table.

Commodity Letter	Strategy Active Weight
C	100%
BO	100%
S	100%
SM	100%
W	100%
KW	100%
LC	100%
LH	100%
CC	100%
KC	100%
CT	100%
SB	100%
CO	100%
CL	100%
HO	100%
XB	100%
QS	100%
NG	100%



## 12. APPENDIX VI – LEVERAGE FACTORS

For all Index Commodities, the Leverage Factors for the strategy are:

$$L_{P2} = 156.625\%$$

For Index Commodity  $i$ , the same Leverage Factor will apply to the strategy.



## 13. APPENDIX VIII – AQUANTUM SPCI EC 2 NET INDEX (AQPEEC2N) CALCULATION

$$U_t = U_{reb} * (1 + lev * \left(\frac{P2_t}{P2_{reb}} - 1\right))$$

$$I_{t_{dragged}} = I_{t-1_{dragged}} * \left(\frac{U_t}{U_{t-1}} - dragfee * \frac{CD(t, t - 1)}{365}\right)$$

$I_{t_{dragged}}$  = Aquantum SPCI EC 2 Net Index Level net of fees on Index Business Day t

$I_{t-1_{dragged}}$  = Aquantum SPCI EC 2 Net Index Level net of fees on Index Business Day t-1

$U_t$  = gross Aquantum SPCI EC 2 Net Index level without fees on Index Business Day t.  $U_t = 100.0000$  on Jan 2<sup>nd</sup> 1998

$U_{t-1}$  = gross Aquantum SPCI EC 2 Net Index level without fees on Index Business Day t-1.

$U_{reb} = U_t$  level on the last average rebalance date. Leverage rebalance date is the first Index Business Day of each month. If t = Jan 2<sup>nd</sup> 2018, reb = Dec 1<sup>st</sup> 2017

$P2_t$  = Aquantum SPCI EC level on Index Business Day t rounded to 4 decimal places

$P2_{reb} = P2_t$  level on the last leverage rebalance date

$lev = 2$

$U_t$  = gross Aquantum SPCI EC 2 Net Index level without fees on index business day t

$dragfee = 1.40\%$

$CD(t, t - 1)$  = number of calendar days between Index Business Day t and t-1 e.g.  $CD(t, t - 1) = 3$  between Jan 5<sup>th</sup> 2018 and Jan 8<sup>th</sup> 2018

$U_t, I_{t_{dragged}}$  levels are rounded to 10 decimal places



## 14. APPENDIX IX – AQUANTUM SPCI EC 6 NET INDEX (AQPEEC6N) CALCULATION

$$U_t = U_{reb} * (1 + lev * \left(\frac{P2_t}{P2_{reb}} - 1\right))$$

$$I_{t_{dragged}} = I_{t-1_{dragged}} * \left(\frac{U_t}{U_{t-1}} - dragfee * \frac{CD(t, t-1)}{365}\right)$$

$I_{t_{dragged}}$  = Aquantum SPCI EC 6 Net Index Level net of fees on Index Business Day t

$I_{t-1_{dragged}}$  = Aquantum SPCI EC 6 Net Index Level net of fees on Index Business Day t-1

$U_t$  = gross Aquantum SPCI EC 6 Net Index level without fees on Index Business Day t.  $U_t = 1.0000$  on Jan 2<sup>nd</sup> 1998

$U_{t-1}$  = gross Aquantum SPCI EC 6 Net Index level without fees on Index Business Day t-1.

$U_{reb} = U_t$  level on the last average rebalance date. Leverage rebalance date is the first Index Business Day of each month. If t = Jan 2<sup>nd</sup> 2018, reb = Dec 1<sup>st</sup> 2017

$P2_t$  = Aquantum SPCI EC level on Index Business Day t rounded to 4 decimal places

$P2_{reb} = P2_t$  level on the last leverage rebalance date

$lev = 6$

$U_t$  = gross Aquantum SPCI EC 6 Net Index level without fees on index business day t

$dragfee = 4.20\%$

$CD(t, t-1)$  = number of calendar days between Index Business Day t and t-1 e.g.  $CD(t, t-1) = 3$  between Jan 5<sup>th</sup> 2018 and Jan 8<sup>th</sup> 2018

$U_t, I_{t_{dragged}}$  levels are rounded to 10 decimal places



## 15. APPENDIX IX – AQUANTUM SPCI EC 4 NET INDEX (AQPEEC4N) CALCULATION

$$U_t = U_{reb} * (1 + lev * \left(\frac{P2_t}{P2_{reb}} - 1\right))$$

$$I_{t_{dragged}} = I_{t-1_{dragged}} * \left(\frac{U_t}{U_{t-1}} - dragfee * \frac{CD(t, t-1)}{365}\right)$$

$I_{t_{dragged}}$  = Aquantum SPCI EC 4 Net Index Level net of fees on Index Business Day t

$I_{t-1_{dragged}}$  = Aquantum SPCI EC 4 Net Index Level net of fees on Index Business Day t-1

$U_t$  = gross Aquantum SPCI EC 4 Net Index level without fees on Index Business Day t.  $U_t = 1.0000$  on Jan 2<sup>nd</sup> 1998

$U_{t-1}$  = gross Aquantum SPCI EC 4 Net Index level without fees on Index Business Day t-1.

$U_{reb} = U_t$  level on the last average rebalance date. Leverage rebalance date is the first Index Business Day of each month. If t = Jan 2<sup>nd</sup> 2018, reb = Dec 1<sup>st</sup> 2017

$P2_t$  = Aquantum SPCI EC level on Index Business Day t rounded to 4 decimal places

$P2_{reb} = P2_t$  level on the last leverage rebalance date

$lev = 4$

$U_t$  = gross Aquantum SPCI EC 4 Net Index level without fees on index business day t

$dragfee = 2.80\%$

$CD(t, t-1)$  = number of calendar days between Index Business Day t and t-1 e.g.  $CD(t, t-1) = 3$  between Jan 5<sup>th</sup> 2018 and Jan 8<sup>th</sup> 2018

$U_t, I_{t_{dragged}}$  levels are rounded to 10 decimal places



## 16. SAPPENDIX X – LICENSING CONTACT DETAILS

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