

**GUIDELINE**  
**BMMSJA19 Index**

Version 1.0 dated July 12<sup>th</sup>, 2018



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This document contains the underlying principles and regulations regarding the structure and the operating of the BMMSJA19 Index (the “Index”). Solactive AG shall make every effort to implement regulations. 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 certain point in time nor in any other respect. The Index is merely calculated and published by Solactive AG and it strives to the best of its ability to ensure the correctness of the calculation. There is no obligation for Solactive AG – 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 AG is no recommendation for capital investment and does not contain any assurance or opinion of Solactive AG regarding a possible investment in a financial instrument based on this Index.

# Introduction

This document is to be used as a guideline with regard to the composition, calculation and management of the Index. Any changes made to the guideline are initiated by the Committee specified in section 1.6. The Index is calculated and published by Solactive AG. The name “Solactive” is copyrighted.

## 1 Index specifications

The BMMSJA19 Index (the “Index”) is an Index of Boersenmedien AG and is calculated and distributed by Solactive AG.

The goal of the index is to provide leveraged exposure, long and short to Microsoft using options. The Index also has a lock-in mechanism.

The Index is calculated and published in Euro (EUR).

### 1.1 Short name and ISIN

The Index is distributed under ISIN DE000SLA56L3; the WKN is SLA56L. The Index is published in Reuters under the code < BMMSJA19> and in Bloomberg under the code < BMMSJA19 Index>.

### 1.2 Initial value

The Index is based on the Index Base Date. On that date, the constituents of the index and condition indices are fixed.

### 1.3 Distribution

The Index is published via the price marketing services of Boerse Stuttgart AG and is distributed to all affiliated vendors. Each vendor decides on an individual basis as to whether he will distribute/display the Index via his information systems.

### 1.4 Prices and calculation frequency

The price of the Index is calculated on each Trading Day based on the bid and ask prices on the respective Exchanges on which the Index Components are listed. The most recent bid and ask price of all Index Components are used. Should there be no current bid and ask price available, the most recent bid and ask price on Reuters for the preceding Trading Day is used in the calculation.

The Index is calculated on each Trading Day between 9:30am and 4:30pm, EST. In the event that data cannot be provided to Reuters or to the pricing services of Boerse Stuttgart AG the Index cannot be distributed.

Any incorrect calculation is adjusted on a retrospective basis.

## **1.5 Weighting**

The Weighting of the Index Components is done according to Section 2.

## **1.6 Decision-making bodies**

A Committee composed of staff from Solactive AG is responsible for decisions regarding the composition of the Index as well as any amendments to the rules (in this document referred to as the “Committee“ or the “Index Committee”). The Committee shall also decide about the future composition of the Index. If any Extraordinary Events should occur and the implementation of any necessary adjustments.

Members of the Committee can recommend changes to the guideline and submit them to the Committee for approval.

## **1.7 Publication**

All specifications and information relevant for calculating the Index are made available on the <http://www.solactive.de> web page and sub-pages.

## **1.8 Historical data**

Historical data is available from the Index Base Date.

## **1.9 Licensing**

Licences to use the Index as the underlying value for derivative instruments are issued to stock exchanges, banks, financial services providers and investment houses by Boersenmedien AG.

## 2 Calculation of the Index

### 2.1 Index formula

The Index Value on Trading Day  $t$  is calculated in accordance with the following formula:

$$I_t = \sum_{i=1}^{N_t} U_{i,t} * P_{i,t} * FX_t, \quad \text{if } t < \text{Expiry}$$

$$I_t = \sum_{i=1}^{N_t} U_{i,t} * IV_i * FX_t, \quad \text{if } t = \text{Expiry}$$

with:

$I_t$  = Index Value on the Trading Day  $t$

$N_t$  = Number of Index Constituents on Trading Day  $t$

$U_{i,t}$  = Unit of Index Constituent  $i$  on Trading Day  $t$

$P_{i,t}$  = Used Price of Index Constituent  $i$  on Trading Day  $t$ , see Section 5.4

$FX_t$  = the USD/EUR currency rate on Trading Day  $t$  if Index Constituent is in USD, otherwise 1

Expiry = Expiry Date of the Index Constituents as shown in Section 5.3

$IV_i$  = Intrinsic Value of Index Constituent  $i$  on Trading Day  $t$ , calculated as follows

If the Index Constituent is a call,

$$IV_i = \max(0, (OC_i - strike_i))$$

If the Index Constituent is a put,

$$IV_i = \max(0, (strike_i - OC_i))$$

If the Index Constituent is Cash Component,

$$IV_i = I_B$$

With:

$OC_i$  = Official Close of the Underlying of Index Constituent  $i$  on the Trading Day  $t$

$strike_i$  = Strike Price of Index Constituent  $i$  as shown in Section 5.3

$I_B$  = Index Base Value on Index Base Date

After the expiry the Index is discontinued.

### 2.2 Conditions

On the Index Base Date, the Units of each Index Constituent is set as shown in Section 5.3. During the lifetime of the index, the units can change based on the following conditions during a Trading Day.

#### 2.2.1 Condition 1

If on each Trading Day the Condition 1

$$C1_t = P_{1,t} * FX_t \geq 0.625 * I_B,$$

is true, then the units of the Index are adjusted according to the following:

$$U_{1,t+1} = 0 \text{ and } U_{6,t+1} = U_{6,t} + 1.25.$$

with:

$U_{i,B}$  = Unit of Index Constituent i on the Index Base Date

$P_{i,B}$  = Used Price of Index Constituent i on the Index Base Date

and the Condition is no longer checked for future Trading Days.

Otherwise:

$$U_{i,t+1} = U_{i,t}, \text{ for } i = 1, 6$$

### 2.2.3 Condition 2

If on any Trading Day before t Condition 1 was never true, then if on each Trading Day t or after t the Condition 2

$$C2_t = P_{5,t} * FX_t \geq 0.4 * I_B,$$

is true, then the units of the Index are adjusted according to the following:

$$U_{5,t+1} = U_{5,t} - 1 \text{ and } U_{6,t+1} = U_{6,t} + 0.4.$$

with:

$U_{i,B}$  = Unit of Index Constituent i on the Index Base Date

$P_{i,B}$  = Used Price of Index Constituent i on the Index Base Date

and the Condition is no longer checked for future Trading Days.

Otherwise:

$$U_{i,t+1} = U_{i,t}, \text{ for } i = 5, 6$$

### 2.2.2 Condition 3

If on any Trading Day before t Condition 1 was never true, then if on each Trading Day t or after t the Condition 3

$$C3_t = P_{5,t} * FX_t > 0.65 * I_B,$$

is true, the units of the Index are adjusted according to the following after having applied Condition 2 first if Condition 2 is triggered on the same day:

$$U_{5,t+1} = U_{5,t} - 1 \text{ and } U_{6,t+1} = U_{6,t} + 0.65.$$

and the Condition is no longer checked for future Trading Days.

Otherwise:

$$U_{i,t+1} = U_{i,t}, \text{ for } i = 5, 6$$

### 2.2.2 Condition 4

If on any Trading Day before t Condition 1 was true, then if on each Trading Day t or after t the Condition 4

$$C4_t = P_{5,t} * FX_t \geq P_{5,B} * FX_B,$$

is true, the units of the Index are adjusted according to the following after having applied Condition 1 first if Condition 1 is triggered on the same day:

$$U_{5,t+1} = 0 \text{ and } U_{6,t+1} = U_{6,t} + \frac{U_{5,B} * P_{5,B} * FX_B}{I_B}.$$

and the Condition is no longer checked for future Trading Days.

Otherwise the Condition is not checked at all.

## 2.3 Corporate Actions

The Index will be adjusted for any Corporate Action affecting the Index Constituents according to the Options Clearing Corporation (<https://www.theocc.com/>).

## 2.4 Accuracy

The value of the Index will be rounded to three decimal places.

## **3 Disruption Events, Modification and Recalculation**

### **3.1 Recalculation**

Solactive AG makes the greatest possible efforts to accurately calculate and maintain its indices. However, the occurrence of errors in the index determination process cannot be ruled out. In such cases Solactive AG adheres to its publicly available [Correction Policy](#).

### **3.2 Disruption Events**

In periods of market stress Solactive AG calculates its indices following predefined and exhaustive arrangements set out in its publicly available [Disruption Policy](#).

### **3.3 Modification**

Any Modification to the rules and any extraordinary decision by the Index Committee will be published on the Solactive website.



## 4 Definitions

“**Trading Day**” means any day on which the Exchange is scheduled to be open for Trading.

“**Exchange**” means the Option Pricing Authority (“OPRA”).

“**Index Constituents**” are any options currently included in the Index, see as well section 5.3.

The “**Index Calculator**” is Solactive AG or any other appropriately appointed successor in this function.

The “**Index Administrator**” is Solactive AG or any other appropriately appointed successor in this function.

The “**Index Base Date**” is the 13<sup>th</sup> July 2018.

The “**Index Currency**” is EUR.

A “**Market Disruption Event**” is defined in section 3.

## 5 Appendix

### 5.1 Contact data

#### Information regarding the Index concept

Börsenmedien AG  
Am Eulenhof 14  
95326 Kulmbach  
Germany

### 5.2 Calculation of the Index – change in calculation method

The application by the Index Calculator of the method described in this document is final and binding. The Index Calculator 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, financial or tax reasons may require changes to be made to this method. The Index Calculator may also make changes to the terms and conditions of the Index and the method applied to calculate the Index, which he 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 Calculator is not obliged to provide information on any such modifications or changes. Despite the modifications and changes the Index Calculator will take the appropriate steps to ensure a calculation method is applied that is consistent with the method described above.

### 5.3 Index Constituents

i	RIC	Underlying	Strike	Type	Expiry	Unit on Base Date	Currency
1	MSFTA181911000.U	Microsoft Corp	110	Call	18 <sup>th</sup> Jan 2019	2	USD
2	MSFTA181911000.U	Microsoft Corp	110	Call	18 <sup>th</sup> Jan 2019	0.25	USD
3	MSFTA181912000.U	Microsoft Corp	120	Call	18 <sup>th</sup> Jan 2019	4	USD
4	MSFTA181912500.U	Microsoft Corp	125	Call	18 <sup>th</sup> Jan 2019	-4	USD
5	MSFTM181909500.U	Microsoft Corp	95	Put	18 <sup>th</sup> Jan 2019	2	USD
6	CASH Component	CASH	-	-	-	0	EUR

### 5.4 Used Prices

Below are listed the pricing rules for the Index Constituents:

i	From Index Base Date to 17/08/18	From 20/08/18 to 14/09/18	From 17/09/18 to Expiry
1	Ask	Mid	Bid
2	Ask	Mid	Bid
3	Ask	Mid	Bid
4	Bid	Mid	Ask
5	Ask	Mid	Bid
6	$I_B$	$I_B$	$I_B$

Below are listed the pricing rules for the Conditions:

i	Price for Trading Day t
1	Bid
5	Bid