



**SUPPLEMENT DATED 13 FEBRUARY 2020  
PURSUANT TO THE BASE PROSPECTUS DATED 14 JUNE 2019**

**SOCIÉTÉ  
GÉNÉRALE**  
as Issuer and  
Guarantor  
(incorporated in  
France)

and

**SG ISSUER**  
as Issuer  
(incorporated in Luxembourg)

and

**SG OPTION EUROPE**  
as Issuer  
(incorporated in France)

## **Debt Instruments Issuance Programme**

This supplement dated 13 February 2020 (the **Supplement**) constitutes a supplement for the purposes of Article 13.1 of the Luxembourg act dated 10 July 2005 on prospectuses for securities remaining applicable in accordance with Article 64 of the Luxembourg law dated 16 July 2019 on prospectuses for securities (the **Prospectus Act 2005**) to the Debt Instruments Issuance Programme prospectus dated 14 June 2019 (the **Base Prospectus**) and approved by (a) the *Commission de Surveillance du Secteur Financier* (hereinafter the **CSSF**) on 14 June 2019 in accordance with Article 7 of the Prospectus Act 2005 and (b) by the SIX Swiss Exchange Ltd pursuant to its listing rules.

The purpose of this Supplement is to (i) incorporate by reference the “SGI Global Methodology” and amend the section “Documents incorporated by reference” accordingly, (ii) update paragraph 12 in the section “General Description of the Programme” and (iii) update section “Description of Société Générale Indices (“SGI Indices”)”.

Any websites included in the Prospectus are for information purposes only and do not form part of the Prospectus.

The amendments included in this Supplement shall only apply to final terms, the date of which falls on or after the approval of this Supplement.

This Supplement completes, modifies and must be read in conjunction with the Base Prospectus, the first supplement dated 19 August 2019, the second supplement dated 11 October 2019, the third supplement dated 29 November 2019 and the fourth supplement dated 15 January 2020 (the “**Previous Supplements**”).

Full information on the Issuers and the offer of any Notes is only available on the basis of the combination of the Base Prospectus, the Previous Supplements and this Supplement.

Unless otherwise defined in this Supplement, terms used herein shall be deemed to be defined as such for the purposes of the relevant Terms and Conditions of the Notes set forth in the Base Prospectus.

To the extent that there is any inconsistency between (i) any statement in this Supplement and (ii) any other statement in the Base Prospectus, the statements in (i) above will prevail.

In accordance with Article 13.2 of the Prospectus Act 2005, investors who have already agreed to purchase or subscribe for the securities before this Supplement is published have the right, exercisable within a time-limit of two business days after the publication of this Supplement (no later than 17 February 2020) to withdraw their acceptances.

## **I. SECTION “DOCUMENTS INCORPORATED BY REFERENCE”**

*Paragraph 1.5 “Document incorporated by reference relating to SGI Indices” on page 113 is added as follows:*

### **“1.5 Document incorporated by reference relating to SGI Indices**

The expression “SGI Global Methodology” means in respect of an SGI Index, all the pages of (1) the SGI Indices Global Methodology (the initial version dated 8 June 2010), (2) the SGI Indices Global Methodology (the updated version dated 1 January 2016), (3) the Global Index Methodology (the updated version dated 16 January 2017) or, as the case may be (4) the Global Index Methodology (the most recent version being dated 25 November 2019) each of which describes, among other things, certain procedures for the calculation and maintenance of such SGI Index as well as important events which might affect it and the Index Components hereof, but in any case applicable to an SGI Index only where the Index Rules for such SGI Index expressly refer to such methodology. For the avoidance of doubt, the term **“SGI Global Methodology”** may be construed to include further versions of such methodology if any. The SGI Global Methodology is available on the SGI website at the following address: <https://sgi.sgmarkets.com>.”

## **II. SECTION “GENERAL DESCRIPTION OF THE PROGRAMME”**

*Subparagraph “SGI Index Linked Notes” under paragraph 12 “Type of Structured Notes” is modified on page 102 with provision added in red and word deleted in green as follows:*

### **“SGI Index Linked Notes**

Payments of principal and/or of interest at maturity or otherwise in respect of SGI Index Linked Notes will be calculated by reference to one or more Société Générale Indices as the relevant Issuer and the relevant Dealer(s) may agree and as indicated in the applicable Final Terms.

SGI Index Linked Notes may be subject to early redemption or adjustment as more fully described in the Additional Terms and Conditions for SGI Index Linked Notes.

SGI Index Linked Notes are linked to the performance of an index that is composed by the Issuer or any other legal entity belonging to the Société Générale group (an SGI Index).

In respect of the description of the SGI Index, this Base Prospectus contains, in accordance with Commission Regulation (EC) 809/2004 as amended, an index description including the essential characteristics to enable an investor to fully understand the index and its dynamics and make an informed assessment.

The index description of the SGI The Best Select Fund EUR Index, SG Rise of the Robots V9 Index, Multi Asset 85% Max Daily NAV Index (EUR – Total Return), ~~and~~ Global Rotation Funds EUR Index (EUR – Excess Return), **SGI Global 85% Progressive Protection Bond Index (EUR – Total Return) and SG US Strong Balance Sheet Beta Hedged 5% VT Index (USD – Excess Return)** is contained in section "Description of SGI Indices" of this Base Prospectus.

It should be noted that additional SGI Indices may be used as underlyings following the publication of a supplement in accordance with the provisions of article 16 of the Prospectus Directive, containing an index description of such additional Indices."

### III. SECTION "DESCRIPTION OF SOCIETE GENERALE INDICES ("SGI INDICES")"

(i) *The description of the SGI Index "SGI Global 85% Progressive Protection Bond Index (EUR – Total Return)" is added from page 804 as follows:*

#### **Index Rules Summary**

##### **1.1 Index Description**

The SGI Global 85% Progressive Protection Bond Index (the "**Index**", displayed on Bloomberg page SGMDGPPB <Index>), launched on the 30<sup>th</sup> April, 2020 (the "**Index Launch Date**"), aims to provide the performance of a crescendo product on a SG Index including a volatility target mechanism.

The Index is calculated and published by Stoxx Limited, Zurich, Switzerland (the "**Index Calculation Agent**") and is sponsored by Société Générale (the "**Index Sponsor**").

#### Main Characteristics

<b>Bloomberg ticker:</b>	SGMDGPPB <Index>
<b>Type of Return:</b>	Total Return
<b>Calculation Frequency:</b>	Daily
<b>Publication Time:</b>	End of Day
<b>Index Launch Date:</b>	30 <sup>th</sup> April, 2020
<b>Currency:</b>	EUR
<b>Fees and Costs:</b>	As specified under the "Index Fees and Costs" section below
<b>Index Asset Class:</b>	Underlying SG Index
<b>Index Components:</b>	Equity Instrument and Market Data

##### **1.2 Mechanism**

The SGI Global 85% Progressive Protection Bond Index is an index designed to track the performance of a strategy that is:

- Long a Risky Asset, the SGI Custom Dynamic Funds Allocation Index (displayed on the Bloomberg page SGMDCDFA <Index>)
- Long a Lookback Put Option on the SGI Custom Dynamic Funds Allocation Index
- Long a Cash Component

Everytime the Lookback Put Option on SGI Custom Dynamic Funds Allocation Index reaches its maturity, it is extended, if possible, and the exposure to the Risky Asset is reset. This extension aims to provide protection against sharp declines of the SGI Custom Dynamic Funds Allocation Index and limit potential losses to a maximum of 15% of the last Maximum Level of the Index while maintaining an exposure to the potential upside of the Risky Asset.

The SGI Custom Dynamic Funds Allocation Index is a volatility-controlled Index that aims to replicate the performance of a Hypothetical Basket composed of an Equity Fund and a Fixed Income Fund. Each Basket Component Weight is determined daily such that the volatility of the Hypothetical Basket equals the volatility target level, at 6%.

**1.3 Index Fees and Costs**

The Index is calculated net of the following fees and costs:

<b>Transaction Costs</b>	Not Applicable
<b>Replication Costs</b>	Not Applicable
<b>Structuring Fee, "SF"</b>	1% p.a.
<b>Management Fee, "MF"</b>	0.2% p.a.

**1.4 SGI Global Methodology**

The Index is computed and maintained pursuant to these Index Rules which incorporate by reference the SGI Indices Global Methodology (version dated 25 November 2019, as supplemented, amended and restated or replaced from time to time, the "SGI Global Methodology"). The SGI Global Methodology is published on the SGI website under the link "SGI Cross Asset Methodology" at <https://sgi.sgmarkets.com>. These Index Rules should be read together with the SGI Global Methodology.

Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the SGI Global Methodology.

**In the event of any inconsistency between the SGI Global Methodology and the Index Rules, for purposes of the Index, the Index Rules will prevail.**

**The SGI Global Methodology notably includes important events applicable in respect of the Index Components selected in section 1.1 above.**

The SGI Global Methodology is expected to be updated and revised from time to time where necessary or desirable, pursuant to legal developments and for the purpose of technical improvement. The Index Sponsor may also act in good faith and a commercially reasonable manner to amend the SGI Global Methodology in order to cure ambiguities, errors and omissions, if any, thereunder. SGI Global Methodology subsequently updated and revised shall be approved in accordance with the Index Sponsor's internal index procedures and published on the SGI website under the link "SGI Cross Asset Methodology" at <https://sgi.sgmarkets.com> and shall, upon such publication, apply to the Index and these Index Rules.

## 1.5 Technical Rectification of Index Rules

The Index Rules may be amended from time to time, consistent with the economic strategy of the Index, by the Index Sponsor acting in good faith and a commercially reasonable manner to cure ambiguities, errors and omissions.

For convenience, the Index Sponsor may from time to time replace a data provider, publisher or source of Market Data or Index Data (a “Data Provider”), provided that the relevant data content remains equivalent. In any case where the Index Sponsor reasonably determines that the replacement of a Data Provider is necessary or desirable whilst the data content may not remain strictly equivalent, the Index Sponsor shall select such replacement Data Provider (a) in a commercially reasonable manner; (b) consistent with the objectives of the Index; and (c) in compliance with the Index Sponsor’s internal procedures for Index modification.

## 1.6 Information available on the SGI website

The Index Level (including the performance and volatility of the Index), further Index data, news, and important disclaimers relating to the Index are available on the SGI website at the following address: <https://sgi.sqmarkets.com>.

## 2. Index Rules:

### 2.1 Terms and definitions relating to Dates:

<b>ACT(<math>t_1, t_2</math>)</b>	means the number of calendar days between Calculation Date ( $t_1$ ) (included) and Calculation Date ( $t_2$ ) (excluded).
<b>Calculation Date</b>	means any Scheduled Valuation Day on which no Index Disruption Event exists.
<b>Disrupted Calculation Date</b>	means any Disrupted Calculation Date determined in accordance with Section 3.
<b>Index Launch Date, “<math>t_B</math>”</b>	30 <sup>th</sup> April, 2020.
<b>N(<math>t_1, t_2</math>)</b>	means the number of Calculation Dates between the Calculation Date ( $t_1$ ) (included) and the Calculation Date ( $t_2$ ) (excluded).
<b>Extension Date</b>	means the Index Launch Date and any Calculation Date ( $t$ ), where $t = mat(t_E(t))$ .
<b><math>t_E(t)</math></b>	means the Extension Date immediately preceding and excluding Calculation Date ( $t$ ): $t_E(t) < t$ ,
<b><math>t_{EE}(t)</math></b>	means the Extension Date immediately preceding and including Calculation Date ( $t$ ): $t_{EE}(t) \leq t$ .

**Scheduled Valuation Day** means any day where all Basket Components are published on their respective Bloomberg pages.

**Valuation Time** means 6:30 p.m. (New York time).

## 2.2 Terms and definitions relating to the Index:

**Index** means the SGI 85% Global Progressive Protection Bond Index (Bloomberg Ticker: **SGMDGPPB** <Index>).

**Index Calculation Agent** Stoxx Limited, Zurich, Switzerland.

**Index Currency** EUR.

**Index Level, "IL(t)"** means, in respect of any Calculation Date (t), the level of the Index calculated and published by the Index Calculation Agent on such date at the Valuation Time, pursuant to the Index rules set out in Section 2.6.

**Index Sponsor** Société Générale ("SG").

**Guaranteed Capital, "λ"** means 85%.

**Structuring Fee, "SF"** means 1% p.a.

## 2.3 Terms and definitions relating to the Underlying Basket:

**Basket Component** any component of the Underlying Basket as provided in Appendix 1.

**Basket Component Currency** means, in respect of the Basket Component, its currency as displayed in Appendix 1.

**Basket Component Level, "BCL(t)"** means, in respect of Calculation Date (t) and the Basket Component, its Closing Price as displayed on its Bloomberg page.

**Basket Component Ticker** means, in respect of the Basket Component, its Bloomberg Ticker as displayed in Appendix 1.

**Exchange(s)** means, in respect of a Basket Component whose Basket Component Type is Index, each exchange or quotation system (if applicable) on which the securities or instruments underlying such Basket Component trade, any successor exchange or quotation system or any substitute exchange or quotation system to which such has relocated.

**Index Component** means any Basket Component and Market Data.

<b>Underlying Basket Level, “UBL(t)”</b>	means, in respect of Calculation Date (t), the level of the Underlying Basket expressed in the Index Currency and determined in accordance with Section 2.7.
<b>Current Cash Level, “cash(t)”</b>	means, in respect of Calculation Date (t), the level of the current cash component, determined by the Index Calculation Agent pursuant to the formula in Section 2.8.
<b>Management Fee, “MF”</b>	means 0.2% p.a.
<b>Risky Asset Weight, “RAW”</b>	means 96%.

## 2.4 Terms and definitions relating to the Lookback Put Option:

<b>PutLB<sub>0</sub>(t, t<sub>EE</sub>t), T(t<sub>EE</sub>(t)), λ)</b>	means the initial value of a Hypothetical Put Lookback Option, on the Underlying Index, determined by the Index Calculation Agent and Société Générale.
<b>Theoretical Lookback Put Option Price, « PutLB(t, t<sub>E</sub>t), mat(t<sub>E</sub>(t)), λ »</b>	means, in respect of Calculation Date (t), the value of a Hypothetical Lookback Put Option on the Underlying Basket Component, determined by the Index Calculation Agent and Société Générale.
<b>Volatility, “σ”</b>	means 7.96%.
<b>Initial LookBack Put Maturity, “IPM”</b>	means 36 months.
<b>Lookback Put Maturity, “mat(t<sub>E</sub>(t))”</b>	means, in respect of Calculation Date (t), the maturity of the Lookback Put Option “PutLB(t, t <sub>E</sub> t), mat(t <sub>E</sub> (t)), λ”.
<b>Number of Extension Dates, “NE(t)”</b>	means, in respect of Calculation Date (t), the number of Extension Dates observed since the Index Launch Date (excluded).

## 2.5 Terms and definitions relating to the Market Data

<b>Market Data</b>	means a rate (including an interest rate, a foreign exchange rate or a swap rate), a spread, or any other data specified in the Index Rules (including any rate specified in this section 2.5) or any other similar instrument specified herein.
<b>EONIA Rate, “ER(t)”</b>	means, in respect of Calculation Date (t), the level of the Euro Overnight Index Average Rate, as displayed on the Bloomberg Page EONIA <Index> or any successor service. If such rate dated as of Calculation Date (t) is missing, means the latest rate available displayed under EONIA <Index> Bloomberg page.

**Capitalization Spread,** means 0.50% p.a.  
**“CS”**

## 2.6 Determination of the Index Level, “IL(t)”:

The Index Level is, in respect of Calculation Date (t), calculated by the Index Calculation Agent at the Valuation Time, subject to the occurrence or existence of an Index Disruption Event or an Index Extraordinary Event, in accordance with the following formula:

For  $t > t_{IB}$ :

If  $mat(t_E(t)) \geq t$ :

$$IL(t) = IL(t_E(t)) \times \left( \begin{array}{l} PutLB(t, t_E(t), mat(t_E(t)), \lambda) + RAW \times \frac{UBL(t)}{UBL(t_E(t))} \\ + cash(t-1) \times \left( 1 + ER(t-1) \times \frac{ACT(t-1, t)}{360} - SF \times \frac{ACT(t-1, t)}{365.25} \right) \end{array} \right)$$

**Else:**

$$IL(t) = IL(t-1) \times \left( 1 + ER(t-1) \times \frac{ACT(t-1, t)}{360} \right)$$

*With:*

$$ILMAX(t) = Max(ILMAX(t-1), IL(t))$$

*And*

$$IL(t_{IB}) = 1000$$

$$ILMAX(t_{IB}) = 1000$$

## 2.7 Determination of the Underlying Basket Level “UBL(t)”:

The Underlying Basket Level is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

For  $t > t_{IB}$ :

$$UBL(t) = UBL(t-1) \times \left[ \frac{BCL(t)}{BCL(t-1)} - (SF + MF) \times \frac{ACT(t-1, t)}{365.25} \right]$$

*Where,*

$$UBL(t \leq t_{IB}) = 1000$$

## 2.8 Determination of Current Cash Level “cash(t)”:

The Current Cash Level is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:



$$cash(t) = \begin{cases} 1 - PutLB_0(t, t_{EE}(t), T(t_{EE}(t)), \lambda) - RAW, & \text{if } t = t_{EE}(t) \\ cash(t-1) \times \left( 1 + ER(t-1) \times \frac{ACT(t-1, t)}{360} - SF \times \frac{ACT(t-1, t)}{365.25} \right), & \text{otherwise} \end{cases}$$

With:

$$cash(t_{IB}) = 1 - PutLB_0(t_{IB}, t_{IB}, T(t_{IB}), \lambda) - RAW$$

## 2.9 Determination of Option Maturity “mat(t)”

The Option Maturity is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

For  $t > t_{IB}$ :

**If t is an Extension Date:**

$$mat(t) = \begin{cases} date(t)_{IPM}, & \text{if } NE(t) = 0 \\ \max_{m \in \{1, 2, \dots, 36\}} \left\{ date(t)_m \mid PutLB_0 \left( t, t_{EE}(t), \frac{ACT(t, date(t)_m)}{365.25}, \lambda \right) < 1 - RAW \right\} & \text{otherwise} \end{cases}$$

Such that  $date(t)_m$  is the Calculation Date immediately preceding and including  $MN \left( t, \frac{m}{12} \right)$ .

With MN defined such as:

$$ACT(t, MN(t, j)) = \lfloor 365.25 \times j \rfloor$$

**Else:**

$$mat(t) = mat(t-1)$$

With  $mat(t_{IB})$  is the Calculation Date immediately preceding and including  $MN(t_{IB}, 3)$ .

Where,

“ $\lfloor \cdot \rfloor$ ” denotes the floor function where  $\lfloor x \rfloor = \max_{m \in \mathbb{Z}} \{m \mid m \leq x\}$

With  $\mathbb{Z}$  denoting the set of integers.

## 2.11 Determination of the Theoretical Lookback Put Option Price “PutLB(t, t<sub>E</sub>(t), mat(t<sub>E</sub>(t)), λ)”:

The Theoretical Lookback Put Option Price is, in respect of Calculation Date (t), provided by the Index Calculation Agent and Société Générale.

**If  $t \leq mat(t_E(t))$ :**

$$PutLB(t, t_E(t), mat(t_E(t)), \lambda) = PutLBdef(ILMAX(t), UBL(t), T(t_E(t)), \sigma, ER(t-1), SF, CS, \lambda)$$

Where,

$PutLBdef(ILMAX(t), UBL(t), T(t_E(t)), \sigma, ER(t-1), SF, CS, \lambda)$  is the mark-to-market of the Lookback Put Option computed by the Index Calculation Agent and Société Générale with the provided observable parameters.

At every single extension date, the Lookback Put Option is struck at a level equal to 85% of the last maximum level of the Index observed since inception. This is done so to protect the investor against sharp drops of the Risky Asset and to guarantee every day 85% of the maximum Level of the Index observed on a daily basis.

And,

$$T(t) = \frac{ACT(t, mat(t))}{365.25}$$

$$T(t_E(t)) = \frac{ACT(t, mat(t_E(t)))}{365.25}$$

$$T(t_{EE}(t)) = \frac{ACT(t, mat(t_{EE}(t)))}{365.25}$$

**Else:**

$$PutLB(t, t_E(t), mat(t_E(t)), \lambda) = 0$$

**3. Index Disruption Events:**

As specified in the SGI Global Methodology.

**4. Index Extraordinary Events:**

As specified in the SGI Global Methodology.

**5. Disclaimers:**

The SGI Global 85% Progressive Protection Bond Index is calculated and maintained by STOXX Limited, Zurich, Switzerland, specifically for SG.

**Société Générale**

The SGI Global 85% Progressive Protection Bond Index (the “**Index**”) has been developed by, and is proprietary to, Société Générale (“**SG**”) and no third party shall have any proprietary interest herein except as may be expressly granted by SG. STOXX Limited acknowledges that the ownership and all intellectual property rights in respect of the name of the Index (and index rules such as, but not limited to, calculation methods) are and shall remain the exclusive property of SG.

SG DOES NOT GUARANTEE THE ACCURACY AND/OR THE COMPLETENESS OF THE INDEX OR ANY DATA INCLUDED THEREIN AND SHALL HAVE NO LIABILITY FOR ANY ERROR OR OMISSION THEREIN AND/OR ANY INTERRUPTION IN THE CALCULATION AND/OR DISSEMINATION THEREOF. SG MAKES NO WARRANTY, EXPRESS OR IMPLIED, AS TO RESULTS TO BE OBTAINED BY ANY OTHER PERSON OR ENTITY FROM THE USE OF THE INDEX RULES OR ANY DATA INCLUDED THEREIN. SG MAKES NO EXPRESS OR IMPLIED WARRANTIES, AND EXPRESSLY DISCLAIMS ALL WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE WITH RESPECT TO THESE INDEX RULES OR ANY DATA INCLUDED THEREIN. WITHOUT LIMITING ANY OF THE FOREGOING, IN NO EVENT SHALL SG HAVE ANY LIABILITY FOR ANY SPECIAL, PUNITIVE, INDIRECT, OR CONSEQUENTIAL DAMAGES OR LOST PROFITS, EVEN IF NOTIFIED OF THE POSSIBILITY OF SUCH DAMAGES

**Appendix 1**

Basket Component	Basket Component Ticker	Basket Component Currency
SGI Custom Dynamic Funds Allocation Index	SGMDCDFA <Index>	EUR

(ii) The description of the SGI Index “SG US Strong Balance Sheet Beta Hedged 5% VT Index (USD - Excess Return)” is added from page 804 as follows:

**“1. Index Rules Summary**

**1.1 Index Description**

The SG US Strong Balance Sheet Beta Hedged 5% VT Index (USD - Excess Return) (the “**Index**”) aims to provide a hypothetical exposure to the SG US Strong Balance Sheet Beta Hedged Index (USD -

Excess Return) (the “**Underlying Basket Component**”) where such exposure is determined using a daily Volatility Target mechanism.

The Index is calculated and published by Solactive AG (the “**Index Calculation Agent**”) and is sponsored by Société Générale (the “**Index Sponsor**”).

Main Characteristics

<b>Bloomberg ticker:</b>	SGMDSBS5 <Index>
<b>Type of Return:</b>	Excess Return
<b>Calculation Frequency:</b>	Daily
<b>Publication Time:</b>	End of Day
<b>Index Launch Date:</b>	[TBC]
<b>Currency:</b>	USD
<b>Fees and Costs:</b>	As specified under the “Index Fees and Costs” section below
<b>Index Asset Class:</b>	Equity
<b>Index Components:</b>	Underlying SGI Index

**1.2 Mechanism**

The Index is constructed pursuant to a daily Volatility Target process where the deemed exposure of the Index to the Underlying Basket Component (the “**Exposure**”) is based on a formula using the following input parameters:

- (i) the short-term historical volatility of the Underlying Basket Component (the “**Underlying Basket Component Historical Volatility**”);
- (ii) a target volatility of 5% (the “**Target Volatility**”); and,
- (iii) the historical volatility of the Index itself (the “**Index Historical Volatility**”).

Such that, in most cases, when the short-term historical volatility of the Underlying Basket Component increases, the deemed exposure to the Underlying Basket Component decreases, and vice versa.

The Exposure is capped at 100% of the Index Level and can be as low as 0%.

**1.3 Index Fees and Costs**

The Index is calculated net of the following fees and costs:

<b>Fixed Transaction Costs:</b>	As defined in the SGI Global Methodology. The Fixed Transaction Costs are set at 0.03%.
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**1.4 Methodology applicable**

The Index is computed and maintained pursuant to these Index Rules which incorporate by reference the SGI Indices Global Methodology (version dated 16 January 2017, as supplemented, amended and restated or replaced from time to time, the “**SGI Global Methodology**”). The SGI Global Methodology is published on the SGI website under the link “SGI Cross Asset Methodology” at <https://sgi.sgmarkets.com>. These Index Rules should be read together with the SGI Global Methodology.

Capitalized terms used but not defined herein shall have the respective meanings ascribed to such terms in the SGI Global Methodology.

In the event of any inconsistency between these Index Rules and the SGI Global Methodology, these Index Rules will prevail.

The SGI Global Methodology is expected to be updated and revised from time to time where necessary or desirable, pursuant to legal developments and for the purpose of technical improvement. The Index Sponsor may also act in good faith and a commercially reasonable manner to amend the SGI Global Methodology in order to cure ambiguities, errors and omissions thereunder. SGI Global Methodology subsequently updated and revised shall be approved in accordance with the Index Sponsor's internal index procedures and published on the SGI website under the link "SGI Cross Asset Methodology" at <https://sgi.sgmarkets.com> and shall, upon such publication, apply to the Index and these Index Rules

### **1.5 Technical Rectification of Index Rules**

The Index Rules may be amended from time to time, consistent with the economic strategy of the Index, by the Index Sponsor acting in good faith and a commercially reasonable manner to cure ambiguities, errors and omissions.

For convenience, the Index Sponsor may from time to time replace a data provider, publisher or source of Market Data or Index Data (a "**Data Provider**"), provided that the relevant data content remains equivalent. In any case where the Index Sponsor reasonably determines that the replacement of a Data Provider is necessary or desirable whilst the data content may not remain strictly equivalent, the Index Sponsor shall select such replacement Data Provider (a) in a commercially reasonable manner; (b) consistent with the objectives of the Index; and (c) in compliance with the Index Sponsor's internal procedures for Index modification.

### **1.6 Information available on the SGI website**

The Index levels (including performance and volatility of the Index), further Index data and important disclaimers relating to the Index are available on the SGI website at the following address: <https://sgi.sgmarkets.com>.

#### **IMPORTANT:**

**The Index seeks to replicate the performance of a hypothetical long position on the Index Components; however, the Index does not actually invest in or hold any Index Component or any other shares or instruments. An investor in any product linked to the performance of the Index (if any) will have no rights whatsoever to any Index Component or any other instruments underlying the Index. The Index is a statistical measure providing a representation of the value of a hypothetical portfolio of the Index Components based on the index strategy; it is not an investment fund, pool or any other investment vehicle.**

**The investment strategy tracked by the Index is not guaranteed to be successful.**

## **2. Index Rules**

### **2.1 Terms and definitions relating to Dates**

**ACT(t-1,t)** means the number of calendar days between Calculation Date (t-1) (included) and Calculation Date (t) (excluded).

**Calculation Date** means, any Scheduled Calculation Date on which no Index Disruption Event exists.

**Scheduled Calculation Date** means any day on which the New York Stock Exchange is scheduled to be open for trading during its regular trading sessions.

## 2.2 Terms and definitions relating to the Index

**Aggregate Transaction Cost, "TC(t)"** means, in respect of Calculation Date (t), the transaction costs determined pursuant to Section 2.10.

**Index** means the SG US Strong Balance Sheet Beta Hedged 5% VT (USD - Excess Return) (Bloomberg Ticker: SGMDSBS5 <Index>).

**Index Back-test Date, "t<sub>B</sub>"** August 25<sup>th</sup>, 2008.

**Index Calculation Agent** Solactive AG.

**Index Component** means the Underlying Basket Component.

**Index Currency** U.S. Dollar ("USD").

**Index Launch Date, "t<sub>0</sub>"**

**Index Level, "IL(t)"** means, in respect of any Calculation Date (t), the level of the Index calculated and published by the Index Calculation Agent on such date, pursuant to Section 2.5.

**Index Sponsor** Société Générale ("SG").

## 2.3 Terms and definitions relating to the Vol Target Mechanism

**Exposure, "E(t)"** means, in respect of a Calculation Date (t), the effective exposure (expressed in percentage) of the Underlying Basket Component in the Index as effective on such date and as determined, on such date, by the Index Calculation Agent in accordance with the formula set out in Section 2.8.

**Index Historical Volatility, "IHV(t)"** means, in respect of any Calculation Date (t), the annualized historical volatility of the Index as determined by the Index Calculation Agent in accordance with the formula specified in Section 2.9.

**Target Volatility, "TV"** 5%.

**Underlying Component Volatility, “HV(t)”** **Basket Historical** means, in respect of a Calculation Date (t), the annualized historical volatility of the Underlying Basket Component over the past fifty (50) Calculation Dates, as determined by the Index Calculation Agent in accordance with the formula specified in Section 2.6.

**Volatility Factor “VAF(t)”** **Adjustment** means, in respect of any Calculation Date (t), the volatility adjustment factor based on the Index Historical Volatility and determined by the Index Calculation Agent in accordance with the formula specified in Section 2.7.

## 2.4 Terms and definitions relating to the Underlying Basket Component

**Fixed Transaction Costs, “C”** **Costs,** has the meaning set forth in the SGI Global Methodology. They set at 0.03%.

**Underlying Component** **Basket** means the SG US Strong Balance Sheet Beta Hedged Index (USD - Excess Return) (Bloomberg page: SGEPSBSB <Index>).

**Underlying Component Closing Price, “CP(t)”** **Basket** means, in respect of a Calculation Date (t) and the Underlying Basket Component,  
 (a) the corresponding Underlying SGI Index Closing Level, or;  
 (b) the latest corresponding Underlying SGI Index Closing Level, if such price dated as of Calculation Date (t) is not available.

**Underlying Component Currency** **Basket** USD.

**Underlying Component Return Type** **Basket** Excess Return.

**Underlying Component Type** **Basket** Underlying SGI Index.

## 2.5 Determination of the Index Level, “IL(t)”:

The Index Level is in respect of Calculation Date (t), calculated by the Index Calculation Agent at the Valuation Time, subject to the occurrence or existence of an Index Disruption Event or an Index Extraordinary Event, according to the following formula:

For any Calculation (t) > t<sub>B</sub>:

$$IL(t) = IL(t - 1) \times \left[ 1 + E(t - 1) \times \left( \frac{CP(t)}{CP(t - 1)} - 1 \right) \right] - TC(t - 1)$$

With,

$$IL(t_B) = 100$$

## 2.6 Determination of the Exposure “E(t)”:

The Exposure is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

$$E(t) = \text{Min} \left[ \frac{TV}{HV(t-2)} \times VAF(t-2), 100\% \right]$$

## 2.7 Determination of the Volatility Adjustment Factor “VAF(t)”:

The Volatility Adjustment Factor is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

a) For any Calculation Date (t)  $\leq t_B + 1$ :

$$VAF(t) = 1$$

b) Otherwise:

$$VAF(t) = \text{Min} \left[ 100\% ; \text{Max} \left[ 80\% ; \sqrt{\text{Max} \left[ 1 + \frac{\alpha(t)}{63} \times \left( 1 - \left( \frac{IHV(t)}{TV} \right)^2 \right) ; 0 \right]} \right] \right]$$

Where,

$$\alpha(t) = \text{Min}[N(t_B, t) ; 189]$$

## 2.8 Determination of the Underlying Basket Component Historical Volatility, “HV(t)”:

The Underlying Basket Component Historical Volatility is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

$$HV(t) = \sqrt{\frac{1}{50} \times \sum_{k=0}^{49} \left[ \sqrt{\frac{365}{ACT(t-k-1, t-k)} \times \ln \left( \frac{CP(t-k)}{CP(t-k-1)} \right)} \right]^2}$$

Where,

“ln” means the logarithm to the base e.

## 2.9 Determination of the Index Historical Volatility “IHV(t)”:

The Index Historical Volatility is, in respect of Calculation Date (t), determined by the Index Calculation Agent in accordance with the following formula:

For any Calculation Date (t)  $\geq t_B + 2$ :



$$IHV(t) = \sqrt{\frac{1}{\alpha(t)} \times \sum_{k=0}^{\alpha(t)-1} \left( \sqrt{\frac{365}{ACT(t-k-1, t-k)}} \times \ln \left( \frac{IL(t-k)}{IL(t-k-1)} \right) \right)^2}$$

Where,

“ln” means the logarithm to the base e, and

$\alpha(t) = \text{Min}[N(t_B, t); 189]$

## 2.10 Determination of the Aggregate Transaction Cost, “TC(t)”:

The Aggregate Transaction Cost is, in respect of a Calculation Date (t), calculated by the Index Calculation Agent in accordance with the following formula:

For any Calculation Date (t) > t<sub>B</sub>:

$$TC(t) = C \times Abs \left( E(t) - E(t-1) \times \frac{CP(t)}{CP(t-1)} \times \frac{IL(t-1)}{IL(t)} \right) \times IL(t)$$

With,

$TC(t_B) = 0$

## 2.11 Rounding Rules

The rounding policy is defined as follows:

- Index Level: 6 decimal places;
- Exposure: 6 decimal places

## 3. Index Disruption Events

With respect to an Index Disruption Event, the SGI Global Methodology shall apply.

## 4. Index Extraordinary Event

With respect to an Index Extraordinary Event, the SGI Global Methodology shall apply.

## 5. Disclaimer

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