EU Benchmarks Regulation

Benchmark Statement

In respect of the

Credit Suisse International: Volatility Target Family of Benchmarks

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Introduction

Credit Suisse International ("CS") administers a number of indices that it considers to be "benchmarks" within the scope of Regulation (EU) 2016/1011 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the "EU BMR").

CS has grouped the benchmarks that it administers into a number of “families” for the purposes of applying certain provisions of the EU BMR. This document constitutes the “Benchmark Statement” under Article 27 of the EU BMR in respect of CS’s “volatility target” family of benchmarks (each benchmark in such family, a “Volatility Target Benchmark”) and provides the information required by the EU BMR to be included in such statement. The full methodology of each Volatility Target Benchmark is set out in the relevant Index Rules applicable to such Volatility Target Benchmark and such Index Rules are available to CS (acting in other capacities), its affiliates, persons who have entered into licencing agreements to use the relevant Volatility Target Benchmark, and any other person to whom the administrator is required to make such Index Rules available to under the EU BMR. Licenced users of a Volatility Target Benchmark, their counterparties and investors should carefully read and consider the relevant Index Rules prior to making any decision to use such Volatility Target Benchmark or to investing in products referencing such Volatility Target Benchmark.

Any person who has entered into a licencing agreement to use a CS administered benchmark and any of its respective counterparties and investors (including prospective counterparties and investors) can contact CS in writing at its principal office at 1 Cabot Square, Canary Wharf, London E14 4QJ, United Kingdom, Attention: Benchmark Administration Manager if they are unsure whether the benchmark they are using (or wants to potentially use) is a Volatility Target Benchmark (for which this document is relevant) or is a benchmark belonging to another CS family of benchmarks.

Capitalised terms used in this Benchmark Statement, which are not otherwise defined, shall have the same meaning as set out in the Appendix hereto (“Definitions for key terms relating to the Volatility Target Benchmarks”).
1. **ISINs**
   There are currently no ISINs allocated to any of the Volatility Target Benchmarks.

2. **Contributions of Input Data**
   None of the Volatility Target Benchmarks are determined using Contributions of Input Data.

3. **Economic reality measured by the Volatility Target Benchmarks**
   Each Volatility Target Benchmark is designed to measure the performance of an investment strategy that provides exposure to a notional portfolio comprised of Volatility Target Instruments systematically rebalanced in accordance with predefined rules and also subject to a volatility control mechanism.

   The volatility control mechanism is designed to systematically adjust the allocation to the Volatility Target Instruments to target a specified level of volatility, according to predefined rules.

   The types of Volatility Target Instruments that may comprise the portfolio from time to time are set out in the relevant Index Rules and may mean that (i) the portfolio would be linked to specified markets or specified geographical boundaries or may be global and (ii) the instruments in the portfolio provide long only, short only or both long and short exposures.

   Please refer to the Index Rules for the relevant Volatility Target Benchmark for a description of the geographical boundaries of the economic reality measured by such Volatility Target Benchmark and whether the economic reality consists of long only, short only or long and short positions.

   In addition, particular Volatility Target Benchmarks may include features that use non-Volatility Target Instruments Input Data, including but not limited to, currency rates and interest rates. These features do not alter the economic reality measured by the Volatility Target Benchmark but provide a variation in the manner in which such economic reality is measured. For example, measuring the performance in a currency other than the currency of the portfolio of Volatility Target Instruments or measuring a leveraged exposure to the portfolio of Volatility Target Instruments or a different type of performance.

4. **Definitions of Key Terms**
   The definitions for all key terms relating to each Volatility Target Benchmark covered by this Benchmark Statement are provided in the Appendix to this document.

5. **Methodology**
   The Volatility Target Benchmarks are rules-based indices developed by CS that are designed to implement, and measure the performance of, a particular investment strategy. The exercise of discretion is limited to exceptional circumstances relating to market disruption or market changes outside the control of CS. The rationale for adopting the methodology of each Volatility Target Benchmark is to create a measure of the performance of a specific, systematically rebalanced, notional portfolio and to enable investors to take a synthetic exposure to such notional portfolios when investing in products linked to the Volatility Target Benchmark.

   The methodology of each Volatility Target Benchmark, and of each new benchmark to be added as a Volatility Target Benchmark, is subject to the approval by CS’s Benchmark Governance Committee (or any successor in such role) (“BGC”) in accordance with a formalised internal process to ensure ongoing compliance with the requirements of the EU BMR. This internal process stipulates that the BGC is provided with the details of the new benchmark, including (but not limited to) the investment strategy, operational risks and
control framework for the new benchmark, its index rules and risk disclosures, an
assessment of the sufficiency, reliability and verifiability of the Input Data.

The BGC members include representatives of CS’s index calculation team, product
structuring team, general counsel division and compliance division.

The methodology of each Volatility Target Benchmark is subject to an annual review by the
BGC to determine if any recent events would have impacted the quality or integrity of the
relevant Volatility Target Benchmark methodology. Reviews may also be conducted on an
ad hoc basis where the BGC considers it desirable or necessary to do so, including in
response to specific events or otherwise. Specific events include (without limitation) any
index errors, index disruptions, changes in the applicable legal or regulatory environment;
any feedback from stakeholders, challenges, complaints; and/or any material audit findings
or findings or recommendations from CS’s Benchmark Oversight Committee (or any
successor in such role).

6. **Criteria and procedures used to determine the Volatility Target Benchmark Level**

The Volatility Target Benchmarks are rules-based indices and are designed not to rely on
Expert Judgement or discretionary determinations in ordinary circumstances. Each
Volatility Target Benchmark is determined by CS collecting the Input Data necessary for
such determination and specified in the relevant methodology and applying the rules
prescribed by the methodology to calculate the performance of the relevant notional
portfolio. The calculated performance may be subject to further predefined and transparent
adjustments, which may include (but are not limited to) deduction of fees, costs associated
with currency hedges included in the portfolio, currency conversions and costs associated
with notional borrowing in relation to leveraged portfolios.

The Volatility Target Instruments that comprise the relevant notional portfolio, from time to
time, are determined periodically on the basis of pre-defined rules set out in the relevant
Index Rules. Once the Volatility Target Instruments that comprise the relevant notional
portfolio at the relevant time are determined, their weightings, from time to time, are
determined based on pre-defined rules set out in the relevant Index Rules.

7. **Input Data**

The Input Data for the majority of Volatility Target Benchmarks comprises only externally
sourced Input Data. In a limited number of Volatility Target Benchmarks, some Input Data
may be internally sourced. Externally sourced Input Data include:

(a) transaction data i.e. executed prices relating to certain Volatility Target Instruments
traded on exchanges;

(b) committed quotes relating to certain Volatility Target Instruments traded on
exchanges;

(c) in relation to interest rates and exchange rates, the published levels of the interest
rate or currency benchmarks providing such rates;

(d) in relation to mutual funds, the net asset values published by the relevant mutual
funds or their respective administrators; and

(e) in relation to any indices (whether sponsored or administered by CS, any of its
affiliates, or any third party entity), the levels published by the respective
administrator or sponsor of such indices.
CS sources the above Input Data from third party data vendors that it considers reputable and does not classify any of the above data as regulated data but classifies it as readily available.

In certain cases, a Volatility Target Benchmark may use internally sourced Input Data. Where this is the case, the relevant Index Rules will indicate when Input Data is internally sourced.

CS may change the Data Sources it uses to source the Input Data from time to time, in accordance with CS’s internal governance procedures, provided that any new data provider or Data Source meets CS’s requirements.

The Index Rules for each Volatility Target Benchmark specify the single Input Data type required to be collected and observed for each relevant component for the determination of such Volatility Target Benchmark. If it is impossible to collect and observe the required Input Data type for a component due to market disruption, this would result in lack of sufficient Input Data to determine the Volatility Target Benchmark according to the methodology. In such cases, CS may use Expert Judgement to estimate relevant values or adjust prices and values or may (i) postpone or suspend the determination of the relevant Volatility Target Benchmark or (ii) supplement, amend (in whole or in part), revise, rebalance or withdraw the relevant Volatility Target Benchmark.

8. **Insufficient Input Data, Insufficient or Inaccurate Data Sources**

Events that may lead to insufficient Input Data and/or insufficient or inaccurate Data Sources include:

- any suspension of, or limitation imposed on, trading by any relevant exchange or other trading facility, the closure of any relevant exchange or other trading facility before its scheduled closing time, changes in the liquidity, trading volume, terms or listing of any Volatility Target Instrument comprised in the relevant portfolio, the failure of any Data Source to publish the Input Data or the level published is significantly different to the level of such data prevailing in the market.

- any other event that disrupts or impairs the ability of market participants in general to effect transactions in, or obtain market values for, the relevant instrument, including a Volatility Target Instrument comprising the portfolio measured by the Volatility Target Benchmark.

- any event that, in the determination of CS, has a material adverse effect on the ability of a market participant to establish, maintain, value, rebalance or unwind a hedge position in relation to an investment product linked to the Volatility Target Benchmark, including a Volatility Target Instrument comprising the portfolio measured by the Volatility Target Benchmark.

The methodology of each Volatility Target Benchmark specifies the relevant market disruption or other event that would lead to lack of sufficient Input Data or where the Data Sources may be insufficient, inaccurate or unreliable.
In addition, while CS intends to use well-established and reputable data providers to source its Input Data, there is a risk that this Input Data may be inaccurate, delayed or not up-to-date. There is also a risk that while the Input Data is accurate, the data feed to CS is impaired.

9. **Extrapolation**

CS does not use any extrapolation to determine the value of any Volatility Target Instrument.

10. **Procedures for determining the Volatility Target Benchmark in periods of stress**

In the limited circumstances mentioned above, the BGC will either make the decision or approve the decision on whether to (i) suspend or delay the calculation and publication of the Volatility Target Benchmark or (ii) determine the Volatility Target Benchmark on the basis of estimated or adjusted data and publish the respective Level or (iii) supplement, amend (in whole or in part), revise, rebalance or withdraw the Volatility Target Benchmark. Such decision and approval would be made in accordance with the criteria relating to the exercise of discretion described under “Exercise of discretion” below.

11. **Limitations of the Volatility Target Benchmarks**

The market disruption and other events that may lead to the Input Data or Data Sources being insufficient, inaccurate or unreliable or to the Input Data being not consistent with the assumptions made when such Input Data was selected as the basis for the calculation of the Volatility Target Benchmark may compromise the reliability of the Volatility Target Benchmark.

12. **External and other factors may necessitate changes or cessation of the Volatility Target Benchmark**

CS provides notice that factors, including external factors beyond the control of the administrator, may necessitate changes to, or the cessation of, any Volatility Target Benchmark.

13. **Exercise of discretion**

CS may exercise discretion to:

(a) determine whether a market disruption or another event has occurred that may lead to the Input Data being insufficient or to such data being not consistent with the assumptions made when such Input Data was selected as the basis for the calculation of the Volatility Target Benchmark;

(b) estimate or adjust the level of Input Data when CS has determined that one or more of the above events have occurred;

(c) address other unscheduled events which may make it impossible to calculate the Volatility Target Benchmark;

(d) decide whether to (i) estimate or adjust the level of Input Data in the above circumstances or (ii) suspend or delay the calculation and publication of the Volatility Target Benchmark or (iii) supplement, amend (in whole or in part), revise, rebalance the Volatility Target Benchmark;

(e) decide how to address errors in Input Data or in the determination of the Volatility Target Benchmark, including whether to restate the Level of the Volatility Target Benchmark in such circumstances;
(f) decide how to address any omissions or ambiguities in the relevant Index Rules; and

(g) decide whether to terminate the Benchmark.

If the need to exercise discretion arises, CS will do so in a way that minimises potential or actual conflicts of interests and will act in good faith and in a commercially reasonable manner consistently with (a) the objective of the Volatility Target Benchmark; (b) any previous exercise of discretion in the same or similar instances; and (c) where possible, across Volatility Target Benchmarks in relation to the affected asset class or instrument. Where there is a corresponding regulatory obligation, CS shall also take into account whether fair treatment is achieved by the exercise of discretion, in accordance with applicable regulatory obligations.

Where CS is entitled to exercise discretion, any such exercise will be either made by the BGC or be subject to the approval of the BGC.

14. Changes to, or cessation of, a Volatility Target Benchmark may impact financial contracts, financial instruments or investment funds that reference that Volatility Target Benchmark

CS may decide to make modifications to the Volatility Target Benchmark, or permanently cancel and discontinue calculating and publishing a Volatility Target Benchmark (in compliance with applicable law and regulation) at any time.

Changes to, or the cessation of, a Volatility Target Benchmark may have an impact on the financial contracts and financial instruments that reference the Volatility Target Benchmark or the measurement of the performance of investment funds.

Users should check that the contractual terms of such financial contracts and financial instruments contain appropriate fallback provisions.

15. Error procedures

CS has a number of procedures and processes in place which are designed to ensure the accuracy and reliability of its published Volatility Target Benchmark Levels. Notwithstanding these procedures and processes, errors in Input Data or in the determination of a Benchmark may sometimes occur. When an error due to the correction by a third party Data Source of Input Data is identified and the impact is below a certain pre-defined threshold, the Level of the Volatility Target Benchmark is restated. In all other cases, the restatement of the Level of the Volatility Target Benchmark is subject to the approval of the BGC or the chairperson of the BGC. The approval of the BGC is also required in relation to any decision not to restate the Level of the Volatility Target Benchmark upon the discovery of any issue or error that would normally give rise to a restatement. All restatements of Volatility Target Benchmarks are reported to the BGC as and when they occur and are then recorded and (if necessary), discussed at the next periodic BGC meeting (usually held monthly).

When determining whether to approve a restatement, the BGC and its members will take into account, among other factors, any applicable FCA conduct rules, CS's conduct and ethics standards, proportionality and the impact on users.

16. Classification of benchmarks

CS has determined that each Volatility Target Benchmark is a non-significant benchmark in accordance with Article 3(1)(27) EU BMR.
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Appendix – Definitions for key terms relating to the Volatility Target Benchmarks

This Appendix sets out the definitions in relation to the terms which CS considers to be “key terms” for the Volatility Target Benchmarks covered by this Benchmark Statement.

The terms defined herein will not necessarily apply to each Volatility Target Benchmark within the Volatility Target Benchmarks family; nor are these terms intended to be exhaustive in respect of any of the Volatility Target Benchmarks, as there may be additional terms relating to (amongst other things) the determination, calculation, disruption, governance, summary description and/or risk factors of any given Volatility Target Benchmark which are not included below. In addition, some of these terms may be defined differently within the individual Index Rules, in which case the meaning used in the Index Rules shall prevail. Further reference should therefore also be had to the Index Rules of the relevant Volatility Target Benchmark, as may be amended and/or updated by CS from time to time.

Definitions:

“Benchmark” means any index administered by CS which CS has determined that it may be used as a “benchmark” as defined in the EU BMR.

“Benchmark Statement” means the statement referred to under Article 27 of EU BMR.

“Contributions of Input Data” means providing any Input Data no readily available to CS, or to another person for the purposes of passing to CS, that is required in connection with the determination of a Benchmark, and is provided for that purpose.

“Data Source” means the publication, page (or any other origin of reference, including an exchange) containing (or reporting) the prices, levels, rates or other data utilised by CS as Input Data, and to any successor publication, page or source on which the relevant prices, levels, rates or other data may be disseminated.

“Volatility Target Instruments” means:

(i) indices (whether sponsored or administered by CS, any of its affiliates, or any third party entity) comprising one or more of the following: shares, stocks, mutual funds, exchange traded funds (ETFs), other equity indices, bonds, money market instruments, interest rate fixings, other bond, money market or interest rate indices, listed futures linked to one or more commodity underlyings, listed options linked to one or more commodity underlyings, other commodity indices, foreign currency exchange rate fixings ("FX"), listed futures linked to one or more FX underlyings, listed options linked to one or more FX underlyings or other FX indices;

(ii) mutual funds;

(iii) ETFs; or

(iv) a notional cash deposit.

“Expert Judgment” refers to the exercise of discretion by an administrator with respect to the use of data in determining a Volatility Target Benchmark. Expert Judgment includes extrapolating values from prior or related transactions, adjusting values for factors that might influence the quality of data, such as market events or impairment of a buyer or seller’s credit quality, or weighting firm bids or offers greater than a particular concluded transaction.
“**Index Rules**” means, in respect of any Volatility Target Benchmark, the methodology or rule book for such Volatility Target Benchmark.

“**Input Data**” means the data in respect of the value of one or more underlying assets, or prices, used by CS to determine a Volatility Target Benchmark.

“**Level**” means, in relation to a Volatility Target Benchmark, the calculated and announced value of such Volatility Target Benchmark.