# FTSE Term SONIA Methodology

Effective Date: 17 June 2024

Last Review Date: 21 March 2024

Document Classification: Public



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### Introduction

#### 1. Introduction

#### 1.1 Overview

- 1.1.1 This document specifies the Methodology of the FTSE Term SONIA benchmark ("Benchmark"). It is published on the LSEG website<sup>1</sup> and is available on request.
- 1.1.2 The purpose of the FTSE Term SONIA benchmark is to represent the risk-free interest rate for Sterling over the relevant forward-looking tenors as implied by Overnight Index Swap ("OIS") contracts that reference SONIA.

#### 1.2 Description of the Benchmark

- 1.2.1 The FTSE Term SONIA benchmark comprises four tenors: 1 month, 3 months, 6 months and 12 months.
- 1.2.2 It is calculated using a waterfall methodology comprised of two levels ("Level 1" and "Level 2") and a final integrated fallback level.
- 1.2.3 Input data for the calculation of Level 1 and Level 2 are committed (i.e. executable) quotes for spot starting SONIA Overnight Index Swap ("OIS") contracts taken from, respectively, dealer-to-dealer Multilateral Trading Facilities ("MTFs") and a dealer-to-client trading platform. The MTFs are the TP ICAP iSwap and Tradition Trad-X venues, and the dealer-to-client trading platform is Tradeweb. Input data for the integrated fallback level is compounded overnight SONIA and historical FTSE Term SONIA benchmark values.
- 1.2.4 The FTSE Term SONIA benchmark is published on every Business Day at 11:50am London Time.
- 1.2.5 The FTSE Term SONIA benchmark is calculated for Level 1 and Level 2 as the median of mid-rates taken from the MTFs and trading platform over a 20-minute window centred on 11:00am London time. The integrated fallback level is calculated by applying the historical spread of the FTSE Term SONIA benchmark to compounded overnight SONIA to an updated value of compounded overnight SONIA.

#### 1.3 ESG factors

1.3.1 The FTSE Term Sonia benchmark does not take account of ESG factors in its index design.

www.lseg.com/termsonia

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### Management responsibilities

#### Management responsibilities

#### 2.1 FTSE International Limited (FTSE)

- 2.1.1 FTSE is the benchmark Administrator<sup>2</sup> of the FTSE Term SONIA benchmark<sup>3</sup>.
- 2.1.2 As Administrator, FTSE International Limited is responsible for collecting input data, determining and publishing the Benchmark, and for all aspects of governance, oversight, compliance and integrity of the Benchmark.

#### 2.2 Oversight Committee

2.2.1 The independent Oversight Committee is responsible for oversight of all aspects of the provision of the benchmark including the reviews of the benchmark definition and Methodology at least annually, overseeing any changes to the benchmark Methodology or cessation of the benchmark, and overseeing the Administrator's control framework, management and operation of the benchmark.

#### 2.3 Benchmark manager

2.3.1 A benchmark manager is appointed from time to time by the Administrator who will be a subject matter expert responsible for interpreting the Methodology.

#### 2.4 User feedback

2.4.1 FTSE International Limited shall communicate periodically with stakeholders in order to assess conditions in the market for risk-free interest rates for Sterling over the relevant Benchmark tenors as implied by OIS contracts that reference SONIA and to assess the ongoing fitness and suitability of the Methodology. Such feedback may be used as part of the periodic review of the Methodology.

#### 2.5 Identification of potential limitations of the Benchmark

2.5.1 The ability of the MTFs and dealer-to-client trading platform to provide accurate input data relies on there being a liquid market in SONIA OIS contracts. If any ongoing constraint or fragmentation to liquidity in this market is identified or foreseen, the Administrator will consult with stakeholders as well as the independent Oversight Committee.

#### 2.6 Review of the methodology and input data providers

2.6.1 The Administrator will carry out a review of the Methodology on at least an annual basis. Additional reviews may be conducted at the Administrator's discretion. Reviews will include an analysis of the underlying

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The term Administrator is used in this document in the same sense as it is defined in Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the European Benchmark Regulation) and The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation).

<sup>&</sup>lt;sup>3</sup> Prior to December 2024, Refinitiv Benchmark Services (UK) Limited was the benchmark Administrator for FTSE Term SONIA. This document has been updated to reflect the change in Administrator but the last review date and effective date of this Methodology are as shown on the cover.

- market the Benchmark seeks to represent, the availability and sufficiency of quotes from the MTFs (TP ICAP iSwap and Tradition Trad-X) and dealer-to-client trading platform (Tradeweb), and a review of other potential platforms.
- 2.6.2 The aim of the review will be to ensure that the Benchmark is still representative of the underlying market, that the input data from the MTFs and dealer-to-client trading platform sufficiently represent the underlying market, and that the current MTFs and dealer-to-client trading platform have been providing input data in an accurate and timely manner.
- 2.6.3 Additional reviews may be conducted at the Administrator's discretion. Such additional reviews may be triggered by (i) events affecting the Benchmark that are not optimally treated by the Methodology, (ii) events in the underlying market, (iii) developments in the source of input data used in the Benchmark determination and (iv) issues raised by stakeholders in the Benchmark.
- 2.6.4 The independent Oversight Committee will provide input into reviews and reviews are approved by the appropriate FTSE International Limited board committee.
- 2.6.5 Any proposals for significant amendments to this Methodology are subject to the FTSE Russell Policy for Benchmark Methodology Changes and will be subject to consultation with FTSE Russell advisory committees and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Index Governance Board before approval is granted.
- 2.6.6 Back-testing shall take place at least at each annual review of the Methodology and following any material change of the Methodology. The Methodology shall include an assessment of the back-testing results, including processes to ensure that systemic anomalies highlighted by back-testing are identified and properly addressed. No significant issues were found under the back-test for the 12 month period to the date of the last annual review shown on the cover of this Methodology.

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### FTSE Russell policies

#### 3. FTSE Russell policies

This Methodology should be read in conjunction with the following policies and policy documents.

#### 3.1 Policy for Benchmark Methodology Changes

3.1.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed using the following link:

Policy for Benchmark Methodology Changes.pdf

#### 3.2 FTSE Russell Governance Framework

3.2.1 To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks<sup>4</sup>, the European benchmark regulation<sup>5</sup> and the UK benchmark regulation<sup>6</sup>. The FTSE Russell Governance Framework can be accessed using the following link:

FTSE Russell Governance Framework.pdf

#### 3.3 FTSE Russell organisational policies

3.3.1 FTSE Term SONIA is subject to the following FTSE Russell organisational policies:

Index Series Decommissioning Statement,

Benchmark Administration Governance and Conflicts of Interest Management and Policy for Benchmark Methodology Changes.

#### 3.4 Refix policy

- 3.4.1 If following publication, a material error is identified in the input data or the determination of the Benchmark before 12:50pm London time, FTSE International Limited will refix the Benchmark.
- 3.4.2 A material error is one that results in a change of + or 0.1 basis points to the published value of the Benchmark.
- 3.4.3 Errors that do not result in an intraday refix will be reported quarterly to the independent Oversight Committee and published on the Administrator's public website.

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<sup>&</sup>lt;sup>4</sup> IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013

<sup>5</sup> Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds

The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019

- 3.5 Complaints, Operational Enquiries and Price Challenges
- 3.5.1 FTSE Russell's complaints procedure can be accessed using the following link: FTSE Russell Benchmark

  Determination Complaints Handling Policy
- 3.5.2 A Price Challenge is a request from a user or a stakeholder to verify and confirm the accuracy of one or more of the published Benchmark rates, inputs to those rates (if publicly available), or whether a specific benchmark determination is representative of market value.
- 3.5.3 Operational enquiries do not meet the definition of a compliant and include Benchmark Price Challenges. However, FTSE Russell may decide to treat an operational enquiry or a series of operational enquiries as a formal complaint.
- Operational enquires must be submitted to FTSE Russell by e-mail and should contain as much information as possible, including your name, your title, the institution you represent, your e-mail address and telephone number, to enable the operational enquiry to be investigated in a timely manner.
- 3.5.5 The e-mail address to raise any benchmark related price challenge and operational enquiries is: <a href="mailto:benchmarkoperations@lseg.com">benchmarkoperations@lseg.com</a>

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### Input data

#### 4.1 Level 1 input data

- 4.1.1 Input data for Level 1 of the Methodology is taken from the central limit order books ("CLOB") of two dealer-to-dealer multilateral trading facilities ("MTFs"): TP ICAP iSwap and Tradition Trad-X. Input data comprises committed (i.e. executable) quotes from each CLOB captured every 30 seconds over a 20 minute window from 10:50am to 11:10am London time. The precise time of capture within each 30 second period varies. Quotes are captured 40 times for each MTF over the 20 minute window.
- 4.1.2 Quotes are captured for spot starting SONIA OIS in respect of the relevant tenors for the FTSE Term SONIA benchmark.
- 4.1.3 The MTFs have been selected as sources of input data as they involve a representative number of dealers active in the market for SONIA OIS contracts. The Level 1 input data is therefore sufficient to represent accurately and reliably the market for SONIA OIS contracts.

#### 4.2 Level 2 input data

- 4.2.1 Input data for Level 2 of the Methodology is taken from a dealer-to-client trading platform: Tradeweb. Input data comprises quotes from each dealer captured every 30 seconds over a 20 minute window from 10:50am to 11:10am London time. The precise time of capture within each 30 second period varies. Quotes are captured 40 times over the 20 minute window.
- 4.2.2 Quotes are captured for spot starting SONIA OIS in respect of the relevant tenors for the FTSE Term SONIA benchmark.
- 4.2.3 The dealer-to-client platform has been selected as a source of input data as it involves a representative number of dealers active in the market for SONIA OIS contracts. The Level 2 input data is therefore sufficient to represent accurately and reliably the market for SONIA OIS contracts.

#### 4.3 Integrated fallback level input data

4.3.1 Input data for the integrated fallback level comprises overnight SONIA published daily by the Bank of England and historical values of the FTSE Term SONIA benchmark.

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### **Determination of the Benchmark**

#### 5.1 Waterfall methodology

- 5.1.1 The FTSE Term SONIA benchmark is calculated using Level 1 of the Methodology subject to a threshold. If the threshold is not reached, the Benchmark is calculated using Level 2 of the Methodology subject to a second threshold. If the second threshold is not met, the Benchmark is calculated using the integrated fallback level. The Level 1 and Level 2 thresholds have been calibrated to ensure a sufficient quantity of eligible input data. Any use of the integrated fallback level is indicated when the resulting Benchmark value is published.
- 5.1.2 The waterfall is applied individually to each tenor of the Benchmark. Consequently, it is possible that different tenors are determined using different levels of the waterfall on the same day.

#### 5.2 Level 1 determination

- 5.2.1 Every 30 seconds between 10:50am and 11:10am London time, the committed quotes from the CLOBs of two dealer-to-dealer MTFs (TP ICAP iSwap and Tradition Trad-X) are captured. For each set of captured quotes, volume weighted bid and volume weighted offer rates are calculated using a standard clearing notional amount that is specified for each tenor.
- 5.2.2 A mid-rate is calculated using the volume weighted bid and offer rates, resulting in up to 40 mid-rates for each of the two MTFs. The FTSE Term SONIA benchmark is then determined as the median rate of the mid-rates.
- 5.2.3 In order for a mid-rate to be valid, the volumes of the captured quotes must exceed the standard clearing notional amount on both the bid side and the offer side, and the spread between the volume weighted bid and volume weighted offer rates must be less than or equal to a maximum spread that is specified for each tenor.
- 5.2.4 The threshold for use of Level 1 in the determination of the FTSE Term SONIA benchmark is that at least 36 valid mid-rates are available.

#### 5.3 Level 2 determination

- 5.3.1 Every 30 seconds between 10:50am and 11:10am London time, the quotes from a dealer-to-client trading platform (Tradeweb) are captured. In order to be valid, each bid rate to offer rate must be less than or equal to a maximum spread that is specified for each tenor, and the volume on the bid and offer rate must be greater than or equal to a minimum notional amount.
- 5.3.2 A mid-rate is calculated using each valid bid rate and offer rate pair. The FTSE Term SONIA benchmark is then determined as the median rate of the mid-rates.
- 5.3.3 The threshold for use of Level 2 in the determination of the FTSE Term SONIA benchmark is that at least 100 valid mid-rates are available and that these rates comprise at least a minimum number of valid midrates from each of a minimum number of separate dealers.

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#### 5.4 Integrated fallback level determination

- 5.4.1 If the thresholds for use of Level 1 and Level 2 of the waterfall are not reached, the FTSE Term SONIA benchmark is determined in accordance with the integrated fallback level.
- 5.4.2 Under the integrated fallback level, the spread between the FTSE Term SONIA benchmark on the previous business day and overnight SONIA compounded to the previous business day is applied to SONIA compounded to the day of the Benchmark determination.
- 5.4.3 On each day t, the spread for Benchmark tenor f, denoted S(t, f) is calculated as

$$S(t,f) = RTS(t-1,f) - \frac{365}{d(t_0,t-1)} \cdot \left[ \prod_{\tau=t_0}^{t-2} \left( 1 + \frac{d(\tau,\tau+1) \cdot R(\tau)}{365} \right) - 1 \right]$$

where RTS(t-1,f) is the FTSE Term SONIA benchmark published on the preceding Business Day (t-1) for tenor f,  $R(\tau)$  is the SONIA rate published by the Bank of England in respect of the day  $\tau$ ,  $d(\tau, \tau+1)$  is the number of calendar days from  $\tau$  to  $\tau+1$  and  $d(t_0, t-1)$  is the number of calendar days from  $t_0$  to t-1. The product is over all Business Days from  $t_0$  to t-2 where  $t_0$  is 30 calendar days before t-2. If  $t_0$  does not fall on a Business Day, it is moved back to the first preceding Business Day.

5.4.4 The integrated fallback for the Benchmark with tenor f on day t, denoted IF(t, f) is then calculated as

$$IF(t,f) = S(t,f) + \frac{365}{d(t_1,t)} \cdot \left[ \prod_{\tau=t_1}^{t-1} \left( 1 + \frac{d(\tau,\tau+1) \cdot R(\tau)}{365} \right) - 1 \right]$$

The product is over all Business Days from  $t_1$  to t-1 where  $t_1$  is 30 calendar days before t-1. If  $t_1$  does not fall on a Business Day, it is moved back to the first preceding Business Day.

#### 5.5 Exercise of expert judgment by the administrator

5.5.1 The Administrator, FTSE International Limited, will not exercise expert judgment in the determination of the FTSE Term SONIA benchmark.

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### **Publication**

#### 6.1 Publication

- 6.1.1 The FTSE Term SONIA benchmark is published at 11:50am London time on each Business Day. The benchmark is published to 4 decimal places. Any use of the integrated fallback level is indicated when the resulting FTSE Term SONIA benchmark value is published.
- 6.1.2 The Benchmark will be made available on the following RICs:
  - 1-month: <GBPTRR1M=RFTB>
  - 3-month: <GBPTRR3M=RFTB>
  - 6-month: <GBPTRR6M=RFTB>
  - 12-month: <GBPTRR1Y=RFTB>
- The benchmark is also available via additional LSEG products including Elektron, DataScope and Workspace, via third party data vendors and is published on a delayed basis at <a href="https://www.lseg.com/termsonia">www.lseg.com/termsonia</a>.

#### 6.2 Delayed publication

The Administrator, FTSE International Limited, may at its discretion delay publication of the FTSE Term SONIA benchmark in the event that technical difficulties are preventing receipt of input data or if FTSE International Limited has reason to believe that either the input data or the determination of the Benchmark includes a potential error. In such cases, all reasonable efforts will be made to publish the Benchmark at the earliest opportunity.

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### **Further information**

#### 7.1 Third party disclaimer

7.1.1 The "SONIA" mark is used under licence from the Bank of England (the benchmark administrator of SONIA), and the use of such mark does not imply or express any approval or endorsement by the Bank of England. "Bank of England" and "SONIA" are registered trademarks of the Bank of England.

#### 7.2 Further information

7.2.2 Further information regarding FTSE Term SONIA is available on the <u>FTSE Term SONIA website</u>.

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## Definition of key terms

Capitalised terms used in this document but not otherwise defined are defined in the following table.

Key Term	Definition	
Administrator	Administrator is used in this document in the same sense as it is defined in the Benchmark Regulation	
Benchmarks Regulation	Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds (the European Benchmark Regulation) and The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019 (the UK Benchmark Regulation)	
Business Day	Any day on which banks in London are open for business	
Methodology	The written rules and procedures according to which information is collected and the Benchmark is determined	
SONIA	The overnight SONIA benchmark administered and published daily by the Bank of England	

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