

SONIA key features and policies

This page comprises information concerning the SONIA benchmark determination, publication and governance

1 Background

The SONIA benchmark has been administered by the Bank of England since April 2016. On 23 April 2018, the methodology used to calculate the benchmark was reformed following several rounds of consultation.¹ On 3 August 2020, the Bank of England began publishing the daily SONIA Compounded Index.²

The purpose of this document is to provide existing and potential users of the SONIA benchmark with relevant information regarding the benchmark determination, publication and governance.

As part of the Bank's commitment to meeting international best practice in its administration of SONIA, it has published a statement of its compliance with the [IOSCO principles for Financial Benchmarks](#). In complying with the principles, the Bank is meeting best practice in governance, quality of benchmark determinations, quality of methodology and accountability. This key features and policies document is an important part of the Bank's transparency and accountability.

2 Definition of SONIA

The definition of SONIA has two elements:

(i) **Statement of underlying interest**

SONIA is a measure of the rate at which interest is paid on sterling short-term wholesale funds in circumstances where credit, liquidity and other risks are minimal.

(ii) **Statement of methodology**

On each London business day, SONIA is measured as the trimmed mean, rounded to four decimal places, of interest rates paid on eligible sterling denominated deposit transactions.

The trimmed mean is calculated as the volume-weighted mean rate, based on the central 50% of the volume-weighted distribution of rates.

Eligible transactions are:

- reported to the Bank's Sterling Money Market daily data collection, in accordance with the effective version of the 'Reporting Instructions for Form SMMD';
- unsecured and of one business day maturity;
- executed between 00:00 hours and 18:00 hours UK time and settled that same-day; and
- greater than or equal to £25 million in value.

The statement of the underlying interest is intended to be an enduring statement of the economic

concept that SONIA seeks to measure. The statement of the methodology describes how the specified underlying interest is currently to be measured.

2.1 Definition of SONIA Compounded Index

The SONIA Compounded Index is calculated as:

$$SONIA\ Compounded\ Index_i = SONIA\ Compounded\ Index_{i-1}^* \times \left(1 + \frac{SONIA_{i-1} \times a_{i-1}}{365} \right)$$

Where:

SONIA Compounded Index_i = The index for date i, calculated and publishing on date i, rounded to eight decimal places (SONIA Compounded Index₁ = 100.00000000 published for 23 April 2018)

SONIA Compounded Index^{*}_{i-1} = The index for business day i-1, calculated on business day i-1, rounded to 18 decimal places

SONIA_{i-1} = The SONIA rate for business day i-1, calculated and publishing on business day i

a_{i-1} = The number of calendar days for which SONIA_{i-1} applies. This is equal to the number of calendar days between business day i-1 and business day i

3 Publication and usage

3.1 Daily publication arrangements

The SONIA rate for a given London business day is published at 9am on the following London business day. Alongside the headline rate, the following information will also be provided:

- aggregate volume;
- the rate occurring at the 10th percentile of volume;
- the rate occurring at the 25th percentile of volume;
- the rate occurring at the 75th percentile of volume; and
- the rate occurring at the 90th percentile of volume.

The SONIA Compounded Index for a given London business day is published at 9am on the same London business day.

3.2 Access

While the Bank anticipates the majority of users will not require a direct licence from the Bank, in

order to recover its costs in producing the benchmark, the Bank has specified certain activities which require users to have a direct licence. Such activities can be considered as those where the licensee provides a service to end-users. These include:

- (a) the redistribution of SONIA data to clients;
- (b) the creation of derivative products referencing SONIA listed on futures exchanges;
- (c) the use of SONIA in providing clearing services; and
- (d) the use of SONIA for the valuation of clients' portfolio(s) (including discounting).

Authorised redistributors of SONIA data are:

		SONIA Rate	SONIA Compounded Index
Bloomberg	Ticker:	SONIO/N Index	SONCINDX
Refinitiv	Logical record:	SONIAOSR=	.SONIA
	Screen:	SONIA	SONIA
ICE Group	Ticker:	X:SONIA\ON	X:SONIA\IX
SIX Financial Information Ltd.	Ticker:	CH11285971	CH55989669

Firms who access the data on a timely basis via those redistributors and are using the data for their own internal business purposes do not need a direct licence with the Bank. Alternatively should those users wish to, they can receive SONIA on a timely basis under a direct licence from the Bank for a fee.

If you are uncertain as to whether you require a SONIA licence please contact the Bank to discuss this: ✉ benchmarkadministration@bankofengland.co.uk.

SONIA is made freely available via the Bank of England's [Interactive Statistical Database](#) [↗] by 10:00 on the working day after it is first published. This includes historical data back to SONIA's creation in 1997 and historical SONIA Compounded Index data back to 23 April 2018, which is when the methodology used to calculate the benchmark was reformed. Reproduction of these data in the Database are subject to the terms of the [UK Open Government Licence](#) [↗], allowing and encouraging free and flexible data reuse.

3.3 Referencing

The ISIN for SONIA can be used to represent SONIA as a variable interest rate in applicable transaction reporting; for example as the reference rate in a floating-rate transaction reported to

the Bank of England on Form SMMD.

The ISIN for SONIA is GB00B56Z6W79.

3.4 Calculating compounded SONIA rates from the SONIA Compounded Index

To calculate the compounded SONIA rate for any reference period, the SONIA Compounded Index values for the start and end date of the reference period are combined in the following formula:

$$\text{Compounded SONIA rate between } x \text{ and } y = \left(\frac{\text{SONIA Compounded Index}_y}{\text{SONIA Compounded Index}_x} - 1 \right) \times \frac{365}{d}$$

Where:

x = start date of the reference period

y = end date of the reference period

d = the number of calendar days in the reference period

4 Data quality

The data underlying SONIA are collected on Form SMMD, under Section 17 of the Bank of England Act 1998. The quality of data collected on the form is highly important to the Bank, given the data's use both to assess conditions in the money markets for policy purposes and to form the basis of SONIA.

The [Reporting Instructions for Form SMMD](#)  set out the data requirements, including:

- data definitions, scope and validations rules;
- pre-submission oversight and controls;
- expectations for timings of communications and corrections;
- requirements for individuals involved in reporting;
- record keeping;
- whistleblowing; and
- remediation processes if issues arise.

Senior Managers, under the Senior Managers Regime, at each reporting institution annually attest to their institution's adherence to the Reporting Instructions. This process serves to ensure that appropriate governance arrangements are in place at each reporting institution in relation to their Form SMMD data.

The daily production of SONIA involves data validation and plausibility checking of SONIA-eligible transactions from 07:00 each morning, in preparation for publication of the benchmark at 09:00. During this time, the Bank raises queries with the reporting institutions where appropriate, providing an opportunity to confirm any trades suspected to be erroneous ahead of publication. Taking into account responses from reporters, any trades which are confirmed, or remain suspected, as erroneous can be excluded from the calculation.

5 Short-term contingency arrangements

The Bank has robust and resilient systems and processes for the calculation of SONIA, with appropriate contingency procedures in place, including for the receipt of data from reporting institutions. Nevertheless, as an ultimate backstop in the event of disruption to the normal production of SONIA, a rate would be published, calculated using a contingency methodology.

The Bank will consider that the data submitted via its Sterling Money Market daily data collection are sufficient to produce SONIA unless:

- five or more reporters in the unsecured population have failed to submit a valid file; and
- the volume of SONIA-eligible transactions is <70% of the mean of the previous five business days for which SONIA has been calculated in line with the statement of methodology.

If these data sufficiency conditions are not met, SONIA will be determined as:

The level of Bank Rate plus the mean of the spread of SONIA to Bank Rate over the previous five publication days, excluding the days with the highest and lowest spread to Bank Rate. For these purposes the relevant level of Bank Rate is that at the close of the SONIA transaction window.

In the event that the contingency methodology is used, this will be clearly indicated to licensees in the data file provided.

This methodology is only intended to be used for relatively short-term contingency events. If such an event was expected to be prolonged, the Bank would consider the appropriate response at the time, with reference to the review and evolution process outlined in Section 8.

As the sole input to the SONIA Compounded Index is the published SONIA rate, the SONIA Compounded Index does not require a contingency calculation methodology.

6 Policies for handling data errors

Section 4 outlines how the Bank satisfies itself of the quality of data inputs to the SONIA

benchmark to allow timely publication. However, the Bank recognises that errors may occur in limited circumstances. This section sets out how such errors would be handled, including when they would result in the republication of the benchmark.

6.1 Republication policy

SONIA will be republished on a given day if the calculation of the benchmark based on the most up-to-date data is two or more basis points away from the earlier published rate. The SONIA Compounded Index will only be republished if either SONIA is republished or an error is identified in the calculation of the SONIA Compounded Index.

Republication will be no later than midday on the same day, but the Bank would republish earlier if ready to do so. The Bank will only republish SONIA and/or the SONIA Compounded Index once for a given day.

Once the republication deadline for SONIA has passed, no amendments will be made to the benchmark rate or the SONIA Compounded Index under any circumstances.

6.2 Policy for transparency over data errors

In order to support the transparency of the benchmark determination process, the Bank periodically publishes summary information on errors that did not meet the republication criteria. This information comprises a table showing the number of errors of various types (for example, data reporting errors), and an indication, for each type, of the absolute impacts of those errors (ie the absolute difference between the published rate and the benchmark methodology based on the most up to date data). Errors whose absolute impact was less than 0.001 percentage points is excluded from this analysis. This information is published on a quarterly basis.

7 Oversight function

An important part of the Bank's governance arrangements for administering SONIA is an oversight function to provide challenge to the administration of SONIA. This comprises the SONIA Oversight Committee, supported by the SONIA Stakeholder Advisory Group.

7.1 The SONIA Oversight Committee

The SONIA Oversight Committee reviews and provides challenge on all aspects of the benchmark determination process and provides scrutiny of the administration of SONIA.

The Oversight Committee is chaired by the Bank's Chief Operating Officer, who does not have line responsibility for the production of the benchmark. The other Bank members of the Oversight Committee are the Deputy Governor for Markets and Banking, as the Senior Manager

responsible for SONIA, and two Executive Directors from other areas of the Bank. In order to provide additional challenge to the Bank on its governance and processes related to the administration of SONIA, and to bring an independent perspective, two external members are also on the Oversight Committee. Given that the Oversight Committee's responsibilities require it to review highly commercially sensitive information, the selection of these external members has due regard for the necessity to avoid conflicts of interest. For the same reason, the minutes of their meetings are not published.

The responsibilities of the Oversight Committee include:

- overseeing the periodic reviews of the benchmark methodology with a view to ensuring that it continues adequately to measure the underlying interest, and if necessary oversee any changes to the methodology;
- overseeing the administrator's control framework, management and operation of the benchmark, commissioning audits as necessary;
- overseeing the data quality controls, and the administrative arrangements for addressing breaches of the Reporting Instructions and escalating suspected misconduct; and
- monitoring the frequency of errors and republications and the actions of the administrator in challenging or validating contributions of input data.

See the [Terms of Reference for the Oversight Committee](#) .


7.2 The SONIA Stakeholder Advisory Group

The Bank's administration of the SONIA benchmark and the Oversight Committee's oversight of it are supported by the SONIA Stakeholder Advisory Group. The Stakeholder Advisory Group is made up of relevant SONIA stakeholders, selected on the basis of their expertise and relevant market knowledge. This includes (but is not limited to): market infrastructure providers; reporters to the Sterling Money Market daily data collection; interdealer brokers; and other users of the SONIA benchmark. Information shared with this Group is not of a confidential nature, to avoid potential conflicts of interest arising. One of the external members of the Oversight Committee acts as chair of the Stakeholder Advisory Group.

The responsibilities of the Stakeholder Advisory Group include:

- providing advice on the functioning of the underlying market being measured by the SONIA benchmark;
- reviewing the published policy documentation associated with the benchmark, eg errors policy, republication;
- providing perspectives on whether the methodology continues to appropriately measure the underlying interest;
- providing advice on any changes required to the benchmark determination; and

- providing feedback on any proposed changes to the benchmark methodology.

The minutes of Stakeholder Advisory Group meetings are published online. See the [Terms of Reference for the Stakeholder Advisory Group](#) .

8 Review and evolution of the SONIA methodology

8.1 Periodic review of the methodology

The Bank periodically reviews the current methodology with a view to ensuring that it continues adequately to measure the underlying interest.

In doing so, the Bank reviews conditions in the relevant market in order to assess whether that market has undergone or is undergoing structural change that may warrant changes to the benchmark methodology. In particular, the Bank seeks to determine whether the relevant market continues, and is expected to continue, to function sufficiently well and have sufficient volumes to form the basis for a robust and credible benchmark.

The Bank also takes account of representations from users of SONIA, the Oversight Committee and the Stakeholder Advisory Group as to the possible need for changes in the methodology.

8.2 Changes to methodology

If the Bank determines, on the basis of its review, that changes to the benchmark methodology are warranted, it may make such changes as it reasonably considers necessary in order to address any issues identified.

Such changes may include, for example, refinements to the calculation methodology or scope of eligible transactions within the relevant market. They may also include the introduction of a methodology which has reference to other actively traded money market instruments, for example UK-gilt collateralised repurchase agreements, or to the Bank of England official interest rates, so long as the Bank considers that they provide an appropriate measure of the underlying interest.

Before making any changes to the benchmark methodology the Bank will (i) follow its benchmark governance procedures, including review by the Oversight Committee; and (ii) to the extent possible or practicable, conduct a public consultation to enable persons affected to provide feedback on the proposed change.

9 Contact

9.1 Enquiries

If you have general queries relating to SONIA, please direct them to ✉ benchmarkadministration@bankofengland.co.uk.

9.2 Complaints

If anyone wishes to submit a complaint, including concerning whether SONIA is representative of the underlying interest it seeks to measure, applications of the SONIA methodology, and other Bank decisions in relation to the determination of SONIA, they should submit this in writing to:

✉ SONIAcomplaints@bankofengland.co.uk.

Such correspondence will be acknowledged within five working days and responded to within 28 working days.

9.3 Whistleblowing

The Bank has established a whistleblowing mechanism in order to facilitate early awareness of potential misconduct or irregularities that may arise in relation to SONIA. Detailed information regarding both the mechanism and legal protection of whistleblowers is available on the [SONIA interest rate benchmark](#) page.

Under UK whistleblowing legislation, workers who make ‘protected disclosures’ enjoy certain protections against detrimental treatment by their employer. While some types of disclosure to the Bank are automatically protected in this way, disclosures in relation to SONIA are not currently automatically protected.

However, a disclosure by a worker to a person other than his or her employer (such as the Bank) can be a protected disclosure if carried out using a procedure which the worker’s employer has authorised the individual to use. The Bank has requested all reporters to the SMMD data collection to authorise UK employees to use the Bank’s whistleblowing mechanism in order to make whistleblowing disclosures to the Bank in relation to the SONIA benchmark. Senior Managers at every reporting institution attest annually to this authorisation having been made, and at the time writing, there were no exemptions to this attestation.

¹ See the [July 2015 consultation](#) ¹; [November 2015 consultation response](#) ¹; [October 2016 consultation](#) ¹; [February 2017 consultation](#) ¹; [March 2017 consultation feedback and the design of SONIA](#) ¹.

² See the ‘Supporting Risk-Free Rate transition through the provision of compounded SONIA’ [discussion paper](#) ² and [response document](#) ².

