

## UK Working Group on Risk-Free Reference Rates - Infrastructure and Systems Work Stream

### Calculator Recommendation

*Below is a provisional recommendation with regard to infrastructure developments for the RFR transition in UK markets agreed by the Working Group on Risk-Free Reference Rates 'RFRWG'. This document does not constitute an exhaustive specification and may be updated following consultation with infrastructure providers and market participants to reflect ongoing progress on plans for benchmark transition, and further work from the infrastructure sub-group and the RFRWG. To provide feedback and comments, please contact [RFR.Secretariat@bankofengland.gsi.gov.uk](mailto:RFR.Secretariat@bankofengland.gsi.gov.uk)*

We recommend that a calculator is built to support the adoption of SONIA based instrument. We suggest that firms do their own analysis however we would expect that the calculator might have the following features:

- Calculate the rate for any term between any dates for any SONIA based instrument.
- Support manual input of the parameters and manual retrieval of a calculated rate
- Support automated input of the parameters and automated retrieval of calculated rate via an API
- Support a standard convention/s for calculation of a rate for all instrument types *(subject to an industry consultation one whether a single standard is achievable/desired)* For example, currently under the 2006 ISDA there are 2 methods for compounding over the counter interest rate derivative cash flows, namely, Compounding and Flat Compounding. The third method is Non ISDA standard definition and treats Floating Interest as compounded but Spread as simple interest.
- Provide support for unadjusted calculation period dates which occurs on rare occasions e.g. maturity on a Saturday
- Be made available to all

The calculator should support the input of the below parameters:

- Notional – *As the Calculator will calculate the Average Coupon from the daily OIS Rates you would want to know the interest to be Paid/Received for a period.*
- Currency – *The calculator could be rolled out for other RFRs (e.g. SOFR, ESTER, SARON, TONAR) and other indices (e.g. Fed funds, EONIA)*
- Effective Date
- Maturity Date
- Overnight Index - *This could include other alternative reference rates in the case of Cross Currency and Basis Swaps*
- Spread (optional) - *This is required as on occasions a spread is included on a Floating Leg of an IRS /Bond/Loan, and would be required for the different Compounding calculations – including the Non ISDA where the spread is based on simple interest.*
- Reset Frequency (optional)
- Pay Frequency (optional)

- Day Count Convention - *e.g. 30/360, ACT/360, ACT/365*
- Holiday Convention – *The calculator should default to referencing UK markets holiday calendar but with ability to reference other calendars for other markets in certain instances e.g. a Cross Currency swap & Basis swaps*
- Business Day Convention - *e.g. FOLLOW, MODFOLL*
- Compounding Method – *e.g. ISDA Formula for Compounding or Averaging*
- Average Coupon (*calculated*)
- Observation / Payment Lag (or Lockout Period)(*optional*)