

International Swaps and Derivatives Association, Inc.

## Documenting RFR derivatives using different approaches to compounding/averaging under the 2006 ISDA Definitions<sup>1</sup>

### Introduction

This paper considers potential approaches to documenting derivatives referencing an overnight risk free rate (“RFR”) using different compounding/averaging approaches, including the convention used in the standard Overnight Index Swap (“OIS”) market. It is not intended to prescribe one approach to documenting a compounded/averaged RFR but to set out how a compounded/averaged RFR may be documented under the 2006 ISDA Definitions using new Floating Rate Options for overnight RFRs<sup>2</sup> in conjunction with new compounding/averaging provisions that enable firms to more closely align with other RFR conventions that have been developed in cash markets.

Capitalised terms used but not otherwise defined in this paper have the meaning given to them in the 2006 ISDA Definitions (as supplemented) (the “Definitions”).

### Overview

The table below sets out: (A) a proposed framework for documenting the floating leg of transactions using the RFR Floating Rate Options and approaches that would be capable of being confirmed

<sup>1</sup> This paper does not constitute legal or accounting advice and members should seek advice from their own professional advisers, including accounting advice as appropriate, in respect of the treatment of any transaction documented using the approaches outlined herein.

***The documentation of any individual transaction remains the responsibility of the parties concerned. ISDA does not assume any responsibility for any use to which the draft language contained in this memorandum may be put, including any use of such language in connection with any privately negotiated derivative transaction or any other agreement. Each party must satisfy itself as to the appropriateness of any provisions documenting a transaction that references a compounded or averaged RFR and must ensure that any compounding or averaging provisions included within a transaction have been properly adapted to reflect the commercial intentions of the parties.***

<sup>2</sup> ISDA intends to publish Floating Rate Options for certain overnight RFRs – please see the list of Overnight RFRs that are initially proposed to be published in the table starting on page 3 of this memorandum. In addition ISDA has published or will publish Floating Rate Options for the following published compounded indices and averages, none of which should be used with any of the compounding approaches outlined in this memorandum:

- Bank of England SONIA Compounded Index (GBP-SONIA Compounded Index) (published in Supplement 76 to the Definitions)
- NY Fed SOFR Index (USD-SOFR Compounded Index)
- European Central Bank €STR Index (EUR-EuroSTR Compounded Index)
- Bank of Japan TONA Index (JPY-TONA Compounded Index)
- NY Fed SOFR 30 day average (USD-SOFR Average 30D)
- NY Fed SOFR 90 day average (USD-SOFR Average 90D)
- NY Fed SOFR 180 day average (USD-SOFR Average 180D)
- American Financial Exchange’s AMERIBOR 30 day average (USD-AMERIBOR Average 30D) (published in Supplement 71 to the Definitions)
- American Financial Exchange’s AMERIBOR 90 day average (USD-AMERIBOR Average 90D) (published in Supplement 71 to the Definitions)
- AMERIBOR term rate (USD-AMERIBOR Term) (published in Supplement 72 to the Definitions)
- European Central Bank €STR 1 week average (EUR-EuroSTR Average 1W)
- European Central Bank €STR 1 month average (EUR-EuroSTR Average 1M)
- European Central Bank €STR 3 month average (EUR-EuroSTR Average 3M)
- European Central Bank €STR 6 month average (EUR-EuroSTR Average 6M)
- European Central Bank €STR 12 month average (EUR-EuroSTR Average 12M)
- Bank of Japan TONA 30 day average (JPY-TONA Average 30D)
- Bank of Japan TONA 90 day average (JPY-TONA Average 90D)
- Bank of Japan TONA 180 day average (JPY-TONA Average 180D)

The published compounded indices will need to be used in conjunction with an index formula and ISDA has published an index provision for this purpose (see Supplement 76 to the Definitions). The published average Floating Rate Options will be capable of use directly.

under the updated Definitions if the new provisions described in this memorandum were included in the Definitions; and (B) the existing framework for OIS transactions in the Definitions.

**A. New modular approach using overnight RFRs and provisions for compounding/simple averaging with (i) observation period shift, (ii) lookback, (iii) lockout, or (iv) standard OIS compounding/standard averaging.**

*The following elections will need to be made by the parties in the Confirmation*

Applicable overnight RFR FRO	Applicable formula and relevant convention	Application of daily cap/floor? If 'yes' specify "Applicable" or "Not applicable" in Confirmation and the capped/floored rate	Business days for shift/lookback/lockout etc.
GBP-SONIA USD-SOFR	OIS formula	Yes	Specify (i) "Delayed Payment" and (ii) applicable Business Days
EUR-EuroSTR CHF-SARON JPY-TONA	OIS formula – Observation Period Shift	Yes	Specify (i) number of Business Days for shift and (ii) applicable Business Days. Option to apply full calculation period shift (i.e. to facilitate an in advance rate)
SGD-SORA HKD-HONIA	OIS formula – Lookback	Yes	Specify number of Business Days for lookback
AUD-AONIA CAD-CORRA NZD-NZIONA	OIS formula – Lockout	Yes	Specify (i) number of Business Days for lockout and (ii) applicable Business Days
NOK-NOWA THB-THOR	Average formula	Yes	Specify (i) "Delayed Payment" and (ii) applicable Business Days
(or any other overnight FRO)	Average formula – Observation Period Shift	Yes	Specify (i) number of Business Days for shift and (ii) applicable Business Days. Option to apply full calculation period shift (i.e. to facilitate an in advance rate)
	Average formula – Lookback	Yes	Specify number of Business Days for lookback
	Average formula – Lockout	Yes	Specify (i) number of Business Days for lockout and (ii) applicable Business Days

**B. Existing approach using OIS Self-Compounding Floating Rate Options + Payment Delay**

Applicable Self-Compounding FRO	Applicable formula	Application of daily cap/floor	Delayed Payment
GBP-SONIA-Compound USD-SOFR-Compound EUR-EuroSTR-Compound CHF-SARON-OIS-Compound JPY-TONA-OIS-Compound SGD-SORA-Compound HKD-HONIX-OIS-Compound AUD-AONIA-OIS-Compound CAD-CORRA-OIS-Compound NZD-NZIONA-OIS-COMPOUND THB-THOR-COMPOUND INR-MIBOR-OIS-COMPOUND DKK-DKKOIS-OIS-COMPOUND PLN-POLONIA-OIS-COMPOUND SEK-SIOR-OIS-COMPOUND TRY-TLREF-OIS-COMPOUND RUB-RUONIA-OIS-COMPOUND COP-IBR-OIS-COMPOUND	OIS formula – no election required	Election not possible	Applicable/Not Applicable If Applicable, specify number of Business Days payment delay

## 1 Compounding/Averaging conventions

Each of the approaches below involves compounding the RFR in arrear<sup>3</sup> (i.e. at the end of the Calculation Period) but allows the Floating Amount to be calculated and notified prior to the Floating Rate Payer Payment Date on which it becomes payable. The same concepts can also be adopted for simple averaging.

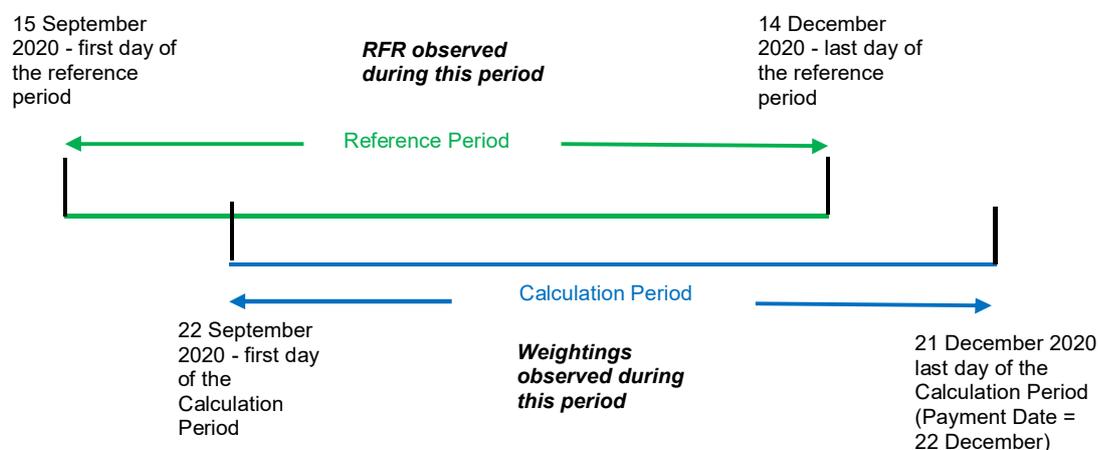
### 1.1 Lookback

Under this approach, the rate for each business day in a Calculation Period is determined on the basis of the rate observed for a certain number of business days prior to such date. The level of the RFR in question observed for each such day will be compounded/averaged in order to determine the Floating Rate that applies to the relevant Calculation Period.

The weighting to be given to the rate depends on the relevant day in the Calculation Period. For example, in a Calculation Period running from 22<sup>nd</sup> September to 21<sup>st</sup> December, if Wednesday 2<sup>nd</sup> December 2020 were a bank holiday, the rate applicable to Tuesday 1<sup>st</sup> December 2020 would be given a weighting of '2' in the compounding formula (i.e. simple interest would apply to the rates for those dates). For a 'lookback' of 5 business days, this rate would be the rate observed for Tuesday 24<sup>th</sup> November 2020 (the date which is 5 business days prior to the relevant date in the Calculation Period, assuming no other bank holidays in that period and excluding weekends).

#### ***Fig 1: Lookback***

*Note that the start and end dates of the 'reference period' assume no bank holidays.*



### 1.2 Observation Period Shift

Under this approach, the Floating Rate for a Calculation Period is determined using rates observed during an '**observation period**' for which both the start and end dates are shifted by a certain number of days, i.e. the observation period starts before the beginning of the Calculation Period (e.g. 5 business days prior) and ends before the end of the Calculation Period (e.g. 5 business days prior). The level of the RFR observed for each day in the observation period will be compounded/averaged in order to determine the Floating Rate that applies to the relevant Calculation Period.

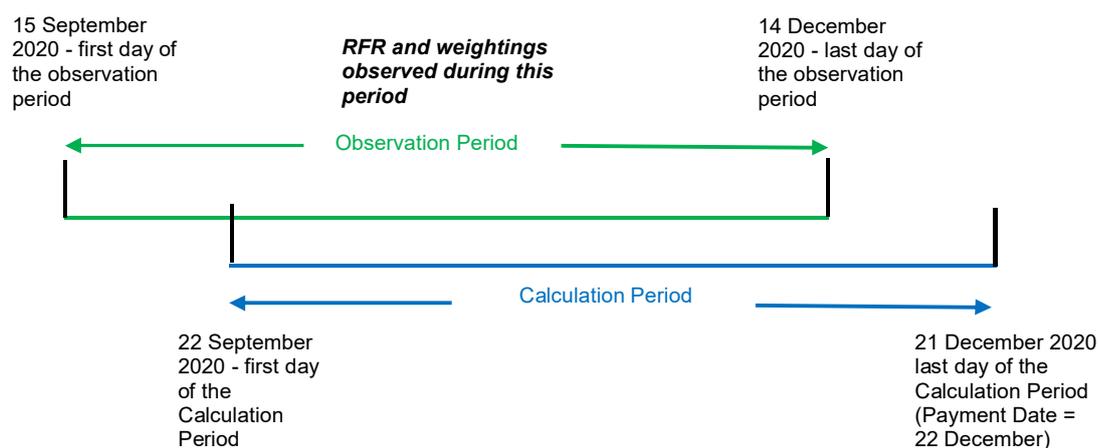
<sup>3</sup> However, see paragraph 2.6 (*Reset in Advance/ off-set*) of this paper which describes how to achieve an 'in advance' rate by applying an observation shift of one whole Calculation Period.

Under this approach, both the rate and the weighting are determined on the basis of the relevant day in this observation period, rather than the weighting being determined based on the relevant day in the Calculation Period (as set out under 'Lookback' above). Therefore, while the weightings of the fixings used to calculate the compounded rate will be determined on the basis of the Business Days in the observation period, which may differ from the Business Days in the Calculation Period, the rate will be annualized and apply based on the number of days in the Calculation Period, using the day count basis applicable to the relevant RFR.

Taking the example Calculation Period from 'Lookback' above, in a Calculation Period running from 22<sup>nd</sup> September to 21<sup>st</sup> December, and assuming an observation period shift of 5 business days, Wednesday 2<sup>nd</sup> December 2020 is a day falling within the observation period. If this day were a bank holiday, the rate observed **for** Tuesday 1<sup>st</sup> December 2020 (which is also a business day in the observation period) would be given a weighting of '2' in the compounding formula (i.e. simple interest would apply to the rates for those dates) (rather than the rate observed for the day falling 5 business days **prior to** Tuesday 1<sup>st</sup> December 2020). So for the same Calculation Period, the bank holiday falling on 2<sup>nd</sup> December has a different impact on the weightings for the observed rates under this approach.

### **Fig 2: Observation Period**

*Note that the start and end dates of the 'observation period' assume no bank holidays.*



### **1.3 Lockout**

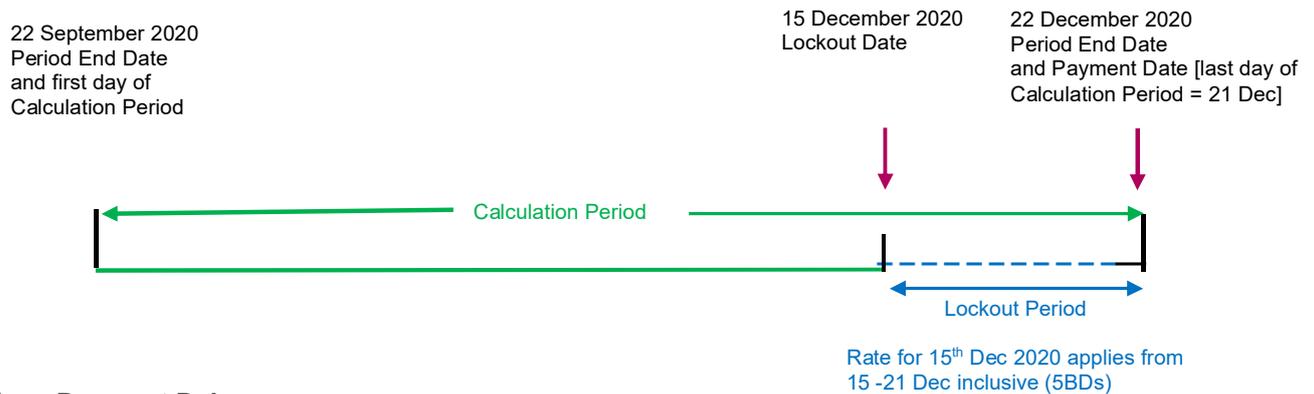
Under this approach, the parties designate a certain period (e.g. 5 business days) prior to the end of the Calculation Period (i.e. prior to the Period End Date) as the 'lockout period'.<sup>4</sup> The level of the RFR used in the compounding/averaging formula is:

- (i) for each day of the Calculation Period up to and including the first day of the lockout period, the level of the rate observed for such day, and
- (ii) for each remaining day in the Calculation Period (i.e. the 'lockout period'), the level of the rate observed for the first day of that lockout period (the '**lockout date**').

<sup>4</sup> Note that the result of specifying the lockout period by reference to the Period End Date (which date is not part of the Calculation Period) is that the final fixing is used a number of times equal to the specified number. For example, if the lockout period is specified as 5 Business Days, the rate on the 5<sup>th</sup> Business Day prior to the Period End Date is used for the following 4 Business Days, resulting in the same fixing being used 5 times but having a lockout period that is strictly only 4 Business Days.

The rate observed for each day in the Calculation Period up to and including the lockout date, and the rate fixed at the rate in effect for the lockout date for each day after the lockout date, will be compounded/averaged in order to determine the Floating Rate that applies to the relevant Calculation Period. Under this approach, the weighting to be given to the rate is determined by reference to each day in the Calculation Period, including during the lockout period and there is no change to the weighting during the, or as a result of the inclusion of, a lockout period.

**Fig 3: Lockout**



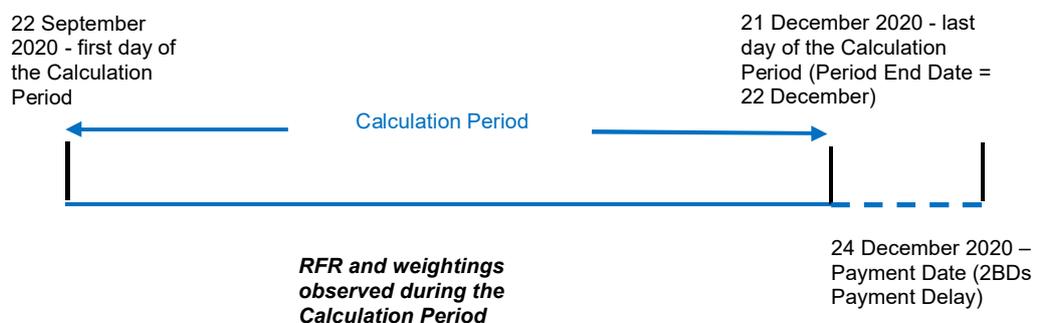
**1.4 Payment Delay**

Under this approach, the rates are observed for each day during the Calculation Period and the Floating Rate Payer Payment Date falls a number of business days after the end of the Calculation Period.

As a result, the rate for each business day in the Calculation Period (and the weighting given to such rate in the compounding/averaging formula) is based on the rate observed for that day.

This is the approach taken in a standard OIS that references one of the Floating Rate Options which includes its own compounding formula (e.g. GBP-SONIA-COMPOUND) (a “**Self-compounding Floating Rate Option**”). The Definitions provide, by default, for the Period End Dates to be the Payment Dates specified in the Confirmation; in other words, by default the Payment Dates and Period End Dates are the same dates. However, for certain OIS markets, it is market convention to introduce a payment delay of a number of business days (e.g. two business days for USD OIS) following the Period End Date.

**Fig 4: Payment Delay**



## 2 Proposed Modular Approach under the Definitions

The paragraphs below set out how (1) lookback, (2) observation period shift, and (3) lockout compounding (each as described in paragraph 1 (*Compounding/Averaging conventions*)) can be documented under the Definitions using a modular approach. This approach involves using one of the new overnight RFR Floating Rate Options (each, an “RFR FRO”), certain new compounding provisions (as described below) and making certain elections in the Confirmation to complete those provisions. These approaches can similarly be applied for simple averaging by using a simple averaging formula. New averaging provisions for lookback, observation period shift and lockout will also be provided (see paragraph 3 (*Implementation*) below).

The fourth approach described in paragraph 1.4 (*Payment Delay*) above, Payment Delay, can be documented using existing provisions of the Definitions and the existing Self-compounding Floating Rate Options. Alternatively, this could also be documented via the modular approach using the new stand-alone OIS compounding provision set out below with a new RFR FRO. For simple averaging, Payment Delay can be documented using a new RFR FRO in conjunction with the existing averaging provisions (as further explained below in paragraph 2.5 (*Payment Delay*)).

### 2.1 Compounding with Lookback<sup>5</sup>

The compounding with ‘Lookback’ approach can be documented by using one of the new RFR FROs and a new lookback compounding provision (which would be inserted into the Definitions by way of Supplement). This approach would be applied via the Confirmation by: (1) electing the parties’ chosen RFR FRO as the “Floating Rate Option”, (2) populating a new field to apply “Compounding with Lookback”, and (3) populating the related fields to complete the information required for the purposes of Compounding with Lookback. This would apply the operative provision set out below, which would be included in the Definitions. Please refer to Annex 1 for sample Confirmation provisions showing how the new fields would appear in the Confirmation.

[Draft new provision to be included in the Definitions]

**Compounding with Lookback.**<sup>6</sup> If “Compounding with Lookback” is specified to be applicable to the Swap Transaction, then notwithstanding any terms of the Floating Rate Option to the contrary, the rate for a Reset Date will be the rate of return of a daily compound interest investment calculated in accordance with the formula below (where the reference rate for the calculation of interest is the relevant overnight rate in the Floating Rate Option specified in the Confirmation) and the resulting percentage will be rounded, if necessary, in accordance with the method set out in Section 8.1(a) (*Rounding*), but to the nearest percentage point specified for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix (provided that if the Floating Rate Option is not included in the ISDA Compounding/Averaging Matrix, rounding shall be as set out in Section 8.1(a) (*Rounding*)).

$$\left[ \prod_{i=1}^{d_0} \left( 1 + \frac{\text{Benchmark Level}_{i-r} \text{ABD} \times n_i}{\text{Day Count Basis}} \right) - 1 \right] \times \frac{\text{Day Count Basis}}{d}$$

<sup>5</sup> For averaging, the approach would be adapted to include a simple averaging (as opposed to a compounded averaging) formula.

<sup>6</sup> This method is compatible with lookback compounding set out in the LSTA Concept Credit Agreement “Daily Compounded SOFR in Arrears (Compound the Rate)” – December 2020 and the LMA exposure draft (Facilities Agreements (Lookback with/without Observation Shift)).

where:

" $d_0$ " for any Calculation Period, is the number of Applicable Business Days in the Calculation Period, except if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is the number of Applicable Business Days in the Calculation Period plus 1;

" $i$ " is:

- (i) if the first calendar day in the Calculation Period is an Applicable Business Day, a series of whole numbers from 1 to  $d_0$ , each representing the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period; or
- (ii) if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is a series of whole numbers from 1 to  $d_0$ , where  $i = 1$  represents the first calendar day of the Calculation Period, and each of  $i = 2$  to  $d_0$  represents the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period;<sup>7</sup>

"Benchmark Level <sub>$i-r$  ABD</sub>" means, in respect of any Applicable Business Day <sub>$i-r$  ABD</sub>:

- (i) subject to paragraph (ii) below, the rate determined in accordance with the Floating Rate Option as if such Applicable Business Day <sub>$i-r$  ABD</sub> were a Reset Date for the purpose of such Floating Rate Option;<sup>8</sup> or
- (ii) if "Daily Capped Rate and/or Daily Floored Rate" is specified as applicable in the Confirmation, either:
  - (A) the greater of the rate determined in accordance with paragraph (i) and the Daily Floored Rate specified (if any); or
  - (B) the lower of the rate determined in accordance with paragraph (i) and the Daily Capped Rate specified (if any),

as applicable;

"Applicable Business Day <sub>$i-r$  ABD</sub>" means, for any day " $i$ " in the Calculation Period, the day " $r$ " Applicable Business Days preceding such day " $i$ ", except if  $i = 1$  and day " $i$ " is not an Applicable Business Day, then it is the day  $r + 1$  Applicable Business Days preceding day " $i$ ";<sup>9</sup>

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<sup>7</sup> The expanded definition of " $i$ " versus the equivalent definition in the existing Self-compounding Floating Rate Options is intended to clarify the position when Period End Dates are unadjusted such that the first day of the Calculation Period falls on a non-business day.

<sup>8</sup> Where the applicable Floating Rate Option is a rate published on a T+1 basis (for example, GBP-SONIA), the Relevant Rate for the Applicable Business Day <sub>$i-r$  ABD</sub> (for lookback) or Applicable Business Day <sub>$i$</sub>  (for observation period shift) will be the SONIA rate published on the next London Banking Day (i.e. the rate published **on** day  $i - r$  ABD plus 1 London Banking Day (for lookback) or the rate published **on** day  $i$  plus one London Banking Day (for observation period shift)). This is because SONIA is published on a T+1 basis and the GBP-SONIA Floating Rate Option will provide that the rate for a Reset Date is the rate published on the next London Banking Day and an Applicable Business Day <sub>$i$</sub>  and an Applicable Business Day <sub>$i$</sub>  are each treated as a Reset Date in these compounding provisions.

<sup>9</sup> The Lookback business days are tied to the RFR business days and there is no option for adding additional financial centers, unlike Observation Period Shift. Accordingly no election needs to be made for the applicable business days for Lookback. The reason for this is that under Observation Period Shift, additional financial centres may be included to move the start and end date of the Observation Period, however the fixings during the Observation Period are by reference to the business days for the RFR. By contrast, if additional financial centres were added to Lookback, this would apply to every day during the Calculation Period on which a lookback was being performed, potentially resulting in the rate not being viewed for days on which it was being published (due to a greater lookback applying) and consequently an unusual outcome for compounding of the rate over that period due to having 'skipped' publication of the rate for certain days. Note that no cash products (including loans documented under LMA documentation) that we are aware of allow inclusion of additional financial centres within a lookback and consequently this should not be required to enable hedging of a cash product using a lookback approach.

“r” is:

- (i) the number specified as the “Lookback” in the Confirmation;
- (ii) if a number is not specified for the purpose of the “Lookback” in the Confirmation and the relevant Floating Rate Option is included in the ISDA Compounding/Averaging Matrix, the number (if any) specified as the “Lookback” for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix; or
- (iii) if a number is not specified for the purpose of the “Lookback” in the Confirmation or in the ISDA Compounding/Averaging Matrix, five;<sup>10</sup>

“n<sub>i</sub>” is the number of calendar days from, and including, the day “i” to, but excluding, the earlier of (a) the next Applicable Business Day, and (b) the Period End Date for the Calculation Period or, in respect of the final Calculation Period, the Termination Date;<sup>11</sup>

“Day Count Basis” is, in respect of a Floating Rate Option, the denominator of the Floating Rate Day Count Fraction; and

“d” is the number of calendar days in the Calculation Period.

*Additional defined terms to be added to the Definitions:*

**“Daily Floored Rate”** means the rate, expressed as a decimal, equal to the per annum rate specified as such in the Confirmation.

**“Daily Capped Rate”** means the rate, expressed as a decimal, equal to the per annum rate specified as such in the Confirmation.

**“ISDA Compounding/Averaging Matrix”** means the 2006 ISDA Definitions Matrix for use with the Overnight Rate Compounding Methods, Overnight Rate Averaging Methods and Index Methods or its successor, as amended and supplemented from time to time and published by ISDA on its website at <http://www.isda.org>.

## **2.2 Compounding with Observation Period Shift<sup>12</sup>**

The compounding with ‘Observation Period Shift’ approach can be documented by using one of the new RFR FROs and a new observation period shift compounding provision, which introduces a new concept of “Observation Period” as distinct from the existing “Calculation Period”. This provision would be inserted into the Definitions by way of Supplement. This approach would be applied via the Confirmation by: (1) electing the parties’ chosen RFR FRO as the “Floating Rate Option”, (2) populating a new field to apply “Compounding with Observation Period Shift”, and (3) populating the related fields to complete the information required for the purposes of Compounding with Observation Period Shift. This would apply the operative provision set out below. Please refer to Annex 2 for sample Confirmation provisions showing how the new fields would appear in the Confirmation.

*[Draft new provision to be included in the Definitions ]*

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<sup>10</sup> Five has been chosen for consistency with the most recent LMA exposure draft (Facilities Agreements (Lookback with/without Observation Shift)) which defines the “Lookback Period” as “[Five] RFR Banking Days”.

<sup>11</sup> The expanded definition of “n<sub>i</sub>” versus the equivalent definition in some of the existing Self-compounding Floating Rate Options is intended to clarify the number of days for which the rate is applicable (for example the rate applicable for a Friday will also be applicable for the following Saturday and Sunday) and also addresses the situation where the final day of the Calculation Period is not an Applicable Business Day.

<sup>12</sup> For averaging, the approach would be adapted to include a simple averaging (as opposed to a compounded averaging) formula.

**Compounding with Observation Period Shift.** If “Compounding with Observation Period Shift” is specified to be applicable to the Swap Transaction, then notwithstanding any terms of the Floating Rate Option to the contrary, the rate for a Reset Date will be the rate of return of a daily compound interest investment calculated in accordance with the formula below (where the reference rate for the calculation of interest is the relevant overnight rate in the Floating Rate Option specified in the Confirmation) and the resulting percentage will be rounded, if necessary, in accordance with the method set out in Section 8.1(a) (*Rounding*), but to the nearest percentage point specified for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix (provided that if the Floating Rate Option is not included in the ISDA Compounding/Averaging Matrix, rounding shall be as set out in Section 8.1(a) (*Rounding*)).

$$\left[ \prod_{i=1}^{d_0} \left( 1 + \frac{\text{Benchmark Level}_i \times n_i}{\text{Day Count Basis}} \right) - 1 \right] \times \frac{\text{Day Count Basis}}{d}$$

where:

“ $d_0$ ” is the number of Applicable Business Days in the Observation Period;

“ $i$ ” is a series of whole numbers from 1 to  $d_0$ , each representing the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Observation Period;

“Benchmark Level $_i$ ” means, in respect of any Applicable Business Day:

- (i) subject to paragraph (ii), the rate determined in accordance with the Floating Rate Option as if such Applicable Business Day $_i$  were a Reset Date for the purpose of such Floating Rate Option;<sup>13</sup> or
- (ii) if “Daily Capped Rate and/or Daily Floored Rate” is specified as applicable in the Confirmation, either:
  - (A) the greater of the rate determined in accordance with paragraph (i) and the Daily Floored Rate specified (if any); or
  - (B) the lower of the rate determined in accordance with paragraph (i) and the Daily Capped Rate specified (if any),

as applicable;

“ $s$ ” is:

- (i) the number specified as the “Observation Period Shift” in the Confirmation;
- (ii) if a number is not specified for the purpose of the “Observation Period Shift” in the Confirmation and the relevant Floating Rate Option is included in the ISDA Compounding/Averaging Matrix, the number (if any) specified as the “Observation Period Shift” for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix; or
- (iii) if a number is not specified for the purpose of the “Observation Period Shift” in the Confirmation or in the ISDA Compounding/Averaging Matrix, five;<sup>14</sup>

“ $n_i$ ” is the number of calendar days from, and including, the day “ $i$ ” to, but excluding, the earlier of (a) the next Applicable Business Day, and (b) the Standard Observation

<sup>13</sup> See footnote 8.

<sup>14</sup> Five has been chosen for consistency with Lookback (see footnote 8).

Period End Date or the Set-in-Advance Observation Period End Date (as applicable) for the Observation Period;

“Day Count Basis” is, in respect of a Floating Rate Option, the denominator of the Floating Rate Day Count Fraction;

“d” is the number of calendar days in the Observation Period;

“Observation Period” means:

- (i) if “Set-in-Advance” is not applicable, for any Calculation Period, the period from, and including, the date “s” Observation Period Shift Business Days preceding the first calendar day of the Calculation Period (and the first Observation Period shall begin on and include the date “s” Observation Period Shift Business Days prior to the Effective Date) to, but excluding, the date “s” Observation Period Shift Business Days preceding the Period End Date at the end of the Calculation Period (or, in respect of the final Observation Period, to, but excluding, the date “s” Observation Period Shift Business Days preceding the Termination Date) (the “**Standard Observation Period End Date**”),<sup>15</sup> or
- (ii) if “Set-in-Advance” is applicable, the Set-in-Advance Observation Period;

“Observation Period Shift Additional Business Day” means a Business Day in the financial centers, if any, specified for such purpose in the Confirmation;<sup>16</sup>

“Observation Period Shift Business Day” means a day which is both an Applicable Business Day and an Observation Period Shift Additional Business Day;

“Set-in-Advance Observation Period” means:

- (i) in respect of a Calculation Period other than the first, second and last Calculation Period, the period from, and including, the date “s” Observation Period Shift Business Days preceding the Period End Date at the start of the previous Calculation Period to, but excluding, the date “s” Observation Period Shift Business Days preceding the Period End Date at the start of such Calculation Period (the “**Regular Period Observation End Date**”);
- (ii) in respect of the second Calculation Period:
  - (A) if the first Calculation Period is a Stub Period, the period from, and including, the Period Two Observation Start Date to, but excluding, the Period Two Observation End Date; and
  - (B) if the first Calculation Period is not a Stub Period, the period as set out in (i) above except that the reference to “the Period End Date at the start of the previous Calculation Period” shall be deemed to be a reference to “the Effective Date”,

where:

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<sup>15</sup> Note that this shifts both the start and end date of the Observation Period.

<sup>16</sup> This is an optional ‘free form’ field allowing any additional financial centers to be specified. It is not necessary to make any election here or apply any default (i.e. the default is that no Observation Period Shift Additional Business Days will apply). Note that loans documented under LMA documentation do not include the ability to specify additional financial centres and so this field would not need to be populated for a swap hedging an LMA loan.

“Period Two Observation Start Date” means the date “s” Observation Period Shift Business Days preceding the Period Two Deemed Preceding Period End Date;

“Period Two Observation End Date” means the date “s” Observation Period Shift Business Days preceding the Period End Date at the start of the second Calculation Period;

“Period Two Deemed Preceding Period End Date” means (1) if the first Calculation Period is not a Stub Period, the Effective Date, (2) if the First Calculation Period is a Stub Period and the Swap Transaction has Period End Dates that are separated by regular intervals (which may be defined by reference to roll dates, IMM Settlement Dates, or intervals of calendar weeks, months or years), the date that falls the relevant regular interval prior to the Period End Date at the start of the second Calculation Period, otherwise (3) the date falling X Observation Period Shift Business Days prior to the Period End Date at the start of the second Calculation Period (or, if X is zero, the Observation Period Shift Business Day immediately preceding such Period End Date), where “X” is the number of Observation Period Shift Business Days in the second Calculation Period; and

“Stub Period” means, in respect of a Swap Transaction which has Calculation Periods determined by Period End Dates that are separated by regular intervals (which may be defined by reference to specified dates, roll dates, IMM Settlement Dates, or intervals of calendar weeks, months or years), a Calculation Period that is longer or shorter than such regular interval;

- (iii) in respect of the first Calculation Period, the period from, and including, the Period One Observation Start Date to, but excluding, the Period One Observation End Date,

where:

“Period One Observation Start Date” means the date “s” Observation Period Shift Business Days preceding the Period One Deemed Preceding Period End Date;

“Period One Observation End Date” means the date “s” Observation Period Shift Business Days preceding the Period Two Deemed Preceding Period End Date; and

“Period One Deemed Preceding Period End Date” means the date falling Y Observation Period Shift Business Days prior to the Period Two Observation Start Date (or if Y is zero, the Observation Period Shift Business Day immediately preceding the Period Two Observation Start Date), where “Y” is the number of Observation Period Shift Business Days in the first Calculation Period;<sup>17</sup>

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<sup>17</sup> Set-in-Advance: For regular Calculation Periods the Observation Period is the previous Calculation Period. For the second Calculation Period, if the first period is a stub, the Calculation Period is a period of equal length to the regular Calculation Periods that runs prior to and ends on the start of the second Calculation Period. The initial stub is shifted backwards by the length of the regular Calculation Periods to run prior to the Observation Period for the second

- (iv) in respect of the last Calculation Period:
- (A) if that Calculation Period is a Stub Period, the period from, and including, the date “s” Observation Period Shift Business Days preceding the Period End Date at the start of the penultimate Calculation Period (the “**Final Period Observation Start Date**”) to, but excluding, the earlier of (i) the date falling Z Observation Period Shift Business Days following the Final Period Observation Start Date (or, if Z is zero, the first Observation Period Shift Business Day following the Final Period Observation Start Date) and (ii) the date “s” Observation Period Shift Business Days preceding the Period End Date at the end of the penultimate Calculation Period, where “Z” is the number of Observation Period Shift Business Days in the last Calculation Period (the date in either (i) or (ii), the “**Final Period Observation End Date**”),<sup>18</sup> and
- (B) if the last Calculation Period is not a Stub Period, the period set out in (i) above;

provided that if “s” is zero and the Period One Observation Start Date, the Period Two Observation Start Date, the Final Period Observation End Date or any Period End Date that would otherwise be the start date or end date for any Set-in-Advance Observation Period, falls on a day that is not an Observation Period Shift Business Day, the Preceding Business Day Convention shall apply to that date by reference to Observation Period Shift Business Days; and

“Set-in-Advance Observation Period End Date” means the Regular Period Observation End Date, the Period One Observation End Date, the Period Two Observation End Date or the Final Period Observation End Date, as applicable.

### 2.3 **Compounding with Lockout<sup>19</sup>**

Lockout Compounding could be achieved by a new compounding provision following the same approach as for ‘Compounding with Lookback’ and ‘Compounding with Observation

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Calculation Period so that Observation Periods are always consecutive and not overlapping. See the next footnote for the treatment of the final stub.

<sup>18</sup> The final stub is shifted back by the length of one regular Calculation Period and runs for the length of the stub (determined by reference to the number of Observation Period Shift Business Days in the Stub Period), unless it is a long stub, in which case it is shortened to the length of the previous Calculation Period to enable the rate to be determined by the Reset Date of that last Calculation Period. That means long stubs have a shorter Observation Period than the Calculation Period. ISDA has considered the alternatives for long last stub which are either (1) overlapping, by allowing the observation period for the long last stub to shift backwards by the actual length of the stub, this would result in overlapping with some of the observation period for the previous Calculation Period, however, given the request from WG members to have an option with no overlapping, this approach has not been adopted in Option 3; or (2) overrunning into the final Calculation Period, by allowing the observation period for the long last stub to extend beyond the Period End Date at the beginning of the long last stub. The result of this approach is that the rate is not available at the start of the long last stub, which is key to Set-in-Advance. Accordingly, this approach has not been adopted either.

Firms using this option would be advised to ensure there is no long last stub under the relevant transaction but instead to re-structure a long stub into a regular Calculation Period + a short stub so that Observation Periods are always equal in length to the length of the Calculation Period for which they set the rate. This final note on the treatment of long last stubs will be included in the Supplement to draw this to the attention of users.

<sup>19</sup> For averaging, the approach would be adapted to include a simple averaging (as opposed to a compounded averaging) formula.

Period Shift'. This provision would be inserted into the Definitions by way of Supplement. This provision would be as follows.

Please refer to Annex 3 for sample Confirmation provisions showing how the new fields would appear in the Confirmation.

*[Draft new provision to be included in the Definitions]*

**Compounding with Lockout.** If "Compounding with Lockout" is specified to be applicable to the Swap Transaction, then notwithstanding any terms of the Floating Rate Option to the contrary, the rate for a Reset Date will be the rate of return of a daily compound interest investment calculated in accordance with the formula below (where the reference rate for the calculation of interest is the relevant overnight rate in the Floating Rate Option specified in the Confirmation) and the resulting percentage will be rounded, if necessary, in accordance with the method set out in Section 8.1(a) (*Rounding*), but to the nearest percentage point specified for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix (provided that if the Floating Rate Option is not included in the ISDA Compounding/Averaging Matrix, rounding shall be as set out in Section 8.1(a) (*Rounding*)).

$$\left[ \prod_{i=1}^{d_0} \left( 1 + \frac{\text{Benchmark Level}_i \times n_i}{\text{Day Count Basis}} \right) - 1 \right] \times \frac{\text{Day Count Basis}}{d}$$

where:

"d<sub>0</sub>" is, for any Calculation Period, the number of Applicable Business Days in the Calculation Period, except if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is the number of Applicable Business Days in the Calculation Period plus 1;

"i" is:

- (i) if the first calendar day in the Calculation Period is an Applicable Business Day, a series of whole numbers from 1 to d<sub>0</sub>, each representing the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period; or
- (ii) if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is a series of whole numbers from 1 to d<sub>0</sub> where i = 1 represents the first calendar day of the Calculation Period, and each of i = 2 to d<sub>0</sub> represents the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period;<sup>20</sup>

"Benchmark Level<sub>i</sub>" means:

- (i) subject to paragraph (iii) below, in respect of any day other than a day in the Lockout Period, if day "i" is an Applicable Business Day, the rate determined in accordance with the Floating Rate Option as if such day "i" were a Reset Date for the purpose of such Floating Rate Option, and if day "i" is not an Applicable Business Day, the rate determined in respect of the immediately

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<sup>20</sup> The expanded definition of "i" versus the equivalent definition in the existing Self-compounding Floating Rate Options is intended to clarify the position when Period End Dates are unadjusted such that the first day of the Calculation Period falls on a non-business day.

preceding Applicable Business Day in accordance with the Floating Rate Option as if such Applicable Business Day were a Reset Date;

- (ii) subject to paragraph (iii) below, in respect of any day “i” in the Lockout Period, the rate determined in respect of the Lockout Date in accordance with the Floating Rate Option as if the Lockout Date were a Reset Date for the purpose of such Floating Rate Option; or
- (iii) if “Daily Capped Rate and/or Daily Floored Rate” is specified as applicable in the Confirmation, in respect of any day “i” either:
  - (A) the greater of the rate determined in accordance with paragraph (i) or paragraph (ii), as applicable, and the Daily Floored Rate specified (if any); or
  - (B) the lower of the rate determined in accordance with paragraph (i) or paragraph (ii), as applicable, and the Daily Capped Rate specified (if any),as applicable;

“t” means:

- (i) the number specified as the “Lockout” in the Confirmation;
- (ii) if a number is not specified for the purpose of the “Lockout” in the Confirmation and the relevant Floating Rate Option is included in the ISDA Compounding/Averaging Matrix, the number (if any) specified as the “Lockout” for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix; or
- (iii) if a number is not specified for the purpose of the “Lockout” in the Confirmation or in the ISDA Compounding/Averaging Matrix, five;

“n<sub>i</sub>” is the number of calendar days from, and including, the day “i” to, but excluding, the earlier of (a) the next Applicable Business Day, and (b) the Period End Date for the Calculation Period or, in respect of the final Calculation Period, the Termination Date;<sup>21</sup>

“Day Count Basis” is, in respect of a Floating Rate Option, the denominator of the Floating Rate Day Count Fraction;

“d” is the number of calendar days in the Calculation Period;

“Lockout Period” is the period from, and including, the Lockout Date to, but excluding, the Period End Date for the Calculation Period or, in respect of the final Calculation Period, the Termination Date;

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<sup>21</sup> The expanded definition of “n<sub>i</sub>” versus the equivalent definition in some of the existing Self-compounding Floating Rate Options is intended to clarify the number of days for which the rate is applicable (for example the rate applicable for a Friday will also be applicable for the following Saturday and Sunday) and also addresses the situation where the final day of the Calculation Period is not an Applicable Business Day.

“Lockout Date” is the date “t” Lockout Period Business Days preceding the Period End Date of the Calculation Period or, in respect of the final Calculation Period, the date “t” Lockout Period Business Days preceding the Termination Date;<sup>22</sup> and

“Lockout Period Business Day” means:

- (i) a Business Day in the financial centers specified for such purpose in the Confirmation; or
- (ii) if no financial centers are specified for such purpose in the Confirmation, an Applicable Business Day.

## 2.4 OIS Compounding

OIS compounding is already included in the Definitions, embedded in the Self-compounding FROs. However, those Self-compounding FROs are not compatible with a daily cap/daily floor. To enable OIS compounding to apply a daily cap/daily floor, it is proposed to include a standalone OIS compounding method including provision for a daily cap/daily floor. If parties wish to provide for a ‘lag’ between the final fixing and the Payment Date, “Delayed Payment” would need to be applied (in the same way that it is applied to Self-compounding Floating Rate Options). See paragraphs 1.4 (*Payment Delay*) and 2.5 (*Payment Delay*) below. Please refer to Annex 4 for sample Confirmation provisions showing how the new fields would appear in the Confirmation.

This provision would be as follows.

*[Draft new provision to be included in the Definitions]*

**OIS Compounding.** If “OIS Compounding” is specified to be applicable to the Swap Transaction, then notwithstanding any terms of the Floating Rate Option to the contrary, the rate for a Reset Date will be the rate of return of a daily compound interest investment calculated in accordance with the formula below (where the reference rate for the calculation of interest is the relevant overnight rate in the Floating Rate Option specified in the Confirmation) and the resulting percentage will be rounded, if necessary, in accordance with the method set out in Section 8.1(a) (*Rounding*), but to the nearest percentage point specified for the relevant Floating Rate Option in the ISDA Compounding/Averaging Matrix (provided that if the Floating Rate Option is not included in the ISDA Compounding/Averaging Matrix, rounding shall be as set out in Section 8.1(a) (*Rounding*)).

$$\left[ \prod_{i=1}^{d_0} \left( 1 + \frac{\text{Benchmark Level}_i \times n_i}{\text{Day Count Basis}} \right) - 1 \right] \times \frac{\text{Day Count Basis}}{d}$$

where:

“d<sub>0</sub>”, for any Calculation Period, is the number of Applicable Business Days in the Calculation Period, except if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is the number of Applicable Business Days in the Calculation Period plus 1;

“i” is:

<sup>22</sup> Note that this results in the last fixing applying for a number of Lockout Period Business Days equal to s, such that if s is one, there is effectively no lockout. This aligns with the way in which Rate Cut-off Date operates under the Definitions. If hedging a cash product, firms should ensure that s aligns with the number of days for which the final fixing applies under the hedged transaction and note that a lockout period of s business days in a cash product may result in the final fixing applying for s + 1 business days depending on how that lockout period is defined in relation to the last day of the interest period.

- (i) if the first calendar day in the Calculation Period is an Applicable Business Day, a series of whole numbers from 1 to  $d_0$ , each representing the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period; or
- (ii) if the first calendar day of the Calculation Period is not an Applicable Business Day, then it is a series of whole numbers from 1 to  $d_0$ , where  $i = 1$  represents the first calendar day of the Calculation Period, and each of  $i = 2$  to  $d_0$  represents the relevant Applicable Business Day in chronological order from, and including, the first Applicable Business Day in the Calculation Period;<sup>23</sup>

“Benchmark Level<sub>*i*</sub>” means, in respect of any day “*i*”:

- (i) subject to paragraph (ii) below, if such day “*i*” is an Applicable Business Day, the rate determined in accordance with the Floating Rate Option as if such day “*i*” were a Reset Date for the purpose of such Floating Rate Option, and, if day “*i*” is not an Applicable Business Day, the rate determined in respect of the immediately preceding Applicable Business Day in accordance with the Floating Rate Option as if such Applicable Business Day were a Reset Date for the purpose of such Floating Rate Option;<sup>24</sup> or
- (ii) if “Daily Capped Rate and/or Daily Floored Rate” is specified as applicable in the Confirmation, either:
  - (A) the greater of the rate determined in accordance with paragraph (i) and the Daily Floored Rate specified (if any); or
  - (B) the lower of the rate determined in accordance with paragraph (i) and the Daily Capped Rate specified (if any),
 as applicable;

“ $n_i$ ” is the number of calendar days from, and including, the day “*i*” to, but excluding, the earlier of (a) the next Applicable Business Day, and (b) the Period End Date for the Calculation Period or, in respect of the final Calculation Period, the Termination Date;<sup>25</sup>

“Day Count Basis” is, in respect of a Floating Rate Option, the denominator of the Floating Rate Day Count Fraction; and

“*d*” is the number of calendar days in the Calculation Period.

## 2.5 Payment Delay

### 2.5.1 Compounding with Payment Delay

The ‘Payment Delay’ approach can be documented using the existing provisions of the Definitions and one of the Self-compounding Floating Rate Options (e.g. GBP-SONIA COMPOUND) by applying ‘Delayed Payment’. Alternatively, this could be documented using

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<sup>23</sup> The expanded definition of “*i*” versus the equivalent definition in the existing Self-compounding Floating Rate Options is intended to clarify the position when Period End Dates are unadjusted such that the first day of the Calculation Period falls on a non-business day.

<sup>24</sup> See footnote 8.

<sup>25</sup> See footnote 11.

the modular approach by specifying an Overnight FRO, applying 'OIS Compounding' (see above) and applying 'Delayed Payment'.

Under standard OIS transactions (using a Self-compounding Floating Rate Option), the market convention is to include a payment delay by specifying that "Delayed Payment" applies and specifying the number of days by which the payment will be delayed. This results in the Payment Date falling the specified number of days after the Period End Date.

Section 4.9(c) (*Payment Date*) of the Definitions, provides as follows:

*"Payment Date" means, in respect of a Swap Transaction and a party...If "Delayed Payment" and a period of days are specified for the Swap Transaction or that party and Period End Dates are established for the Swap Transaction or that party, each day that is the specified number of days after an applicable Period End Date or after the Termination Date."*

See Annex 4 for sample Confirmation provisions for documenting a payment delay using a Self-compounding Floating Rate Option or OIS Compounding.

Note that:

- (i) the approach using the Self-compounding Floating Rate Options results in a compounded average rate; and
- (ii) the Self-compounding Floating Rate Options do not include the ability to specify a daily cap or daily floor to the observed daily RFR (but this is included in the modular 'OIS Compounding' provision).

'Delayed Payment' can be applied to any transaction type, including a transaction using the modular approach and one of the compounding methods described in this memorandum (i.e. it is not limited to the existing Self-compounding Floating Rate Options), such that parties could apply both a lookback (for example) and a payment delay.

### 2.5.2 Averaging with Payment Delay

Averaging with a payment delay can also be documented within the existing provisions of the Definitions by using one of the new RFR FROs and specifying:

1. Reset Dates as each day during the Calculation Period,
2. 'Method of Averaging' – 'Unweighted Average' or 'Weighted Average',
3. Delayed Payment – Applicable [*specifying number of Business Days payment delay*],

This can be documented using the template confirmation in Exhibit II-A to the Definitions. alternatively, Confirmation provisions for documenting a payment delay using overnight averaging, similar to those in Annex 4, will be included in the Supplement as Exhibit IV-D to the Definitions.

## 2.6 Reset in Advance/ off-set

All of the approaches discussed above result in averaging or compounding of the overnight RFR in arrears. For lookback compounding and observation period shift compounding, parties have the option to specify the number of days off-set (lookback/observation shift) that applies.

If parties want the rate to be fixed in advance, they can do this using 'Compounding with Observation Period Shift' by applying 'Set-in-Advance' and providing for the Reset Date to be the first day of the Calculation Period. This sets the Observation Period as one Calculation

Period prior to the current Calculation Period. The option for this is included in the draft observation period shift compounding provision above and the template Confirmation terms by enabling the parties to specify 'Set-in-Advance'. 'Set-in-Advance' can be used together with a number of business days observation shift by specifying a number of business days as the Observation Period Shift. This enables the rate to be fixed in advance, a number of business days prior to the Reset Date, replicating the position that exists for certain term rates that fix one or two relevant Business Days/Banking Days prior to the Reset Date. Accordingly, if firms want to retain the same fixing date (the date on which the rate is viewed and set for a Calculation Period) for a compounded Overnight RFR as currently applies for the same currency IBOR, they would specify both 'Set-in-Advance' and specify the relevant number of Business Day (e.g. one or two) for the Observation Period Shift.

## 2.7 Capping or flooring the daily rate

The new modular provisions proposed above for compounding with lookback, compounding with observation shift, compounding with lockout and the standalone OIS compounding provision all include the ability to cap and/or floor the daily observed rate by including a "Daily Floored Rate" and/or a "Daily Capped Rate" in the Confirmation. In order to use this feature firms must specify "Daily Capped Rate and/or Daily Floored Rate" as 'applicable' in the Confirmation and then specify the applicable "Daily Capped Rate" and/or "Daily Floored Rate" (it is possible to apply both a capped rate and a floored rate).

If a Daily Capped Rate is specified, the RFR observed for any applicable day will be the lower of the rate observed and the specified Daily Capped Rate. If a Daily Floored Rate is specified, the RFR observed for any applicable day will be the greater of the rate observed and the Daily Floored Rate. Daily Floored Rate can be used to include a zero floor which would then apply to floor the daily RFR at zero anytime that the observed rate was negative. It can also be used to include a negative floor if hedging, for example, a loan that has a daily floor of zero for the RFR plus a credit adjustment spread<sup>26</sup> ("**CAS**"). In this case, in order to floor the daily RFR + CAS at zero, the Daily Floored Rate in the swap would be set at the negative of the CAS. In other words, this in-built floor/cap provision is entirely flexible as to the daily floor (or cap) specified.

Note that if the Floating Rate for the entire period is to be floored at zero (rather than the daily RFR), the existing "Zero Interest Rate Method" provision in the Definitions can be used. This floors the floating rate option (the compounded RFR) plus the Spread (as defined in the Definitions<sup>27</sup>) at zero. Note that there is no option in the Definitions to floor just the compounded RFR (excluding the Spread) for the Calculation Period at zero. Inclusion of this provision ("Zero Interest Rate Method Excluding Spread") is contemplated in the 2021 Interest Rate Derivatives Definitions.

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<sup>26</sup> The CAS is generally the five-year historical median spread between the relevant IBOR and the applicable RFR, but may differ depending on the relevant documentation for the cash product in question. Note that for some cash products a methodology for CAS may not be specified, or CAS may not be applicable.

<sup>27</sup> "**Spread**" means the per annum rate (which may be negative), if any, expressed as a decimal, specified as such for the Swap Transaction or the party. For purposes of determining a Floating Amount, a Compounding Period Amount or a Basic Compounding Period Amount, the Spread will be added to the Floating Rate.

### 3 Implementation

RFR FROs (e.g. GBP-SONIA) are to be introduced into the Definitions by way of a Supplement. In addition, the Definitions will be updated by way of Supplement to introduce:

- (i) the new compounding provisions set out in paragraphs 2.1 (*Compounding with Lookback*), 2.2 (*Compounding with Observation Period Shift*), 2.3 (*Compounding with Lockout*) and 2.4 (*OIS Compounding*) of this memorandum; and
- (ii) new simple averaging provisions for each of the three 'lag' approaches (lookback, observation shift and lockout). Note that suggested drafting for simple averaging has not been set out in this memorandum but will follow substantially that set out in paragraphs 2.1 (*Compounding with Lookback*), 2.2 (*Compounding with Observation Period Shift*) and 2.3 (*Compounding with Lockout*) for compounding (albeit with an averaging formula in place of the compounding formula).

These new provisions will subsequently be included in the 2021 Interest Rate Derivatives Definitions.

## ANNEX 1

### Confirmation terms for Compounding with Lookback

[Extract from the proposed new Confirmation template (to be inserted as an Exhibit to the 2006 ISDA Definitions) populated for an Overnight Floating Rate Option applying Compounding with Lookback. This template is based on Exhibit II-D (Additional Provisions for Confirmation of a Swap Transaction that is a Self-Compounding Overnight Interest Rate Swap Transaction). Yellow highlighted rows show new fields as compared to Exhibit II-D]

Floating Amounts:

Floating Rate Payer:	[Party B/A]
<b>[Floating Rate Payer Currency Amount:]</b>	<b>[ ]</b>
Floating Rate Payer Payment Dates [Period End Dates]: <sup>28</sup>	[ ] [, subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>29</sup>
[Floating Rate for initial Calculation Period:]	[ ]
Floating Rate Option:	GBP-SONIA <i>Note: This is included as an example. The parties' preferred Overnight Floating Rate Option should be specified here.</i>
Spread:	[Plus/Minus %] [None]
Floating Rate Day Count Fraction:	[ ]
Reset Dates:	The last day of each Calculation Period [, subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>30</sup>
<b>[Compounding:]</b>	<b>[Compounding with Lookback] [Not Applicable]]<sup>31</sup></b>
<b>[Averaging:]</b>	<b>[Averaging with Lookback] [Not Applicable]]<sup>32</sup></b>
<b>[Lookback:]</b>	<b>[[ ] Applicable Business Days] [*Optional field* This is the number of Applicable Business Days lookback being applied. If none are specified, the default position of five Applicable Business Days Lookback will apply.]</b>

<sup>28</sup> If parties wish to apply 'Delayed Payment' (in addition to applying Lookback), the parties will need to include a field for 'Delayed Payment', specify this as Applicable, and state the relevant number of Business Days payment delay being applied. This has not been included in this template to avoid confusion as Delayed Payment is not required to create the 'lag' between fixing and payment when using Lookback. However, see Annex 4 for a template which includes a field for Delayed Payment.

<sup>29</sup> Bracketed language is not necessary if Payment Dates and Period End Dates are to be adjusted in accordance with the Modified Following Business Day Convention, as provided in the 2006 ISDA Definitions.

<sup>30</sup> Bracketed language is not necessary if Reset Dates are to be adjusted in accordance with the Business Day Convention applicable to Payment Dates.

<sup>31</sup> This field can be deleted when Averaging applies.

<sup>32</sup> This field can be deleted when Compounding applies.

**[Daily Capped Rate and/or Daily  
Floored Rate:]**

**[Applicable/Not Applicable]<sup>33</sup>**

**[Daily Capped Rate:**

**[ ]%**

**[Daily Floored Rate:**

**[ ]%**

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<sup>33</sup> This field is optional and can be removed if Daily Capped Rate and/or Daily Floored Rate is not applicable.

## ANNEX 2

### Confirmation Terms for Compounding with Observation Period Shift

[Extract from the proposed new Confirmation template (to be inserted as an Exhibit to the 2006 ISDA Definitions) populated for an Overnight Floating Rate Option applying Compounding with Observation Period Shift. This template is based on Exhibit II-D (Additional Provisions for Confirmation of a Swap Transaction that is a Self-Compounding Overnight Interest Rate Swap Transaction). **Yellow** highlighted rows show new fields as compared to Exhibit II-D]

Floating Amounts:

Floating Rate Payer:	[Party B/A]
<b>[Floating Rate Payer Currency Amount:]</b>	<b>[ ]</b>
Floating Rate Payer Payment Dates [Period End Dates]: <sup>34</sup>	[ ] [, subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>35</sup>
[Floating Rate for initial Calculation Period:]	[ ]
<b>Floating Rate Option:</b>	<b>GBP-SONIA</b> <i>Note: This is included as an example. The parties' preferred Overnight Floating Rate Option should be specified here.</i>
Spread:	[Plus/Minus %] [None]
Floating Rate Day Count Fraction:	[ ]
Reset Dates:	The last day of each Calculation Period [,subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>36</sup>
<b>[Compounding:]</b>	<b>[Compounding with Observation Period Shift] [Not Applicable]]<sup>37</sup></b>
<b>[Averaging:]</b>	<b>[Averaging with Observation Period Shift] [Not Applicable]]<sup>38</sup></b>
<b>[Set-in-Advance:]</b>	<b>[Applicable] [Not Applicable]] [The default position is that Set-in-Advance is not applicable.]<sup>39</sup></b>

<sup>34</sup> If parties wish to apply 'Delayed Payment' (in addition to applying Observation Period Shift), the parties will need to include a field for 'Delayed Payment', specify this as Applicable, and state the relevant number of Business Days payment delay being applies. This has not been included in this template to avoid confusion as Delayed Payment is not required to create the 'lag' between fixing and payment when using an Observation Period Shift. However, see Annex 4 for a template which includes a field for Delayed Payment.

<sup>35</sup> Bracketed language is not necessary if Payment Dates and Period End Dates are to be adjusted in accordance with the Modified Following Business Day Convention, as provided in the 2006 ISDA Definitions.

<sup>36</sup> Bracketed language is not necessary if Reset Dates are to be adjusted in accordance with the Business Day Convention applicable to Payment Dates.

<sup>37</sup> This field can be deleted when Averaging applies.

<sup>38</sup> This field can be deleted when Compounding applies.

<sup>39</sup> This field is optional and can be removed if Set-in Advance is not applicable.

**[Observation Period Shift:**

**[ ] Observation Period Shift Business Days]**

*[\*Optional field\*. This is the number of Observation Period Shift Business Days shift being applied. If none are specified, the default position of five Observation Period Business Days shift will apply. If Set-in-Advance is applicable and the rate is to be determined as at the Reset Date, the Observation Period Shift should be specified as zero. If the rate is to be determined as at a number of business days prior to the Reset Date, then the relevant number of business days should be specified here in addition to applying Set-in-Advance.]*

**[Observation Period Shift Additional Business Days:]**

**[[ ]/Not Applicable]** *[\*Optional field\* Specify the financial center(s) that will apply for the purposes of the Observation Period Shift Additional Business Days. These are the additional financial centers that will apply for the purposes of the observation shift in addition to the relevant financial center for the overnight rate (Applicable Business Days). If the observation shift is to be only by reference to the rate financial centers (Applicable Business Days), nothing needs to be specified here. If none are to apply, this can be left blank or specified as Not Applicable]*

**[Daily Capped Rate and/or Daily Floored Rate:**

**[Applicable/Not Applicable]<sup>40</sup>**

**[Daily Capped Rate:]**

**[[ ]%]**

**[Daily Floored Rate:]**

**[[ ]%]**

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<sup>40</sup> This field is optional and can be removed if Daily Capped Rate and/or Daily Floored Rate is not applicable.

## ANNEX 3

### Confirmation terms for Compounding with Lockout

[Extract from the proposed new Confirmation template (to be inserted as an Exhibit to the Definitions) populated for an Overnight Floating Rate Option applying Compounding with Lockout. This template is based on Exhibit II-D (Additional Provisions for Confirmation of a Swap Transaction that is a Self-Compounding Overnight Interest Rate Swap Transaction).

**Yellow highlighted rows show new fields as compared to Exhibit II-D]**

Floating Amounts:

Floating Rate Payer:	[Party B/A]
<b>[Floating Rate Payer Currency Amount:]</b>	<b>[ ]</b>
Floating Rate Payer Payment Dates [Period End Dates]: <sup>41</sup>	[ ] [, subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>42</sup>
[Floating Rate for initial Calculation Period:]	[ ]
<b>Floating Rate Option:</b>	<b>GBP-SONIA</b>
	<i>Note: This is included as an example. The parties' preferred Overnight Floating Rate Option should be specified here.</i>
Spread:	[Plus/Minus %] [None]
Floating Rate Day Count Fraction:	[ ]
Reset Dates:	The last day of each Calculation Period [,subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>43</sup>
<b>[Compounding:]</b>	<b>[Compounding with Lockout] [Not Applicable]]<sup>44</sup></b>
<b>[Averaging:]</b>	<b>[Averaging with Lockout] [Not Applicable]]<sup>45</sup></b>
<b>[Lockout:]</b>	<b>[[ ] Lockout Period Business Days] [*Optional field*]. This is the number of Business Days' lockout being applied. If nothing is specified, the Number of Lockout Business Days will default to five.]</b>

<sup>41</sup> If parties wish to apply 'Delayed Payment' (in addition to applying a Lockout Period), the parties will need to include a field for 'Delayed Payment', specify this as Applicable, and state the relevant number of Business Days payment delay being applies. This has not been included in this template to avoid confusion as Delayed Payment is not required to create the 'lag' between fixing and payment when using a Lockout Period. However, see Annex 4 for a template which includes a field for Delayed Payment.

<sup>42</sup> Bracketed language is not necessary if Payment Dates and Period End Dates are to be adjusted in accordance with the Modified Following Business Day Convention, as provided in the 2006 ISDA Definitions.

<sup>43</sup> Bracketed language is not necessary if Reset Dates are to be adjusted in accordance with the Business Day Convention applicable to Payment Dates.

<sup>44</sup> This field can be deleted when Averaging applies.

<sup>45</sup> This field can be deleted when Compounding applies.

**[Lockout Period Business Days:]**

**[[ ] [Applicable Business Days]]** [\*Optional field\*. Specify the financial center(s) for the purposes of the Lockout Business Days. If none are specified, the Lockout Business Days will be the Applicable Business Days (i.e. the rate business days). The option here to specify 'Applicable Business Days' reflects the default position.]

**[Daily Capped Rate and/or Daily Floored Rate:]**

**[Applicable/Not Applicable]** [\*Optional field\*]<sup>46</sup>

**[Daily Capped Rate:]**

**[[ ] %]**

**[Daily Floored Rate:]**

**[[ ] %]**

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<sup>46</sup> This field can be removed if Daily Capped Rate and/or Daily Floored Rate is not applicable.

## ANNEX 4

### Confirmation terms for Compounding with Payment Delay

[Extract from Exhibit II-D to the 2006 ISDA Definitions, populated for either a Self-compounding Floating Rate Option or an Overnight FRO + OIS Compounding, using Delayed Payment to adopt a Payment Delay approach. **Yellow** highlighted rows show new fields as compared to Exhibit II-D]]

Floating Amounts:

Floating Rate Payer:	[Party B/A]
<b>[Floating Rate Payer Currency Amount:]</b>	<b>[ ]</b>
Floating Rate Payer [Payment Dates] [Period End Dates]:	[ ] [, subject to adjustment in accordance with the [Following/Modified Following/Preceding] Business Day Convention] <sup>47</sup>
<b>Delayed Payment:</b>	<b>[Applicable, with the specified number of days being [five] Business Days/Not Applicable]</b>
	<i>Notes:</i>  <i>1. This is not included in the pro-forma Confirmation at Exhibit II-D to the 2006 ISDA Definitions and parties will need to include it in their Confirmation.</i>  <i>2. This will result in the Floating Rate Payer Payment Dates falling the specified number of days after the Period End Date. Parties should specify Period End Dates above and not Payment Dates. If no Business Day Convention is specified, the Modified Following Business Day Convention will apply to the Period End Dates and Payment Dates.</i>
[Floating Rate for initial Calculation Period:]	[ ]
<b>Floating Rate Option:</b>	<b>[GBP-SONIA-COMPOUND] [GBP SONIA]</b> <i>Note: This is included as an example. The parties' preferred Self-compounding Floating Rate Option or Overnight Floating Rate Option should be specified here.</i>
Spread:	[Plus/Minus %] [None]
Floating Rate Day Count Fraction:	[ ]
Reset Dates:	The last day of each Calculation Period [, subject to adjustment in accordance with the

<sup>47</sup> Bracketed language is not necessary if Payment Dates and Period End Dates are to be adjusted in accordance with the Modified Following Business Day Convention, as provided in the 2006 ISDA Definitions.

[Following/Modified Following/Preceding]  
Business Day Convention]<sup>48</sup>

*Note: This is as per the pro forma Confirmation at Exhibit II-D. As compounding is built into the Floating Rate Option, and the relevant RFR (SONIA in this example) is viewed for each relevant Business Day/Banking Day in the Calculation Period (London Banking Days in this example), the Reset Date is the last day of each Calculation Period.*

**[Compounding:**

**[OIS Compounding] [Not Applicable]**

*Note: If using a Self-compounding Floating Rate Option, specify 'Not Applicable'. There is no need to specify Compounding as being applicable, as the compounding mechanic is built into the Floating Rate Option itself. If using an Overnight Floating Rate Option, specify 'OIS Compounding'. If using Overnight Averaging, specify 'Not Applicable' or delete this field.*

**[Averaging:**

**[Overnight Averaging] [Not Applicable]]<sup>49</sup>**

**[Daily Capped Rate and/or Daily Floored Rate:]**

**[Applicable/Not Applicable]<sup>50</sup>**

*Note: Daily Capped Rate and/or Daily Floored Rate can only be used when using an Overnight Floating Rate Option and OIS Compounding or Overnight Averaging.*

**[Daily Capped Rate:]**

**[ [ ] %]**

**[Daily Floored Rate:]**

**[ [ ] %]**

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<sup>48</sup> Bracketed language is not necessary if Reset Dates are to be adjusted in accordance with the Business Day Convention applicable to Payment Dates.

<sup>49</sup> If using an Overnight Floating Rate Option and applying averaging, specify 'Overnight Averaging'. If using OIS Compounding, specify 'Not Applicable' or delete this field.

<sup>50</sup> This field is optional and can be removed if Daily Capped Rate and/or Daily Floored Rate is not applicable.