Working Paper on Loans Processing

The Working Group on Sterling Risk-Free Reference Rates

August 2019

On behalf of the Working Group on Sterling Risk-Free Reference Rates (RFRs) - Market Infrastructure Sub-Group

Topic from the Priority List

3c. Loans Processing "Ability for Back Office (settlement, servicing) and accounting systems to calculate accruals, P/L, and settlement values."

Objectives

This document aims to highlight potential courses of action for the broad range of market participants and vendors to aid in the operational processing of loans referencing alternative risk free rates. It focuses on potential enhancements to loans systems for vendors and proprietary system owners to help accelerate the adoption of system updates to support use of SONIA. This is a working paper and may be updated to account for future developments. To provide any feedback or comments, please contact RFR.Secretariat@bankofengland.gsi.gov.uk.

The RFRWG recognises that the development of conventions for new markets is an important factor in supporting the design of these enhancements. Readers may find it helpful to refer to the Working Group's statement on conventions for referencing SONIA, which summarises responses to an earlier public Discussion Paper on this topic.[1] Work is also taking place internationally, for example the FSB has published a user guide to RFRs,[2] and the Swiss National Bank Working Group on RFRs has suggested options for calculating compounded interest accruals for SARON.[3]

Key takeaways:

- System providers should proceed on the basis that functionality will be required to support loans based on overnight rates compounded in arrears, whilst allowing for the potential for forward-looking term rates to become available in the future.
- System enhancements will need to build in flexibility to take account of potential differences across jurisdictions in both transition timelines and conventions in new markets in RFRs. Systems should also have the ability to take account of any amendments that may be made during the lifetime of the trade.
- Market participants are encouraged to engage with their technology teams or vendors as soon as possible to prioritise planning for essential system updates.
- The availability of fully-specified supporting systems should not be seen as a barrier to issuance of SONIA referencing instruments, market participants are encouraged to instead find interim solutions to facilitate the demand for these types of products.

[1] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/statement-and-summary-of-responses-to-sonia-conventions-discussion-paper.pdf
[2] https://www.fsb.org/wp-content/uploads/P040619-1.pdf
[3] https://www.snb.ch/n/mmr/reference/minutes_20190205/source/minutes_20190205.n.pdf

Processing Interest Accruals

System providers will need to take into account differences in the operation of interest accruals for use of RFRs

The RFRWG anticipates that corporate borrowers will increasingly prefer to reference compounded SONIA[4] so it will be important for supporting systems to be developed quickly to enable this activity to take place on a large scale. The RFRs are backward looking, i.e. set in arrears and pay in arrears, whereas Libor is set in advance and pays in arrears. Current loans systems therefore generally calculate forward-looking interest accruals and are typically not set up to support backward-looking overnight compounding accruals so changes will be required to facilitate this.

The backward-looking nature of compounded risk-free rates has implications for settlement, funding and client servicing requirements, as the final fixing is not known until the end of the interest period or, if a lag is used, only known a few days before the payment is due. While these issues will not arise in the case of loans utilising a forward-looking term rate, it will be important for systems to enable efficient calculation, invoicing and payment of interest coupons under both alternatives.

In particular, use of overnight rates involves a need to convert from a series of daily SONIA rates to a final compounded rate at the end of an interest period. A variety of interest calculation tools have been produced to help users with this,[5] and it is expected that daily screen rates for compounded SONIA may emerge over time. System developers will need to take account of both the potential for compounded rates to be entered manually and for automated feeds to become available.

The RFRWG also supports work currently underway to develop a term benchmark based on the sterling risk-free rate, known as a Term SONIA Reference Rate (TSRR). Future use of such a benchmark in cash markets is expected to be more limited than the current use of LIBOR and market participants are encouraged not to delay preparations to conduct new business using overnight rates while the development of a TSRR takes place. Nevertheless, supporting systems will therefore need to retain the flexibility to utilise both backward- and forward-looking rates.

Settlement Processing Considerations

Does the settlement process change with an RFR benchmark?

This section outlines some of the areas for developers to take into account in developing systems to support settlement processing. It will be important across many of these areas for systems to build in flexibility to account for potential differences across jurisdictions in both transition timelines and conventions in new markets in RFRs. While the focus of this paper is primarily on requirements in sterling markets, it also flags potential areas where international approaches may differ.

Backward-looking overnight compounded rate:

- When applying a daily-compounded overnight calculation, generally, the sum outstanding interest payment is not known before the end of the interest period unless a lag is introduced. The interest calculation certainty would need to be balanced

[4] https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/statement-on-the-progress-on-adoption-of-risk-free-rates-in-sterling-markets

[5] For example, from IBA and NatWest

against the timeframe required for sending invoices to clients, and making the payment. Therefore, different lag adjustments may be used to cater for different business needs, so systems will need the flexibility to apply different lag periods.

- For a recent loan,[6] margin treatment was excluded from compounding. This is similar to SONIA-referencing bonds and the same approach could apply for the addition of a spread adjustment.
- Borrower and lender interest notices will need to be adapted to show how interest payments are derived, showing a day-by-day breakdown. Developers of compounding calculators are encouraged to embed transparent parameters that cater for a variety of business demands. If such calculators were to become widely available, it would afford the borrowers and lenders the opportunity to validate agents' calculations.

Lag period:

- Industry discussions have explored different ways of adding a processing window into the accrual period by providing a small number of days at the end of a compounding period where the rate is known. Knowing the interest payable a few days ahead of the accrual period enables invoices to be sent to clients and to make calculations and payments on time.
- Looking at SONIA referencing FRN conventions as an example, these have used compounded RFR with a 5 day lag.[7] Similarly, the convention of the first SONIA credit facility also used a 5 day lag. But as noted above, the period of the lag may be subject to negotiation between borrowers and lenders of a new loan, so while consistency with FRNs and the derivatives market conventions is an important factor for market participants, systems will need to be able to accommodate differing lag periods, and take international alternatives, such as lock-out period, into account.

Mid period settlement/Delayed compensation:

- Primary and secondary loan trading systems need to be adapted to calculate settlement proceeds. If the trade settlement does not happen at the end of the period, use of a lock would require an individual lock calculation per trade to determine the interest owed, whereas a lag would have an agreed number of days of rates into the future and thus have less overall technology impact.
- When the transition settles after the delay period commencement date, an overdue payment arise. Primary and secondary loan trading systems need to be adapted to calculate this delayed compensation. Use of a lock would require an individual lock calculation per trade upon settlement to determine the interest owed, whereas a lag would have an agreed number of days of rates into the future and thus have less overall technology impact. This is due to the current convention for late loans settlement that means the seller is liable to pay overdue settlement (in the form of interest to the buyer at the terms of the trade based on Libor) for the number of days overdue and is offset against the cost of carry due to the seller for funding the late settlement (typically a daily average of 1M Libor) which results in a net compensation number.

Forward-looking term rate:

- Currently on maturity (or at an interim payment date) the interest due is already known. It would have been fixed at the start of the interest period for settlement at the end of the period, with accompanying client invoices typically having been sent in advance of

[6] https://www.natwestmarkets.com/natwest-markets/Insight/Has-the-loan-market-Realised-SONIAs-potential.html
[7] Internationally, some SOFR FRN deals have also used compounded RFR with a 2 day lag.

payment date. As noted above, systems should maintain the capability to operate in this manner to account for the potential development of a TSRR.

- System developers should also take into account the potential for complexity to arise if a combination of backward and forward looking rates are used within a multi-currency deal, or if different credit spread adjustments were applied across currencies.

System Upgrades

Market participants are encouraged to consider engaging with their technology teams or vendors, along with their operations teams, to discuss the challenges of supporting overnight compounding loans. They will need to agree requirements, understand timelines, and incorporate into development plans. This should be done as soon as possible to ensure end user system updates are prioritised (subject to usual operational risk procedures), noting that system developments and system updates may potential progress simultaneously.

Syndicated borrowers will need all of their syndicate lenders to be ready to structure new deals using RFRs in order to make the transition, so wide global adoption of system updates will need to take place rapidly.

While the availability of fully-specified supporting systems is an important step toward transition, their absence should not be seen as a barrier to issuance of SONIA referencing instruments in the meantime. Market participants are instead encouraged to find interim solutions to facilitate the demand for these types of products.