SUMMARY OF FEEDBACK RECEIVED FROM THE CONSULTATION ON MARKET CONVENTIONS FOR FINANCIAL PRODUCTS REFERENCING NOWA

WORKING GROUP ON ALTERNATIVE REFERENCE RATES FOR THE NORWEGIAN KRONE

SEPTEMBER 2020

Introduction

The sub-group for Market standards and fallback solutions, on behalf of the working group for alternative reference rates in NOK (ARR), has received feedback to the consultation from the following ten respondents, representing15 different entities:

- Citi
- DNB
- Gjensidige
- Handelsbanken
- Nordea
- Nordic Trustee
- Norske Finansanalytikeres Forening (NFF)
- Norske Finansielle Referanser (NoRe)
- SpareBank 1 Nord-Norge, SpareBank 1 SMN, SpareBank 1 SR-Bank, SpareBank 1 Østlandet, SpareBank 1 Boligkreditt og SpareBank 1 Næringskreditt
- Undergruppen for etablering av OIS-marked i NOK

The respondents have to a varying degree commented on the full scope of the consultation paper. Nordic Trustee have, for instance, focussed their response on practical elements in connection with the implementation of an alternative reference rate. The sub-group for establishing an OIS market in NOK have limited their feedback to market conventions used in the interdealer market for derivatives referencing Nowa.

Overall the respondents express support for the recommendations of the sub-group, with some exceptions. See below for a summary of the feedback received to the different topics covered in the consultation. The feedback received in response to the request for comments on topics not discussed in the consultation is listed in full at the end of the report. The ARR and its sub-groups will evaluate and, if relevant, comment on these in the final report.

Although the respondents in general supported the ARR recommendations, it is clear from the feedback that it seems necessary with diverging market conventions for some products and borrower types, e.g. in relation to interdealer derivatives.

The consultation responses of Nordic Trustee and Norske Finansielle Referanser (NoRe) are published in Norwegian on their respective web-pages. Please see links below.

- Nordic Trustee
- NoRe

Summary of feedback

Topic 1 – Day Count Convention

- <u>Explanation:</u>
  NOWA is quoted as an annualized rate with day count convention actual days divided by 365. The number of days in the interest period is calculated by including the first day in the interest period up to, but not including, the last day in the interest period.

- <u>Working group recommendation:</u>
  The working group recommends interest payment with NOWA as a reference rate calculated with actual days in the interest period divided by 365 as the day count convention.

- Question 1:
  Does your institution support the recommended day count convention? If not, please explain why this is not your preferred solution, and suggest an alternative solution.

- **<u>Feedback summary:</u>**
  None of the respondents opposed the recommendation of the ARR, but one institution pointed out that information on day count conventions for corresponding interest rates in other currencies should be reviewed to, if possible, align the Nowa conventions with the international standard. Furthermore one respondent noted that the day count convention in bond contracts referencing Nibor, today, uses Act/360.

Topic 2 – Business Day Convention

- <u>Explanation:</u>
  If the interest payment date falls on a weekend or on another bank holiday, then the actual payment date needs to be rolled forward or backward. Multiple conventions are available to handle this.
    - Following business day: If the interest payment day falls on a weekend or on a bank holiday, the payment day is rolled forward to the next business day.
    - Modified following business day: Same as "Following", but if the next business day falls in the following calendar month, the payment day is rolled backward to the immediately preceding business day.

- Preceding business day: If the interest payment day falls on a weekend or on a bank holiday, the payment day is rolled backward to the immediately preceding business day.
- Adjusted interest days: If the interest payment day needs to be rolled forward or backward, the interest accrual days may be adjusted accordingly such that the interest period matches with interest accrual days. This is the normal convention for products using NIBOR as the reference rate.

- <u>Working group recommendation:</u>
  The working group recommends that contracts referencing NOWA use modified following with adjusted interest accrual days as the business day convention since this is the standard for contracts with NIBOR as the reference rate.

- <u>Question 2:</u>
  Does your institution support the recommended modified following, adjusted, as the business day convention? If not, please explain why this is not your preferred solution, and suggest an alternative solution

- **<u>Feedback summary:</u>**
  All respondents commenting on this topic supported the ARR's recommendation of using the modified following, adjusted business day convention.

Topic 3 – Forward-looking or Backward-looking observations of NOWA Fixings during the Rate Period

- <u>Explanation:</u>
  NOWA is an overnight rate and accrued interest shall therefore be exchanged daily. However, daily exchange of interest is technically and administratively challenging. In order to align the use of NOWA in contracts to mirror conventions using NIBOR as the reference rate, one has two options. One option is to fix the interest rate for the interest period at the start of the period. The other option is to use actual NOWA fixings in the interest period and calculate the weighted average interest rate with payment at the end of the interest period.

  - Interest rate calculations based on forward-looking term rates:
    - The methodology of applying a fixed term NOWA that is set at the beginning of the rate period is the option that corresponds the closest to that of NIBOR. The coupon payment is thus known at the start of the interest period. Since this option aligns with todays' practice this would probably be the least challenging option for existing accounting and payment systems.

        - A fixed NOWA for the interest period simplifies liquidity management, especially for smaller enterprises.
        - The development of a forward-looking term rate based on NOWA requires a well-functioning derivatives market structure where OIS-swaps are traded with sufficient liquidity. As of today, no such market exists for the Norwegian krone, as is the case for other currencies as well. Other countries' working groups for alternative reference rates have thus not recommended a forward-looking interest rate as the market convention.
        - A fixing for a forward-looking NOWA will be based on quotes in the derivative market, and to a lesser degree on actual transactions, which is one of the pillars of the introduction of alternative reference rates. With few participants and limited liquidity in the Norwegian derivatives market, this will probably be challenging. The other sub working group is looking into how an overnight index swap (OIS) market can be established in Norwegian kroner. They aim to publish a consultation and final report before year end 2020.

    - Interest rate calculations based on backward-looking term rates:
        - All issuance of bonds with a floating interest rate (FRNs) in the market referencing SOFR, SONIA or €STR has used a backward-looking method for calculating the coupon.
        - ISDA's proposed fallback solution for derivative contacts referencing IBOR is based on a backward-looking interest rate calculation.
        - Backward-looking interest rate calculation is based on actual NOWA fixings, which is based on actual transactions and meant to reflect the interest rate level in the market.
        - The interest amount is not known until the end of the interest period after the last NOWA fix. Challenges posed by not knowing the interest amount before the payment day can be solved by different conventions that are further evaluated in this document.

- <u>Working group recommendation:</u>
  The working group recommends a backward-looking interest rate calculation as it reflects the actual market development of the interest rate level, as opposed to the expected development. Furthermore, a forward-looking term rate requires a well-functioning OIS derivative market, which may be challenging to develop in Norwegian kroner. Backward-looking calculations are also the conventions used as the fallback solution by ISDA in the derivative market, and floating rate bond issuance in GBP, USD and EUR. Lately, in the bank lending market, facilities with backward-looking interest rates referencing SONIA and SOFR have been established.

- <u>Question 3:</u>
  Does your institution support backward-looking interest rate calculation as the convention for contracts referencing NOWA? If not, please explain why this is not your preferred solution, and suggest an alternative solution.

- <u>**Feedback summary:**</u>
  All respondents commenting on this topic supported the ARR's recommendation of a backward-looking interest rate calculation. One respondent pointed out that clarification on this point is especially important for counterparties in existing contracts where the reference rate needs to be replaced before maturity. In any new contracts the counterparties will be free to agree a model of choice, and for standardised products the decision will be up to the standard setter(s).

Topic 4 – Simple Nowa average or compounded Nowa average

- <u>Explanation:</u>
  To calculate an interest rate for a period longer than one day using daily NOWA fixings, one must choose between a simple or compounded average.

    - Simple average:
        - A simple average of NOWA fixings is easier to calculate and easier to implement in systems.
        - However, there are few products internationally that use simple average for interest rate calculation.
    - Compounded average:
        - NOWA is a daily rate, so by investing 1 today, you will receive 1 + interest tomorrow. Tomorrow you invest 1+ interest until the day after tomorrow with a new NOWA fix. By using NOWA as reference rate for a period longer than one day without exchanging interest, the most correct approach mathematically will be to use a compounded interest rate average.
        - FRNs issued in SONIA and €STR use compounded interest rates and this is also the recommended solution from ISDAs consultation on fallback solutions.
        - For some users a compounded interest rate increases the complexity. One way to reduce this complexity would be if compounded NOWA rates are published by one official source.
        - ARR has sent a letter to the Norwegian Central Bank with an inquiry for them to calculate and publish a NOWA compounded index.

- <u>Working group recommendation:</u>
  The working group recommends compounded NOWA average in contracts that reference NOWA.

- Question 4:
  Does your institution support compounded average as the convention for contracts referencing NOWA? If not, please explain why this is not your preferred solution, and suggest an alternative solution.

- **Feedback summary:**
  All the respondents giving feedback on this topic supported the ARR's recommendation to use compounded Nowa average. One respondent commented that it is not preferable to use different conventions in different markets and products.

Topic 5 – Comparison between different methods for calculating the term interest rate

- Explanation:
  When using a backward-looking calculation of the interest rate, the rate is not known until the last NOWA fix at the end of the period. This may lead to administrative challenges for settlements with short notice. To reduce these challenges there are different convention used in the market to increase the time between when the interest rate is known and the actual settlement of payments.

  - Lookback:
    - The NOWA fix to be used to calculate the interest rate is found by looking back a set number of business days, whereas the day weighting follows the interest period. So far, most of the FRNs issued referencing SONIA or €STR use the lookback convention, normally with a 5 days lookback period. Issuance of FRNs referencing SOFR has so far used different conventions, both lookback with 2 or 5 days, as well as lockout (see below) or a combination of the two methods. By using a 5 days lookback period, the NOWA rate fixing on any day will correspond to the same weekday the previous week. The day-weighting will, in most cases, be correct over weekends, unless there are bank holidays during the 5-day period.
  - Lockout:
    - The NOWA fix and day-weighting follows the interest period, except for a set number of days before the interest period ends, where the NOWA fix will be kept unchanged. The interest rate will thus be known a set number of days in advance. Some FRNs referencing SOFR have used this convention, often in conjunction with lookback. If the NOWA fix on the day of the lookout is an outlier in the interest period, this could have a significant impact on the calculated period interest rate.
  - Delayed Payment:
    - The interest payment is delayed a pre-determined number of days after the end of the interest period. This convention is commonly used in the OIS market.

- Shifted observation period:
  - The shifted observation period convention is closely linked to the lookback convention. Both methods use the NOWA fix a set number of days back, but where the lookback convention uses the day weightings in the interest period, the shifted observation period also shifts the day weightings back the same set number of days. This convention ensures that the weight given to every NOWA fix is "correct", i.e. it takes holidays into account with the correct day weighting. This convention is also ISDAs fallback solution for derivatives given an IBOR cessation. If the administrator of NOWA decides to publish a NOWA index, like FED NY does for SOFR and BoE is planning to do for SONIA, this convention will make it possible to use that NOWA index to calculate compounded interest rates for products referencing NOWA.

- Working group recommendation:
  The working group recommends the shifted observation period convention. This convention gives the correct weightings to the NOWA fixings and also ensures that a potential NOWA index can be utilized for calculation of compounded interest rates.

- Question 5:
  Does your institution support the shifted observation period as the convention for contracts referencing NOWA? If not, please explain why this is not your preferred solution, and suggest an alternative solution.

- **Feedback summary:**
  The respondents commenting on this topic in general support the working group's recommendation of using shifted observation period, with some exceptions. It is pointed out that if the international market standard for a product differs from the Norwegian market convention for Nowa the former should apply, and the ARR is recommended to monitor the international developments in this regard. For currencies with active OIS derivative markets the standard convention for trades between market-makers is payment delays of T+1 and T+2. Respondents note that they prefer to align NOK OIS conventions with the conventions used in the global OIS markets. Several respondents comment that for this topic use of alternative conventions for different financial instruments should be assessed.

  Further to this, the respondents support a Nowa index published by the administrator. The respondents' feedback on number of days of the shift is not unanimous and the feedback spans from two to five days. See further comments under topic 6.

Topic 6 – Notification period for interest payments

- Explanation:
  Given a backward looking interest rate calculation for NOWA, the period interest rate will be known a set number of days before the last day of the interest period. To execute a payment the same day as the interest amount is known, can be challenging. This has led to the development of conventions that enable the interest amount to be known a set number of days ahead of the payment day. The most common notification periods are 2 or 5 days before the payment of the interest amount. Please note that notification period in this context means the number of lockout days, the number of lookback days or the number of days for observation shift in the conventions discussed above (topic 5).

  - Notification period of 2 business days: ISDA recommends a shifted observation period with 2 business days shift as the fallback solution. This enables a notification period of 2 business days. ARRC's FRN working group describes how FRNs can be aligned to derivatives with 2 days observation shift.
  - Notification period of 5 business days: For some products a notification period of 2 business days can be too short to accommodate an interest payment in the payment systems. The convention mostly used in the bond market in GBP referencing SONIA has so far been 5 days lookback which gives rise to a 5 days notification period.

- Working group recommendation:
  The two abovementioned notification periods are the most frequently observed in the market across products, while more options exists. In the high yield (HY) market in Norway it is common that the issuer has to make the interest amount available 3 days before the actual payment day. The key principle of the working group has been to propose, to the greatest extent possible, the same conventions for Nowa across different products and to align with recommended conventions in other currencies. With the recommended convention for ISDA being a 2 business days shifted observation period for their fallback solution and since derivatives are being used in combination with both loans and bonds, the recommendation from the working group is to mirror that convention. It is also worth noting that in a period with volatile interest rate levels a notification period that deviates from the interest period, could potentially have a significant impact on the calculated period interest rate.

- Question 6:
  Does your institution support a 2 business days notification period as the convention for contracts referencing NOWA? If not, please explain why this is not your preferred solution, and suggest an alternative solution.

- **Feedback summary:**
  The respondents do not give unanimous responses to this question, but the majority support the ARR's recommendation for a 2 days notification period. It is pointed out that there might be practical issues and characteristics of types of issuers that could necessitate the use of notification periods longer than 2 days.

Topic 7 – Treatment of Margin over Nowa

- Explanation:
  The margin, which could be positive or negative, to be added to Nowa for loans, bonds or derivatives can either be added to daily Nowa fixings and then compounded, or added to the compounded Nowa at the end of the interest period.
    - Adding the margin at the end of the compounded interest period:
        - The daily compounding of the margin will lead to changes in the current margin levels. It is easier to compare margins across transactions if the compounded reference rate and the margin are kept separate.
        - A compounded margin increases the complexity of the interest rate calculation.
        - Most interest rate derivatives do not contain a margin over the reference rate. A compounded margin will complicate the use of interest rate derivatives in combination with loans or bonds.
        - So far issuance of bonds referencing SONIA and €STR have added the margin to the compounded reference rate.

- Working group recommendation:
  The working group recommends adding the margin to the compounded Nowa, i.e. not compounding the margin

- **Feedback summary:**
  All respondents commenting on this topic supported the ARR's recommendation of adding the margin to the compounded Nowa.

Topic 8 – Other questions

- Explanation:
  In the table above different challenges and solutions to market conventions for the use of NOWA in financial products are discussed. The working group has given its initial recommendation for each topic. The recommendations are based on the key principles of to the greatest extent possible, to propose the same conventions for NOWA across different products and to align with recommended conventions in other currencies.
- Question 8:

Are there any market conventions for the use of NOWA as a reference rate in financial products that have not been discussed in this consultation?

- **Received comments:**

  The respondents note the following:
  - The consultation paper does not discuss the number of decimals to use when rounding the calculated Nowa term interest rate. We propose to use the same standard as for SOFR which is five decimals.
  - We miss an assessment of the following issues in connection with the potential disappearance of the term structure in the money market and backward-looking interest payments:
    - Possible consequences for and flexibility for implementation of the central bank's monetary policy and liquidity management
    - Banks' conduct with regards to liquidity management and pricing towards clients, and the banks own hedging
    - Consequences of the clients adapting to not having a predetermined cost of borrowing and a clear money market / interest rate curve
    - Pricing of interest rate related products in the non-bank sector
    - Evaluation of the potential cost increase of systems post transition and, if so, who would face the increased costs?
  - Question 7 discusses whether the margin over Nowa should be compounded or not. Another question is how the margin, that in contracts referencing Nibor ordinarily is fixed as an annualised percentage and added to Nibor, should be calculated for the relevant term. Also in relation to this it must be decided which day count convention to use. It is assumed that it would be most appropriate for the day count convention for the margin to align with the day count convention that is decided for Nowa.
  - We emphasize the importance of cross border transactions in the construction of a representative Nowa rate. Especially looking back at the crisis where NOWA volumes stayed close to 0 on many occasions. Eliminating cross border transactions means that significant volumes that indicate where the market is at will never be included in the benchmark. We therefore kindly ask the working group to re-assess the use of cross border transactions, and evaluate whether they can be included in the NOWA benchmark.
  - Sub-working group for Establishing an OIS market in NOK proposes specific conventions for interdealer trades referencing Nowa in their feedback to this consultation. Their suggested conventions are outlined in their feedback paper that can be accessed by following this link.