

**FINAL REPORT:
ESTABLISHING AN OVERNIGHT INDEX SWAP
(OIS) MARKET IN NOK**

WORKING GROUP ON ALTERNATIVE REFERENCE
RATES FOR THE NORWEGIAN KRONE

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Introduction

A working group on alternative Norwegian krone reference rates (ARR) was established by Norges Bank, in consultation with the financial industry, in early 2018. This working group consists of a number of representatives from the Norwegian financial industry.¹ The main objective of the first part of the group's work was to recommend an alternative reference rate for the Norwegian krone. The working group published its recommendation of a reformed version of Nowa (Norwegian Overnight Weighted Average) as the alternative reference rate at the end of September 2019.²

Since then, the second phase of the group's work on alternative reference rates has been focusing on how to transition to Nowa as an alternative reference rate. Two subgroups have been established, focusing on:

(1) Market standards and fallback solutions

(2) Establishing an OIS (Overnight Index Swap) market in NOK

Subgroup (2) consists of a broad group of representatives with interest in the NOK interest rate derivatives market.³ In July 2020, subgroup (2) published a consultation on the work done on establishing an OIS market in NOK. The working group identified a number of factors that argued in favour of developing an OIS market in Norway, but also identified a number of obstacles that would need to be overcome in order to make such a market feasible. The report concluded with suggestions as to how these challenges could be overcome and sketched a framework for how such a market could be established. The report asked for views and feedback from market participants, with a deadline of 1st September 2020.

This final report will first summarise the feedback received to the consultation. Based on this feedback and further consultation within the working group and with other stakeholders, the report will then outline a final suggested framework and timeframe for the establishment of an OIS market in NOK. The working group once again welcomes feedback, which can be submitted to the secretariat at ARR@norges-bank.no.

1. Feedback to the Consultation

A summary of the feedback received

The working group received limited feedback to its first consultation, although it should be pointed out that a large number of the relevant stakeholders are represented within or were consulted by the working group, and feedback and views from these institutions was therefore already represented in the consultation.

¹ ARR consists of DNB Bank, Sparebanken Vest, Nordea Bank, Handelsbanken, Skandinaviska Enskilda Banken, Danske Bank, Swedbank, SpareBank 1 SMN, SpareBank 1 Nord-Norge, SpareBank 1 Østlandet, Sparebank 1 SR-Bank. Norges Bank and Finans Norge attend as observers.

² https://www.norges-bank.no/globalassets/upload/markeder/arr/arr_report_reccommendation_alternative_reference_rate.pdf

³ The sub working group consists of representatives from Danske Bank, DNB, Handelsbanken, HIS Markit, Kommunalbanken, Nordkinn Asset Management, Nordea Bank, LCH, SEB, Sparebank 1 Markets, Sparebank 1 Nord-Norge, SR-Bank and Swedbank. Norges Bank attends as an observer.

Feedback was however received from a number of banks, members of the insurance and clearing sectors, as well as Norges Bank. The working group has also had a tight dialogue with interdealer brokers, trading / trade affirmation venues and other relevant industry bodies.

In general, the feedback received to the consultation has been positive, both to the development of an OIS market in NOK and to the suggestions made by the working group. Listed below is a summary of the key pieces of feedback received:

- All banks who submitted feedback were positive to the development of an OIS market and ready/willing to participate in such a market as appropriate.
- Some respondents expressed concern regarding the backward-looking nature of Nowa-linked products (i.e. the lack of term Nowa rates) and the subsequent uncertainty of cashflows until just before payment. These respondents were therefore in favour of exploring options for Nowa term rates that would allow cashflow certainty like that which currently exists in products linked to Nibor.
- Clearing was stressed as fundamentally important for the establishment of an OIS market. The product design should not present any obstacles to clearing, but there are a number of processes that would need to be completed before clearing could be established.
- The timeline presented in the report was viewed as ambitious by some respondents, but possible with a concerted effort from relevant parties.
- Some respondents expressed the view that strong support from the official sector would be important in driving demand/liquidity for derivatives as well as encouraging issuance of cash products linked to Nowa.
- Norges Bank made no specific comments to the suggestions made in the report but expressed a positive view towards the establishment of an OIS market. They commented that a liquid OIS market referencing Nowa could contribute to a better-functioning interest rate market in Norway, giving participants better possibilities to take or hedge risk connected to changes in the Norges Bank target rate as well as helping to stimulate debt issuance linked to Nowa. A full copy of Norges Bank's comments can be found in Appendix 1 of this report.

Response to feedback

The working group was encouraged that all bank respondents stood ready to support the market.

With regards to the backward-looking nature of Nowa, the working group notes that its mandate is strictly limited to the establishment of an OIS derivatives market and that all major global OIS derivative markets operate on a backward-looking basis. The working group acknowledges there are potential difficulties with moving to a backward-looking reference rate for a wide range of other financial products but refers to the consultation and final reports published by the subgroup for *Market standards and fallback solutions*⁴ which address these issues. There is no doubt however that a robust OIS derivatives market would be essential for any potential future establishment/use of Nowa term rates for other financial products, and this is another reason why working towards developing an OIS market linked to Nowa is important.

⁴ <https://www.norges-bank.no/en/topics/liquidity-and-markets/working-group-arr/>

The working group acknowledges the fundamental importance of clearing in the development of an OIS market linked to Nowa and the working group members stand ready to support its establishment as required, especially given the ambitious timeframe.

The working group has communicated the feedback received regarding official sector support to Norges Bank.

Conclusion

Based on the feedback received, the working group did not see the need for any major changes in the planned steps for developing an OIS market referencing Nowa, and has therefore been working towards firming up the required steps and timeline as outlined in its initial consultation.

2. Market Conventions

Suggested interdealer conventions

The subgroup for Market standards and fallback solutions published a consultation report “Market conventions for Financial products Referencing Nowa” on 19 June 2020⁵. The subgroup for Establishing an OIS market in NOK responded to this consultation with suggested conventions for the interdealer derivatives market. This response can be found in full on the ARR website.⁶ Below are the suggested conventions for the interdealer market.

Vanilla OIS

Parameter	Fixed Leg	Float Leg: NOWA
Start date		Spot (T+2)
Frequency		Annual
Averaging	N/A	Daily compounding, exclude spread
Day count convention		ACT/365
Business day convention		Modified Following, Adjusted
Payment delay		2 days

⁵ Ibid. 2

⁶ https://www.norges-bank.no/globalassets/upload/markeder/arr/arr_20_response-from-ois-working-group-on-consultation-paper-for-market-conventions-for-financial-products-referencing-nowa.pdf

Cross-currency Basis Swaps

Interdealer NOWA-RFR Cross-currency Basis Swap

Parameter	Float Leg 1: NOWA	Float Leg 2: Foreign CCY RFR
Start date	FX Spot date for relevant currency pair	
Exchange of notional principal cashflows	At start and maturity dates	
Frequency	Quarterly	
Averaging	Daily compounding, exclude spread	
Day count convention	ACT/365	Day count convention used in relevant single currency OIS market
Business day convention	Modified Following, Adjusted	
Payment delay	Adjusted in order to achieve alignment of payment dates of principal*	
Reset of notional principals	Quarterly*	

- * Note that the Alternative Reference Rates Committee (ARCC) outlines different options for both payment lags and quarterly resets of notional principals in their paper, *Recommendations for Interdealer Cross-Currency Swap Market Conventions*.⁷ As yet it is unclear which of these will become market standard in global markets, but the sub-working group supports the principle of aligning payment dates of principal, as well as the principle of quarterly resets of notional principals for interdealer RFR-RFR cross-currency basis swaps where NOK is one of the reference currencies.

Interdealer NOWA-IBOR Cross-currency Basis Swap

The working group supports the recommendations made by ARCC in their aforementioned *Recommendations for Interdealer Cross-Currency Swap Market Conventions*:⁸

Potential conventions for an RFR-IBOR dealer-to-dealer cross currency basis swaps

1) Conventions for the RFR leg

As a standard, the RFR conventions in the RFR-IBOR cross currency basis swap market should match RFR accrual conventions which develop in the RFR-RFR cross currency market and which are discussed in the previous section.

2) Conventions for the IBOR leg

As a standard, the IBOR leg of the RFR-IBOR cross currency basis swap market should match the conventions developed in the related IBOR currency swap market.

3) Alignment of settlement dates

Although in general the Group believed that standard OIS or RFR conventions could be used for each respective leg, respondents to the consultation noted that it may be useful to align settlement conventions if, for example the standard IBOR settlement date (T) diverged from the standard OIS settlement date (T+2). Recognizing the importance of aligning principal payment dates in mitigating credit risk, the group agreed that alignment of payment dates of principal could be recommended as a standard

4) Aligning Accrual Conventions with Cash Products

In certain circumstances, RFR accrual conventions may develop to include lookback periods or lockout periods. Such conventions would facilitate alignment of principal and interest and alignment with conventions in cash markets. As a matter of convenience, these may also be adopted in cross-currency swap conventions, although there currently is insufficient information upon which to assess how this will develop. Note, however, that because IBOR is a forward looking rate and overnight RFRs are based upon realized rates, incorporating certain current conventions in the RFR leg might lead to additional basis or convexity.

⁷https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2020/Recommendations_for_Interdealer_Cross-Currency_Swap_Market_Conventions.pdf, 3-5

⁸ Ibid. 5

3. Steps for Establishing an OIS market in NOK

In its initial consultation, the working group set a target “launch date” for NOK OIS of Q3 2021. This remains unchanged in the final report, with the below steps needed to be completed ahead of this date.

Clearing

LCH are represented in the working group and are working towards establishing clearing for derivatives linked to NOWA. There are a number of steps that must be completed before clearing can be established:

- * ISDA Floating Rate Option definition
- * Confirmation of sufficient market depth/breadth
- * Internal governance checks
- * External regulatory approval

The members of the working group are committed to helping to support this process such that clearing can be established before Q3 2021.

Trading and trade affirmation platforms

The working group has established a dialogue with both Bloomberg and Tradeweb, both of whom are positive to enabling NOK OIS on their trading platforms. Markitwire are also represented in the working group and are positive to enabling NOK OIS on their trade affirmation platform before Q3 2021. The working group will continue to work with these institutions to support the enablement of NOK OIS in line with the target launch date.

Indicative prices

The working group has established a dialogue with the interdealer brokers active in the NOK derivatives market, all of whom are positive to facilitating trading in NOK OIS as well as adding NOK OIS products to their indicative pricing screens. Work on this has already begun and it is anticipated that indicative price screens will be established in Q2 2021.

Interdealer market

In order to ensure liquidity in Nowa derivatives, a number of Scandinavian banks that are active in the NOK interest rate derivatives market have agreed to support the market. These banks will have agreed to make markets to customers, as well as directly to one another (up to a certain agreed upon amount and at a certain spread). Such reciprocal quoting arrangements are already in place amongst the local Scandinavian banks for NIBOR derivatives.

Initial indications from local banks are to quote one another ca 5bps wide in 50,000 NOK Dv01 in the following:

- IMM dated OIS for the first 8 IMM dates
- Spot start OIS with maturities 3m, 6m, 9m, 1y, 18m and 2y
- NIBOR/NOWA basis swaps for 2y+

Trading via the broker market is scheduled to begin in Q2 2021 on a bilateral basis, with the understanding that trades will move to clearing as soon as available. The direct market will open once clearing is established.

4. Conclusion

Good progress has been made over the course of 2020 towards establishing an OIS market in NOK. The working group has identified the outstanding steps in the path towards opening the OIS market and will continue to support all stakeholders in throughout the process. The working group maintains its goal of having a functioning OIS market in NOK in Q3 2021. The mandate of the working group will be updated to reflect the phase of the work that one is now entering.

The working group continues to welcome thoughts/feedback and questions, which can be submitted to the secretariat at ARR@norges-bank.no.

Appendix – Response to Consultation from Norges Bank

Establishing an OIS market in NOK

Letter on 31 August 2020 to the working group on alternative reference rates denominated in NOK (ARR).

On 24 June, the working group for alternative reference rates for contracts denominated in NOK (ARR) published a consultation report with proposals for establishing a market for NOK Overnight Index Swaps (OIS).

Norges Bank has no specific comments on the proposals in the consultation, but we look favourably on the development of such a market. The establishment of a liquid OIS market linked to the reference rate Nowa can contribute to a better-functioning interest rate market in Norway. It can provide market participants with better opportunities to hedge or assume risk associated with changes in Norges Bank's policy rate, and help stimulate issuance of debt linked to Nowa.

Sincerely

Olav Andreas Bø
Executive Director

Ketil Johan Rakkestad
Director