

Establishing an Overnight Index Swap market in NOK

WORKING GROUP FOR ALTERNATIVE NORWEGIAN REFERENCE RATES (ARR)

WEBINAR 28 OCTOBER 2020

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International background

- In response to the financial crisis, work on reference rates was launched internationally to make reference rates more robust
- There are challenges with existing reference rates, ibor-rates, as they to a large extent are based on judgement
- Libor might disappear from the beginning of 2022
- Transition to alternative reference rates abroad
- All the new reference rates are transaction based near risk-free overnight rates

The work in Norway

- The working group on alternative NOK reference rates (ARR) was established in early 2018
- In September 2019, the ARR-group recommended a reformed version of the Nowa rate (Norwegian Overnight Weighted Average) as the alternative Norwegian krone reference rate
- Reformed Nowa has been published since 1.1.2020 and Norges Bank has taken over as the administrator
- The work now focuses on how to transition to using Nowa as a reference rate and as a fallback to Nibor
- Two subgroups has been established;
 1. Market standards and fallback solutions
 2. Establishing an OIS (overnight index swap) market in NOK

Questions

Please feel free to submit questions throughout the presentation:

arr@norges-bank.no

Sub-working group background

- A well-functioning interest rate derivatives market is important for market participants wishing to hedge interest rate risk or speculate on changes in market yields.
- The interest rate derivatives market in Norway uses Nibor as a reference rate. There is no established OIS market.
- In line with global trends of increasing use of alternative reference rates, Nowa may be increasingly used as a benchmark for financial products in Norway. Greater use of Nowa as a benchmark in financial contracts will likely also lead to greater demand for interest rate derivatives linked to Nowa.
- Sub-group has been given the following mandate:
 - *Prepare an official report with proposals for how to facilitate the establishment of an OIS market linked to Nowa.*
 - *The report should include specific recommendations for how an OIS market linked to Nowa can be established and a plan for carrying out the recommendations*
 - *The report should include recommended measures for increasing interest in derivatives linked to Nowa.*

Current market structure

■ Products:

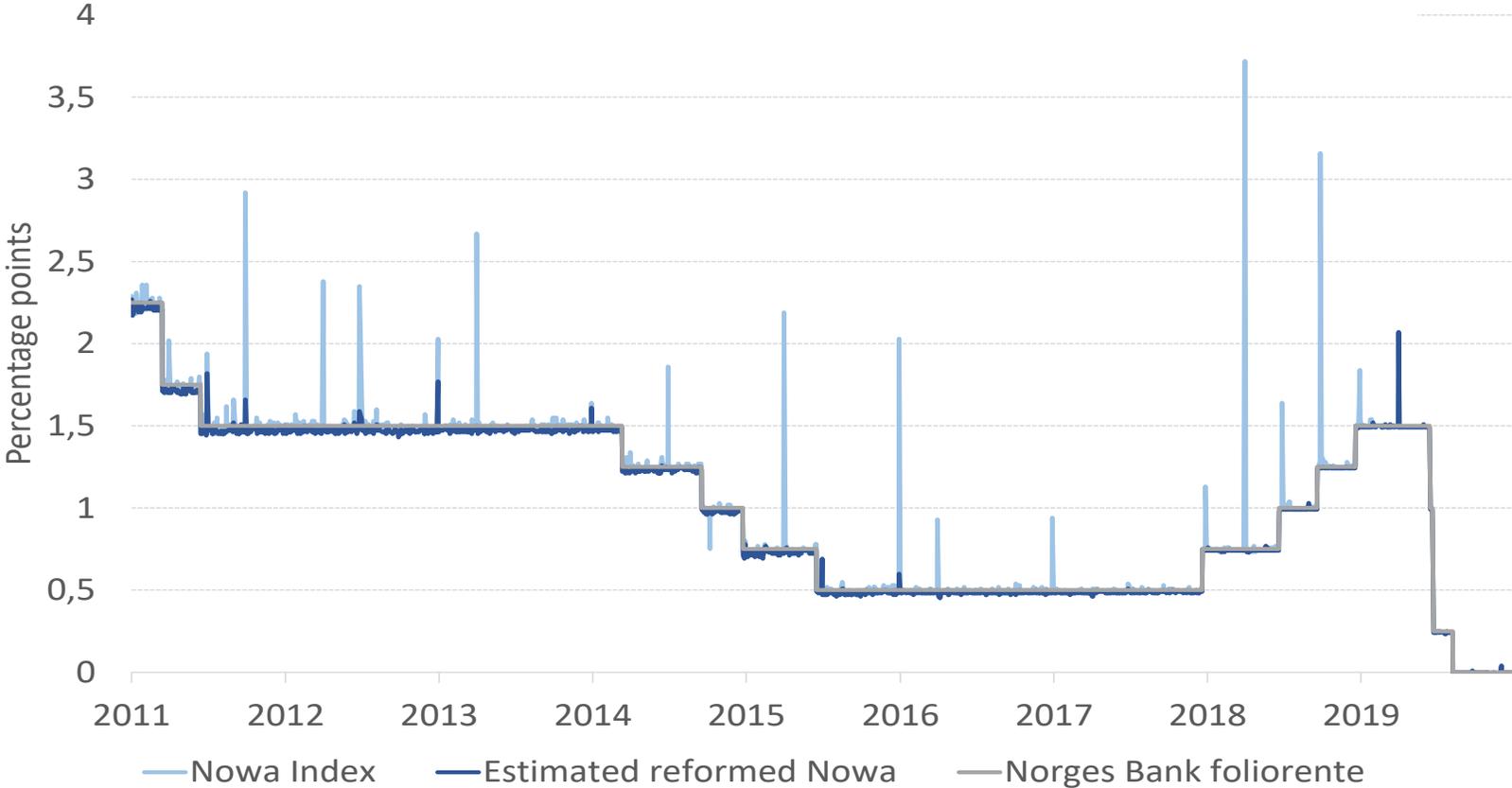
- Forward Rate Agreements (FRAs)
- Interest Rate Swaps (IRS)
- Tenor Basis Swaps
- Cross-Currency Basis Swaps

■ Clearing: A number of clearing houses offer clearing for NOK interest rate derivatives, with clearing mandated by regulators in some jurisdictions for certain participants/products. The vast majority of NOK interest rate derivatives are cleared on LCH (ca 22 trillion NOK), which offers clearing for:

- FRAs out to 3yrs and 3mths.
- IRS out to 16yrs.

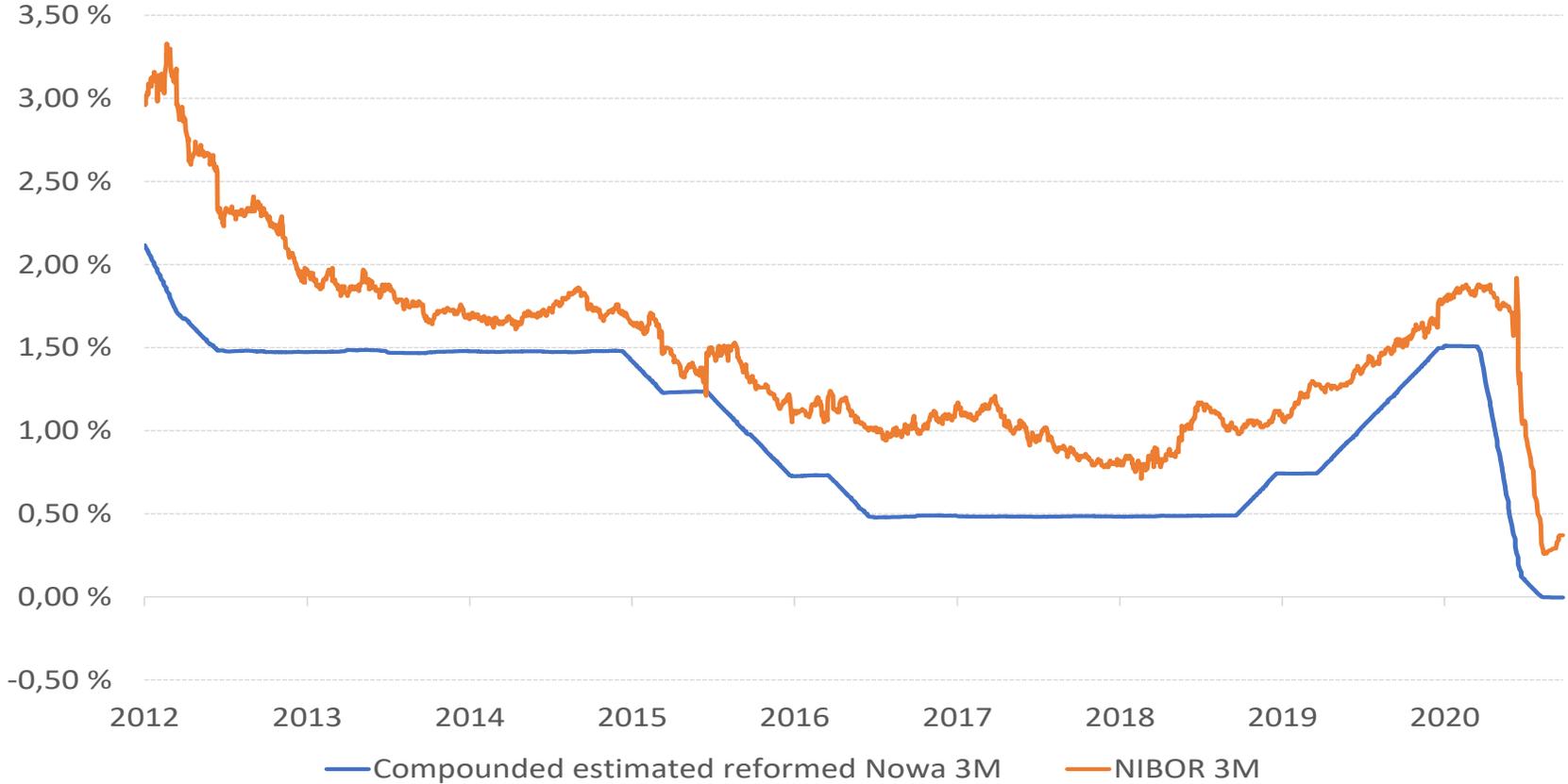
■ Reference Rates: The NOK derivatives market currently exclusively uses NIBOR rates as reference rates. Published NIBOR tenors currently include 1 week, 1 month, 2 month, 3 month and 6 months, however generally only 3 month and 6 month NIBOR rates are used in practice, with the shorter tenors only used to calculate "stub" rates

Nowa and reformed Nowa: history



Nibor vs Nowa

3mth Nibor vs 3mth realised compounded NOWA



The case for developing a NOK OIS market

Discussions within the working group as well as consultation with parties active in the NOK interest rate market have identified a number of arguments in favour of establishing an OIS market in NOK:

- **Regulation** – the uncertain future of «IBOR» indices
- **Robustness** – based on actual transactions, with fixings stable at close to Norges Bank target
- **Transparency** – easier to infer market expectations/pricing for Norges Bank decisions
- **Appropriateness / Relevance** – NIBOR not always an appropriate reference rate for securities / contracts
- **Discounting** – reduce market frictions and allow discounting risk to be hedged
- **Risk Management** – allow better risk management, particularly in the short-end of the curve
- **Alignment with international markets** – many major markets are transitioning away from «IBOR»
- **NOWA term rates** – a derivatives market is required if term rates are to be a possibility

What are the challenges?

Liquidity / Transparency – Will there be sufficient liquidity? Will liquidity in NIBOR IRS be affected?

Mandates – investment / risk mandates need to be updated

Technical systems – systems need to be updated to accommodate NOWA/OIS

Volatility of fixings and credit spreads – NOWA has no credit/liquidity component

Clearing – many market participants would require clearing

Other – concerns raised with regards to asset/liability management, backward-looking interest calculations etc.

Market conventions as recommended by sub-working group #1

Område	Konvensjon
Day Count	Act/365
Business Days	Modified following
Interest Rate Calculation	Backward-looking
Averaging Method	Daily compounding
Interest period	Shifted observation period
Notice/shift period	2 days
Margin	Added to reference rate, not compounded
Index	Recommendation that Norges Bank publish a compounded Nowa return index

Recommended interdealer market conventions

- Important that interdealer OIS market conventions in Norway mirror as closely as possible the interdealer OIS market conventions in major global markets.
- Interdealer vanilla OIS vs NOWA:

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	

- 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*	

How to facilitate the establishment of a NOK OIS market

Liquidity / Transparency:

- Support of banks active in NOK market to quote customers and reciprocal market making agreement with one another for 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+
- Support of interdealer brokers active in NOK market to establish indicative pricing screens on major market data venues.
- Support of issuers to consider issuing NOWA linked bonds

Systems / Mandates: Give sufficient time to market participants to take necessary steps.

Clearing / Trade Affirmation: LCH and IHS Markit are members of the working group

Timeline: Target launch date is Q3 2021.

Closing Remarks

- Nowa is the recommended alternative NOK reference rate
- The working group aims to publish the final reports towards end 2020. One report on establishing and OIS market in NOK and one report with
 - i. recommendations on market conventions for different financial products with Nowa as a benchmark, and
 - ii. suggestions to how Nowa can be used as an alternative to Nibor and what would trigger a transition from Nibor to Nowa
- Responses to the consultation regarding (ii) is requested cob. 2 November
- Consultation responses, questions, suggestions or applications to participate in the ARR-work can be sent to arr@norges-bank.no

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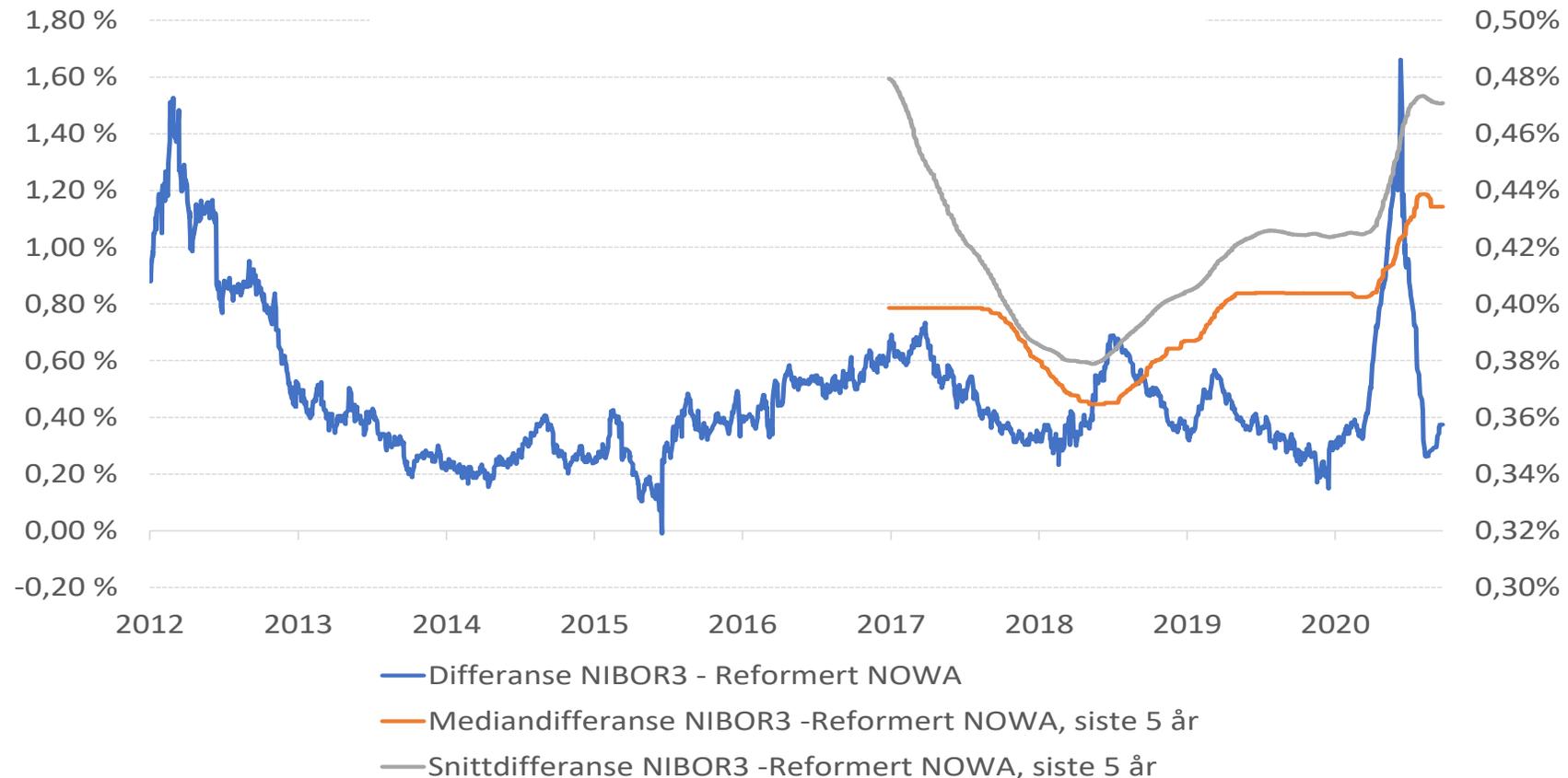
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Appendix

Spread between Nibor and Nowa

3mth Nibor vs 3mth realised compounded NOWA



Spread adjustment between Nowa and Nibor

If Nibor had been discontinued on 14th September 2020 the below spread adjustments would have been applied going forward, assuming a 5yr median spread adjustment as recommended by sub-working group #1

	Nowa*	Norges Bank's key reference rate
1M Nibor	29	27
3M Nibor	43	42
6M Nibor	53	52

*For Nowa before 1 Jan 2020 the estimated, reformed Nowa has been used. See chapter 5.6.

Sources: Bloomberg, Norges Bank and working group's own calculations