The Danish Financial Benchmark Facility (DFBF), as administrator of the four Danish benchmarks: CIBOR®, Tom/Next, CITA and SWAP, issued a public consultation paper dated the 16th April 2020 addressing the issue of the required quorum for the calculation of the four respective benchmarks.

In this regards, as such proposed changes were considered 'material' as defined by the DFBF Consultation policy, opportunity was duly given to provide stakeholders and the broader community the opportunity to provide feedback, which the DFBF can take into consideration for its decision making process, specifically to the following questions:

- **Q1**. Do you agree with the proposed amendments to sections 2.2 and 2.3 of the DFBF 17034 CIBOR Calculation Methodology document as above? Do you have any additional suggestions? Please specify.
- **Q2**. Do you agree with the proposed amendments to sections 2.2 and 2.3 of the DFBF 17035 Tom/Next Calculation Methodology document as above? Do you have any additional suggestions? Please specify.
- **Q3**. Do you agree with the proposed amendments to sections 2.2 and 2.3 of the DFBF 17036 CITA Calculation Methodology document as above? Do you have any additional suggestions? Please specify.
- **Q4**. Do you agree with the proposed amendments to sections 2.2 and 2.3 of the DFBF 17037 SWAP Calculation Methodology document as above? Do you have any additional suggestions? Please specify.

The summary feedback received, with DFBF response is as follows:

General points applicable to all benchmarks:

- The framework has been introduced as the direct response of BCP procedures used by panel banks during the COVID-19 crisis. It could be further specified in the framework whether these fallback methodologies will apply to the benchmarks going forward, at all times, or only during the crisis (we assume the former).

- **DFBF response: The current situation regarding Covd-19 prompted the Oversight Committee to address the current methodology regarding quorum. However, once such proposed changes are incorporated into formal documentation, they will always then be applicable.**

- Clarification was deemed necessary on what scenario would prevail for the respective benchmarks if zero Banks contributed, with the strong recommendation that the same contingency measure should apply as stipulated when only one panel bank contributes, namely to 'publish yesterday's aggregate rate'.

- **DFBF response: The point is accepted and sections 2.2 and 2.3 of the Calculation Methodology documents will be updated accordingly.**

- In case of one or zero submissions, yesterday's benchmark rate is suggested to be used. This means that changes in DKK and EUR rates will not be reflected, and the benchmark rates will therefore not be market-based. Furthermore, in the event of only two or three Banks contributing, yesterday's rate will be used as a replacement for the calculation of the aggregate rate. Given that the stressed situation may also last for more than a few days, we suggest that yesterday's benchmark rate is used in both scenarios, with an adjustment for the changes in interest rates in the DKK and EUR markets, as follows:

  o CIBOR – as a priority, tenors adjusted by the daily movement in corresponding maturities reflected in the CITA fixing, and as a second option, using EURIBOR or as an alternative an average of the two if both are available.
  o CITA – tenors adjusted by the daily movement in the corresponding maturities reflected in EUR OIS (EONIA).
  o SWAP - tenors adjusted by the daily movement in the corresponding maturities reflected in EUR Swaps.

- **DFBF response: As administrator, the proposed changes to the required quorum for calculation are viewed as an enhancement of the current methodology, whilst acknowledging that a perfect remedy is not feasible. Certainly, the need for the DFBF to perform daily adjustments to rates should remain limited under all circumstances. However, the clearly defined correlation between CIBOR and CITA provides a suitable alternative to ensure that the CIBOR fixings remains reflective of the market. Therefore, under the revised contingency arrangements, whenever the previous day's rate is used for calculation purposes, this will be duly adjusted by the net change in the corresponding movement reflected in the CITA fixing for that day.**
  Whilst there is clearly also a correlation between DKK and EUR, it remains more subjective due to the foreign exchange component, requiring adjustment based on an agreed methodology. Furthermore, dependence on external benchmarks/markets outside Denmark is not viewed favourably.
  For these reasons, the proposal to adjust the fixings for CIBOR, CITA and SWAP by the daily movement in corresponding maturities in their EURO equivalent is rejected.

Specific points applicable to Tom/Next benchmark:

- It was suggested that for ease of understanding a table could be provided showing the calculation methodology when the quorum reached is less than three panel banks (similar to that shown for CIBOR).

- **DFBF response: The point is acknowledged, and a table is shown below.**

- What is the motivation for not having a minimum quorum requirement in T/N, as opposed to a quorum of 2 in CIBOR, CITA and DKK Swap?

- **DFBF response: Following review, in a situation where the required minimum transactional volume of DKK3,000 million is not met, the required quorum of 4**

contributing banks remains unchanged. The quorum for CIBOR, CITA and SWAP also remains unchanged at 4,3 and 3, respectively. (Please refer to subsequent point.)

- In the highly unlikely event that only one or zero Banks contributed to T/N over month-, quarter- or year-end, the previous day's quote would not fully reflect market conditions, due to the volatility usually seen over those dates. Could an alternative fallback methodology be applied to those days specifically?

  DFBF response: Whilst this market specific point is acknowledged, an alternative methodology would require DFBF as administrator applying an adjustment factor based on expert judgement, which as stated previously should be limited. The proposed contingency arrangements represent an enhancement of the existing methodology but cannot resolve every scenario. For this reason, the point is rejected.

General points following internal review:

- **The amended wording contained within the Consultation document, for sections 2.2 and 2.3 for CIBOR, Tom/Next, CITA and SWAP, implied a fundamental change in the quorum required for calculation, which upon review had further consequences. For avoidance of doubt, the required quorum for each remains unaltered, namely:**
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  - **CIBOR 4**
  - **TN 4**
  - **CITA 3**
  - **SWAP 3**

It is only in the event that such quorum is not met, that the proposed contingency measures are duly enforced.

Calculation Methodology Specifications for Tom/Next:

Reported Real Turnover (first round)	Real Turnover + Submitted synthetic	Turnover + Synthetic + contingency	Banks Contributing	Calculated Benchmark rate	Bank 1 Volume	Bank 1 Rate	Bank 2 Volume	Bank 2 Rate	Bank 3 Volume	Bank 3 Rate	Bank 4 Volume	Bank 4 Rate	Bank 5 Volume	Bank 5 Rate	Bank 6 Volume	Bank 6 Rate	Add up Volume	Add up Rate (YD TN)	Calculation conditions
3500	3500	3500	6	-0,2883	1500	-0,285	1000	-0,3055	1000	-0,276	0		0		0		0	0	Volume weighted - transacted average
1200	3000	3000	6	-0,2895	900	-0,275	600	-0,315	600	-0,255	300	-0,29	300	-0,31	300	-0,33	0	0	Normal quorum calculation
1200	2700	2700	5	-0,2850	900	-0,275	600	-0,315	600	-0,255	300	-0,29	300	-0,31	0	0	0	0	Normal quorum calculation
600	2200	2200	4	-0,2868	700	-0,275	700	-0,315	400	-0,255	400	-0,29	0	0	0	0	0	0	Normal quorum calculation
600	1800	3000	3	-0,2912	700	-0,275	700	-0,315	400	-0,255	0	0	0	0	0	0	1200	-0,2988	Contingency calculation, add up using previous day benchmark rate
0	1000	3000	2	-0,2975	500	-0,275	500	-0,315	0	0	0	0	0	0	0	0	2000	-0,2988	Contingency calculation, add up using previous day benchmark rate
0	500	3000	1	-0,2948	500	-0,275	0	0	0	0	0	0	0	0	0	0	2500	-0,2988	Contingency calculation, add up using previous day benchmark rate
0	0	3000	0	-0,2988	0	0	0	0	0	0	0	0	0	0	0	0	3000	-0,2988	Contingency calculation, add up using previous day benchmark rate