

Response to Feedback Received from the Consultation Paper on the Evolution of SIBOR

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Singapore Foreign Exchange Market Committee*



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1 Introduction

1.1 Background

1.1.1 On 4 December 2017, ABS Benchmarks Administration Co Pte Ltd and the Singapore Foreign Exchange Market Committee (“**ABS-SFEMC**”) issued a joint consultation to seek feedback on proposals to enhance SIBOR by anchoring the benchmark to market transactions to the extent possible.

1.1.2 The consultation period closed on 5 February 2018, and a total of 22 respondents provided feedback. ABS-SFEMC has carefully considered the feedback received, together with transaction-level data obtained from a new round of data collection that was also completed in February 2018¹.

1.1.3 ABS-SFEMC thanks all respondents for their feedback. ABS-SFEMC’s responses to the key areas of feedback received are set out in this paper.

2 Feedback on Proposals

2.1 Tenor Review

2.1.1 A large majority of respondents supported ABS-SFEMC’s proposal to retain the 6-month SIBOR, as it is used by ABS Co. as a methodological fall-back for the 6-month SOR. There could be increased client demand for this benchmark with the proposed discontinuation of the 12-month SIBOR.

2.1.2 There was broad support for the proposal to discontinue the 12-month SIBOR, given low market usage and a lack of underlying transactions to support the production of this benchmark.

2.1.3 One respondent highlighted that the discontinuation of 12-month SIBOR could trigger a re-assessment of the Total Debt Servicing Ratio (“**TDSR**”) for retail clients with property loans referencing the 12-month SIBOR. The respondent asked if a request could be put to MAS to consider a waiver in such cases, of the TDSR re-assessment.

¹ ABS-SFEMC with MAS’ support, completed a new round of data collection involving transaction-level data spanning the period April 2015 to December 2017, from SIBOR panel banks and other banks with large SGD operations.

2.1.4 On the appropriate notice period for discontinuing the 12-month SIBOR, the majority specified that a period of 12 months or less would suffice as this benchmark tenor was not widely used.

ABS-SFEMC's Response

2.1.5 Taking into account respondents' feedback, the 6-month SIBOR will be retained while the 12-month SIBOR will be discontinued when the proposed enhancements to the SIBOR methodology are implemented (see paragraph 4.1 below).

2.1.6 ABS-SFEMC has brought the TDSR re-assessment issue to MAS' attention. MAS recognises that financial institutions will need to replace some property loan contracts that reference the 12-month SIBOR with contracts pegged to different benchmark rates. MAS does not expect financial institutions to treat the offering of replacement loan packages to the affected borrowers as a refinancing of property loans. Correspondingly, the property loan rules, such as the computation of TDSR for refinancing of investment property loans, will not be applicable. Nevertheless, the prevailing refinancing rules will apply to any subsequent refinancing by such borrowers. As good practice, the key features of the replacement loan packages offered to affected borrowers, including applicable fees and charges, should be highlighted.²

2.2 Enhanced Waterfall Methodology

2.2.1 ABS-SFEMC had proposed to enhance SIBOR by adopting the following waterfall methodology.

Waterfall Level	Data Type	Features
Level 1 <i>(highest priority)</i>	Transactions in underlying market	The Volume Weighted Average Price ("VWAP") of a panel bank's unsecured interbank and other wholesale funding transactions.
Level 2	Transactions in related markets	Adjustment of previous level 1 or 2 submissions with data from related market transactions.
Level 3 <i>(lowest priority)</i>	Expert judgement	A panel bank's internally documented approach for rate submissions, subject to appropriate governance and accountability controls.

² Financial institutions may use MAS Notice 632A Residential Property Loans Fact Sheet as a reference for the important features to highlight to borrowers.

Level 1 Inputs – Transactions in Underlying Market

Counterparty/Transaction Types

2.2.2 A majority of respondents supported ABS-SFEMC’s proposal for level 1 inputs to comprise a panel bank’s unsecured interbank and other wholesale funding transactions. At the same time, a number of respondents highlighted the following regarding the inclusion of corporate deposits:

- (a) Pricing effects: Some corporate deposits could incorporate relationship spreads and promotional rates, which could result in a more volatile SIBOR. For instance, a few respondents highlighted that large-sized corporate deposits could be priced at a higher rate by banks, and this could distort a bank’s benchmark submission. There was also feedback that recent regulations such as the Liquidity Coverage Ratio (“LCR”) and the Net Stable Funding Ratio (“NSFR”) could influence banks’ pricing of corporate deposits.
- (b) Compliance considerations: The inclusion of corporate deposits would imply that benchmark-related compliance controls would have to be expanded to cover the panel banks’ commercial banking function.
- (c) Operational considerations: Data for corporate deposit transactions was stored in the commercial banking systems and not available to benchmark submitters in the treasury units in near real-time. Process or IT system enhancements would therefore be required to obtain the data in a timely fashion.

2.2.3 A few respondents sought clarifications regarding submissions under level 1:

- (a) Whether the scope of proposed wholesale funding transactions would include -
 - variable rate deposits (e.g. structured deposits);
 - inter-company transactions; and
 - deposits from non-financial corporates that are on-boarded via a bank’s private banking division.
- (b) Whether submissions under this level should be based on the bank’s internal reference rate or the all-in dealt rate faced by the client, inclusive of any spreads or margins.

2.2.4 A number of respondents suggested to align the minimum eligible transaction size to S\$10 million for all types of transactions to reduce complexity – rather than a threshold of S\$1 million for money market transactions and S\$10 million for corporate deposit transactions.

2.2.5 On the amount of time that banks needed to put in place system enhancements to support the new waterfall methodology, with exception of a few respondents who requested for a slightly longer transition period, most respondents highlighted that 12 months would be sufficient.

ABS-SFEMC's Response

2.2.6 ABS-SFEMC's analysis of recent transaction data reaffirmed that banks' sources of funding have shifted from the unsecured interbank market towards other wholesale funding markets, particularly funding from non-financial corporates. In particular, the number of corporate deposit transactions was substantially more than the number of other money market transactions. Therefore, ABS-SFEMC is of the view that the inclusion of corporate deposits within the scope of eligible wholesale funding transactions in level 1 is necessary, and would serve to augment the benchmark's data sufficiency.

2.2.7 On the issue of pricing effects, ABS-SFEMC's analysis of recent transaction data indicated some tiering of corporate deposit rates based on size, but rates for corporate deposits above S\$10 million were on average in line with rates in other unsecured wholesale funding markets. Looking across the SIBOR benchmark tenors, the 1-month corporate deposit rates were typically lower than the current SIBOR, likely due to banks' funding behaviour in response to recent banking regulations, while 3-month and 6-month corporate deposit rates were at broadly similar levels to the current SIBOR. Overall, the analysis showed that on average, benchmark rates from the proposed methodology generally tracked the current SIBOR, but fluctuated more on a daily basis reflecting day-to-day changes in wholesale funding conditions.

2.2.8 ABS-SFEMC agrees that panel banks' existing compliance controls would need to be expanded with the inclusion of corporate deposits into the SIBOR submission methodology, so as to ensure the accurate and timely capture of transaction data. To facilitate consistency of approaches across panel banks, a working group has been established by ABS Co. to enhance the current ABS Co. Code of Conduct for panel banks, which sets out industry best practices for benchmark submissions. ABS Co. will consult panel banks on its revised Code of Conduct in H2 2018.

2.2.9 ABS-SFEMC is cognisant that most panel banks may need to put in place system enhancements to support the SIBOR waterfall methodology. Taking into consideration the feedback received, ABS-SFEMC will provide a 12-month period to allow banks sufficient lead-time to put in place the necessary system enhancements.

2.2.10 To reduce operational complexity, ABS-SFEMC agrees with respondents' suggestion to set the minimum eligible transaction size at S\$10 million for all types of transactions. This

is not expected to materially reduce the number of eligible transactions as money market transactions are typically larger than S\$10 million. In summary, subject to this S\$10 million minimum eligible transaction size threshold, a panel bank will base its benchmark submissions under level 1 on the VWAP of its unsecured wholesale fixed rate funding transactions from the following eligible counterparty types:

- (a) Banks
- (b) Central banks
- (c) General government/public sector entities/non-financial international organisations³
- (d) Non-bank financial institutions⁴
- (e) Non-financial corporates

Level 1 inputs will also include a panel bank's primary issuances of certificates of deposits / commercial papers. To reflect the bank's wholesale funding rate, submissions should be based on the all-in dealt rate faced by the client, rather than on the internal reference rate between business units in the bank.

2.2.11 In addition, consistent with the scope of the recently concluded data collection exercise, ABS-SFEMC clarifies that variable rate deposits (e.g. structured deposits) would not fall within scope of level 1. Transactions between the panel submitter and its affiliates should also be excluded from level 1 data as only arms-length transactions should be used in the computation of a benchmark – i.e. trades with entities that are part of the same banking group, the controlling parent institution, the head office of the bank (if different from parent institution), and branches or subsidiaries that are part of the consolidated reporting entity should be excluded. In line with the intent to incorporate wholesale funding transactions, deposits from non-financial corporates should be included regardless of where such counterparties were on-boarded.

Tenor Bucketing

2.2.12 Some respondents suggested to narrow the proposed tenor bucket for the 6-month SIBOR slightly, to avoid causing distortion to this benchmark.

³ This includes statutory boards, town councils but excludes central banks, other official monetary authorities and government-linked companies. International organisations include those whose members are either national states, or other international organisations whose members are national states.

⁴ This includes private or public financial institutions, other than banks, engaged primarily in the provision of financial services and activities auxiliary to financial intermediation. For example, insurers, securities dealers, and fund managers. This also includes public financial institutions such as development banks, export credit agencies and sovereign wealth funds.

ABS-SFEMC's Response

2.2.13 ABS-SFEMC agrees with this feedback that the 6-month SIBOR could be more volatile because of the wider tenor bucket. ABS Co. will adopt the following tenor buckets:

SIBOR Tenor	Lower and Upper Limit in Calendar Days (inclusive)	
1-month	25	35
3-month	80	100
6-month	165	195

Transaction Window and Publication Time

2.2.14 Almost all respondents preferred retaining the current publication time of 11.30am for SIBOR. With regard to the transaction window, the majority of respondents preferred to base benchmark submissions on transactions from the previous business day. This would provide sufficient time for panel banks to compile and verify the required transaction data, as some corporate deposits are booked into the banks' systems only at the end of the day.

ABS-SFEMC's Response

2.2.15 ABS Co. will retain the current publication timing for SIBOR at 11.30am. On the eligible transaction window, ABS-SFEMC agrees with respondents' feedback for panel banks to base benchmark submissions on transactions from the previous day. To simplify implementation, the eligible transaction window will be widened to the entire trade date (i.e. 0000hrs to 2359hrs), one business day before the submission date.

Level 2 Inputs – Transactions in Related Markets

2.2.16 There was broad support among respondents for panel banks to use the movement in related transaction-based benchmarks to adjust its previous day's rate submission, as such related market movements provide a useful reference when there is a lack of level 1 transactions. A few respondents highlighted that FX swaps and repos are secured rates and questioned the appropriateness of referencing such rates for submissions to SIBOR, which is an unsecured rate.

2.2.17 Regarding the proposal for panel banks to prioritise the referencing of its own transactions in related markets, a number of respondents highlighted that this was unlikely to be relied on in practice as it would require panel banks to have transactions of the same tenor on consecutive days, which happened infrequently. In addition, this would require a panel bank to make substantial internal system enhancements to aggregate such related market transaction data.

2.2.18 The majority of respondents supported the proposed limits on the maximum consecutive number of business days that level 2 inputs can be relied on (i.e. 5 business days for 1-month SIBOR, 10 business days for 3-month and 6-month SIBOR). Some respondents suggested to align the proposed limits across all three SIBOR benchmark tenors to 10 business days, to simplify implementation.

ABS-SFEMC's Response

2.2.19 The analysis of recent transaction data affirms respondents' feedback that level 2 adjustments based on a panel bank's own transactions in related markets would have been sporadic. Taking this into account and to simplify the methodology, ABS-SFEMC will not proceed with the proposal for panel banks to reference own transactions in related markets. Level 2 inputs will hence only entail panel banks' referencing of movements in related market transaction-based benchmarks to adjust their previous days' submissions. Taking into account feedback received, the maximum number of consecutive business days that level 2 inputs can be used will be aligned across all SIBOR benchmark tenors to 10 business days.

2.2.20 With reference to the appropriateness of using related transaction-based benchmarks (e.g. FX swaps, repos) which are secured rates, ABS-SFEMC would like to reiterate that level 2 inputs would not be based directly on the actual level of the related transaction-based benchmarks. Instead, level 2 inputs would be an adjustment of a panel bank's previous rate submission with changes in the related transaction-based benchmark.⁵ This method of making adjustments based on 'deltas' is considered appropriate, as related market rates generally move in tandem. Level 2 provides panel banks with a consistent method of making submissions by referencing related market transaction-based benchmarks, which would allow submitters to reduce their reliance on expert judgement. Nonetheless, ABS-SFEMC would like to highlight that panel banks may also rely on expert judgement if they assess that certain significant market or bank-specific events have rendered a level 1 or level 2 input less reflective of market conditions.

Level 3 Inputs

2.2.21 There was broad support for the proposed list of inputs which expert judgment can be based on, and the proposed approach of allowing panel banks the flexibility to determine their own approach towards the exercise of expert judgement.

⁵ **Example:** A panel bank relied on level 1 inputs and submitted 1.00% yesterday, but has no level 1 inputs today. The 5-day moving average SOR was 0.95% yesterday and 0.90% the day before yesterday. Hence the bank can submit, as a level 2 input: $1.00\% + (0.95\% - 0.90\%) = 1.05\%$.

2.2.22 A few respondents suggested to include FX swaps in the list of possible inputs for expert judgement, as they highlighted that notwithstanding the usage under level 2, FX swap market movements could still be a useful reference for submitters, particularly in periods where the submitter was unable to rely on level 1 or level 2 inputs.

ABS-SFEMC's Response

2.2.23 While level 2 already allows submitters to reference the FX swap market, ABS-SFEMC agrees with the inclusion of FX swaps as a possible input to base expert judgement on under level 3. Nevertheless, panel banks should not mechanically submit rates observed in related markets, and should not mechanically extend the level 2 submission approach to level 3.

3 Feedback on Other Issues

3.1 Trimming Methodology

3.1.1 A number of respondents preferred to keep the existing methodology of trimming the top and bottom quartile of panel banks' submissions. In particular, there was concern that the proposed median group method (average of median 3 – 4 submissions) would result in a benchmark that would be less representative of the market.

ABS-SFEMC's Response

3.1.2 The latest data analysis shows that the median group method would help with moderating volatility, but only slightly. Taking into account respondents' feedback, ABS-SFEMC agrees to retain the current methodology of trimming the top and bottom quartiles.

3.2 Enhancing Disclosure – Publishing Submission Levels

3.2.1 Most respondents preferred the publication of the aggregated proportion of submission inputs (i.e. the % of inputs which are level 1, level 2 and level 3) to be done on a monthly basis.

3.2.2 Regarding the current practice of publishing individual submitters' rates on a lagged 90-days basis, some respondents highlighted concerns that with the move to anchoring rate submissions to market transactions, rate submissions would be commercially sensitive as a panel bank's funding cost could be inferred from such data.

ABS-SFEMC's Response

3.2.3 Taking into account respondents' feedback, ABS Co. will publish the aggregated proportion of submission inputs on a monthly basis. ABS Co. will continue to publish panel bank's individual submission on a lagged basis to facilitate transparency, but given the commercial sensitivity concerns raised, the individual submissions will be published on an unnamed basis when the proposed enhancements are implemented.

3.3 Transition Path and Evolution of SIBOR Definition

3.3.1 Most respondents highlighted that they did not foresee legal implications that could pose a challenge to a seamless transition.

ABS-SFEMC's Response

3.3.2 The name of the benchmark when the new methodology is implemented would remain as "SIBOR", and the rate would continue to be published on the same data vendor pages. To align SIBOR with evolving practices for benchmarks in other markets, the proposed definition for SIBOR will focus on the rate for a particular business day in Singapore, rather than the prior approach of focusing on the date of publication. Accordingly, when the new methodology is implemented, the revised SIBOR definition will read as follows:

"SIBOR is the benchmark administered by the ABS Benchmarks Administration Co Pte Ltd (ABS Co.). An individual Contributor Bank contributes the rate at which it could borrow SGD funds from the wholesale market on a particular Business Day, in accordance with the Contribution Waterfall Methodology as defined by ABS Co."

3.3.2 ABS-SFEMC agrees with respondents' views that a seamless transition is achievable. ABS-SFEMC will conduct transitional testing prior to implementation, with a view to achieving a seamless transition for SIBOR.

4 Timeline and Next Steps

4.1 ABS-SFEMC expects the new SIBOR methodology to be implemented around end-2019/early-2020, following a period of transitional testing. The projected timeline for the implementation of the new SIBOR methodology is set out below. There will be no change to the current SIBOR methodology in the meantime.

Jul 2018 onwards	Panel banks start to put in place systems and controls to support submissions under new waterfall methodology
H2 2018	ABS Co. to consult panel banks on an enhanced Submitter's Code of Conduct
H2 2019	Transitional testing
End-2019 to Early-2020	Implementation of new SIBOR waterfall methodology and discontinuation of 12M SIBOR