

Consultation Paper



Transitioning Outstanding MIFOR Swaps post Index Cessation - Proposed Cash Computation Methodology and Operational Aspects of Transition

1st Dec 2022

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1.0 Introduction

1.1 The UK Financial Conduct Authority (FCA) and ICE Benchmark Administrator (IBA) announced on 5th March 2021 that IBORs in various currencies and maturities will either cease to be provided by the Administrator or will no longer be representative after specified dates. The timelines for cessation/ non representativeness of various IBORs are:

- a) Immediately after 31st Dec 2021, in the case of all Pound sterling, Euro, Swiss franc and Japanese yen settings, and the 1-week and 2-month US dollar settings.
- b) Immediately after 30th June 2023, in the case of the remaining US dollar settings.

While O/N and 12M USD LIBOR will cease immediately after 30th June 2023, 1M, 3M and 6M USD LIBOR settings will be provided by the Administrator on a “synthetic basis”. Hence, 30th June 2023 is the “Index Cessation Effective Date” (ICED) which will trigger ISDA fallback.

1.2 LCH and CME have proposed transition of USD LIBOR swaps to USD SOFR swaps before 30th June 2023 without transitioning to fallback. LCH, which clears SGD (Singapore Dollar) SOR¹ Swaps have proposed that all cleared SOR contracts outstanding as on conversion date (prior to 30th June 2023) will be converted into SORA contracts. These global CCPs have completed their consultation process in mid-2022 wherein members have agreed to the methodology of transition to Risk free rate (RFR) swaps rather than to fallback swaps post transition date (before 30th June 2023). Current update on the proposed conversion process in these CCPs post member consultation is placed in *Annexure – 2*.

1.3 LCH proposes to do the conversion in two tranches (by products) over 2 weekends in mid-2023. While the first tranche conversion will be done in the weekend of 22nd/ 23rd Apr 2023 (back up dates being 6th/ 7th May 2023), the second tranche conversion will be done in the weekend of 20th / 21st May 2023 (back up dates being 3rd / 4th June 2023). CME proposes

¹ Singapore Dollar Swap Offer rate (SOR) is the synthetic rate of borrowing SGD by borrowing USD of the same maturity and converting it to SGD. SOR is derived from USD LIBOR and USD SGD forward premium and hence is similar to MIFOR. SORA is the volume-weighted average rate of borrowing transactions in the unsecured overnight interbank SGD cash market in Singapore between 8.00 AM and 6.15 PM.

21st Apr 2023 as the primary conversion date of USD LIBOR swaps to RFR swaps. LCH has proposed a conversion date of 9th June 2023 for SGD SOR swaps.

1.4 In India, MIFOR rate is the implied INR interest rate of USD borrowing. MIFOR is derived from USD LIBOR and USD INR forward premium. CCIL has been clearing interbank 6M MIFOR swaps since Nov 2018 for the banks who are availing CCP clearing in MIFOR swaps. Banks which have not availed CCIL clearing membership in MIFOR report their MIFOR trades to CCIL's Trade Repository (TR). For non-cleared MIFOR trades, CCIL provides Non-Guaranteed Settlement (NGS) services. Post 31st Dec 2021, no new MIFOR swap has been cleared by CCIL / reported to CCIL TR. As on 18th Nov 2022, the number and notional of outstanding MIFOR swap trades accepted for CCP clearing/ reported to CCIL's TR is given in the table below:

Termination Date of MIFOR Swap during the period	CCIL Cleared		Non CCIL Cleared		CCIL Cleared + Non CCIL Cleared	
	Gross Notional Amount (in INR crores)	Count of Trades	Gross Notional Amount (in INR crores)	Count of Trades	Gross Notional Amount (in INR crores)	Count of Trades
Nov-22 - Jun-23	30,304	371	64,271	726	94,575	1,097
Jul-23 - Jun-24	40,128	517	80,138	1,123	120,266	1,640
Jul-24 - Jun-25	32,522	402	46,019	621	78,540	1,023
Jul-25 - Jun-26	23,246	314	34,673	444	57,918	758
Jul-26 - Jun-27	10,107	158	17,578	215	27,685	373
Jul-27 - Jun-28	0	0	8,237	98	8,237	98
Jul-28 - Jun-29	0	0	5,855	68	5,855	68
Jul-29 - Jun-30	0	0	3,738	52	3,738	52
Jul-30 - Jun-31	0	0	7,397	81	7,397	81
Jul-31 - Jun-32	0	0	3,088	31	3,088	31
Jul-32 - Jun-33	0	0	70	1	70	1
Jul-33 - Jun-34	0	0	80	1	80	1
Total	136,307	1,762	271,144	3,461	407,451	5,223

Table 1: Trade count and notional of outstanding (as on 18th Nov 2022) Cleared and Non Cleared MIFOR Swap trades

1.5 The fallback benchmark for legacy MIFOR contracts is Adjusted MIFOR, which FBIL has started publishing since 15th June 2021. Modified MIFOR is the benchmark for new

contracts which FBIL has started publishing since 30th June 2021. Since 1st Jan 2022, banks have started trading Modified MIFOR swaps and volumes have gradually increased over time. CCIL plans to offer CCP Clearing of Modified MIFOR swaps post regulatory approval.

1.6 Providing CCP clearing for legacy MIFOR contracts using the fallback benchmark (i.e. Adjusted MIFOR) post June 2023 will pose challenges to CCIL for the reasons outlined below:

- i) Difficulty in specific risk management responsibilities of CCIL with respect to the accepted trades, which include default management.
- ii) Reduced liquidity in Adjusted MIFOR linked swaps.

LCH, CME have justified the transition to RFR swaps highlighting the difficulties that they are likely to face in default management if fallback benchmark were to become operational. For IBORs that have already undergone cessation (EUR, GBP, CHF, JPY), LCH, CME have transitioned outstanding cleared trades to RFR benchmarks before end Dec 2021.

2.0 CCIL's Proposed Conversion Process

2.1 CCIL has issued a Consultation paper proposing that the outstanding cleared MIFOR referenced legacy contracts will be referenced to Modified MIFOR benchmark instead of the fallback benchmark (=Adjusted MIFOR) post transition. The detailed approach of proposed conversion process is in CCIL's Consultation paper titled "*Proposed Approach for Legacy Cleared INR MIFOR IRS trades post Index Cessation*" (12th July 2022). The web link to the Consultation paper is placed in Annexure -1.

2.2 CCIL's transition approach is summarized as under:

1. All outstanding CCIL cleared MIFOR trades having cash flows with reset date beyond 30th June 2023 will be referenced to Modified MIFOR. The trade attributes of the legacy MIFOR trades will be carried on to the new trades.

2. The cash flow for all outstanding cleared MIFOR trades having reset date on or before 30th Jun 2023 will be settled based on the corresponding FBIL published MIFOR.
3. The cash flows for all the outstanding cleared MIFOR trades having reset date after 30th June 2023 will be settled based on the corresponding Modified MIFOR rate published by FBIL and a spread for the relevant reset date and Designated Maturity (=6M).
4. The spread as mentioned in para-(3) above will be uniform across all trade maturities. This is in line with the approach that has been agreed for 6M USD LIBOR swaps wherein a fixed ISDA spread of 42.826 bps will be added to 6M compounded SOFR to convert an input 6M LIBOR contract to 6M SOFR contract irrespective of the swap maturity.
5. ISDA spread of 42.826 bps between 6M USD LIBOR and 6M SOFR was arrived at based on the median value of daily spread between 6M USD LIBOR and compounded overnight SOFR of 6 months computed over the 5 year look back period (Sept 2015 to Sep 2020).
6. In line with the ISDA methodology (as mentioned in para - (5) above), CCIL has computed the median value of daily spread between 6M MIFOR and 6M Modified MIFOR over the same 5 year look back period (Sept 2015 to Sep 2020). The data sources used for spread computation are given below:

6M MIFOR

April 2018 to Sep 2020	FBIL published 6M MIFOR rates
Sep 2015 to Mar 2018	Computed using FBIL methodology for MIFOR using ICE published 6M LIBOR and EOD 6M forward premia sourced from Reuters page “INR1F= ”

6M Modified MIFOR

April 2018 to Sep 2020	Computed using FBIL methodology for Modified MIFOR using 6M Adjusted SOFR and FBIL published 6M forward premia
Sep 2015 to Mar 2018	Computed using FBIL methodology for Modified MIFOR using 6M Adjusted SOFR and EOD 6M forward premia sourced from Reuters page INR1F=

Table: 2 Sources to compute median daily spread between 6M MIFOR and 6M Modified MIFOR for the period Sep 2015 to Sep 2020

The computed value of median daily spread between 6M MIFOR and 6M Modified MIFOR over 5 year look back period (Sept 2015 to Sep 2020) using the data sources as mentioned in Table -3 above comes to 44.25 bps.

7. Existing eligible MIFOR trades are to be cancelled on the proposed conversion date. For each MIFOR trade cancelled, 3 new trades are to be booked as given below:
 - a) New short-term MIFOR trade
 - b) New short-term Modified MIFOR trade
 - c) Replacement Modified MIFOR trade

Trades (a) and (b) are “overlay” bookings to handle the first cash flow post ICED. Modified MIFOR trades are to be booked with floating leg = 6M Modified MIFOR + 44.25 bps. All the 3 trades (i.e. (a) to (c) above) would have the same trade attributes (Trade date, Effective date, Notional) as the original MIFOR trade except that the direction of the trade would be reversed on the new short-term Modified MIFOR trade.

8. An illustration of an outstanding MIFOR trade and proposed trades post conversion is given below:

	Legacy MIFOR Trade	New Short term MIFOR trade	New Short term MODIFIED MIFOR trade	Replacement Modified MIFOR Trade
Trade ID	12345	12345_1	12345_2	12345_3
Trade Date	26-Nov-20	26-Nov-20	26-Nov-20	26-Nov-20
Member	A	A	A	A
Counterparty	CCIL	CCIL	CCIL	CCIL
Notional Amount (in Rs. Crores)	50	50	50	50
Effective Date	1-Dec-20	1-Dec-20	1-Dec-20	1-Dec-20
Termination Date	1-Dec-25	1-Dec-23	1-Dec-23	1-Dec-25
Pay/ Receive	Pay fix	Pay fix	Receive fix	Pay fix
Fixed Rate	6.22	6.22	6.22	6.22
Seller Benchmark Index	MIFOR	MIFOR	Modified MIFOR	Modified MIFOR
Seller Benchmark Designated Maturity	6 M	6 M	6 M	6 M
Seller Spread (bps)	0	0	44.25	44.25
Trade Status	Cleared	Cleared	Cleared	Cleared

Table: 2 Illustration - Legacy MIFOR trade and 3 proposed replacement trades

2.3 Operational Aspects

1. As CCIL will be booking new trades, new trade IDs and member reference numbers will be generated by CCIL for members for the converted Modified MIFOR trades. CCIL will provide a report to members to enable them to link these trades with the old legacy contracts to facilitate further life cycle processing events.
2. All outstanding trades as on the conversion date having a cash flow which will be reset post Jun 30, 2023 will be mandatorily subject to this conversion. In case members do not wish to subject their trades to this conversion process, they should ensure that these trades are cancelled / reversed by both counterparties to the trade before the CCIL conversion date.

2.4 As a consequence of conversion of non-cleared MIFOR trades to Modified MIFOR, one or more of the resultant overlay trades and the replacement trades may become eligible for CCP clearing as some of these trades will now meet the CCIL criteria for CCP clearing; provided both the counterparties are members of CCIL's Guaranteed Settlement segment.

3.0 Feedback to CCIL's Consultation paper

CCIL has received written feedback from 9 banks. The feedback was presented in the Member meeting held on 9th Sept 2022. Summary of the feedback received and CCIL's responses to the feedback are listed below:

- a) Members are in agreement with CCIL's transition approach. They have indicated that from an operational point of view, the approach is similar to that of LCH and CME.
- b) A constant spread ignores the term structure of the forward premia. CCIL responded that in the absence of basis swap trades between MIFOR vs. Modified MIFOR, forward implied spreads will have to be model determined. Even in markets where there is a significant liquidity in basis swaps, there is a consensus to adopt a flat spread adjustment across all the tenors. Hence, CCIL's approach is in alignment with the approaches followed by global CCPs.
- c) Trade level cash compensation needs to be exchanged to make the transition NPV neutral. CCIL acknowledges the need to exchange cash compensation on the day of conversion. The proposed cash compensation methodology is outlined in Section – 5 of this paper.
- d) While LCH and CME proposes to book 2 new replacement trades, CCIL plans to book 3 new trades as part of the transition process which is operationally less efficient. CCIL responded that in order to book two new swaps, CCIL would either have to book a basis swap or a forward starting swap. Both basis swaps and forward starting swaps are not traded in the Indian market and hence system capabilities to book 2 trades in place of every outstanding cleared MIFOR trade are currently not available with CCIL. The three proposed trade tickets captures the economics of the original trade, hence it would be convenient from a system point of view to book 3 trades by CCIL for transition.

- e) Some members who are not part of CCIL’s clearing mechanism desired that the same transition methodology as finalized for cleared MIFOR swaps may be implemented for non-cleared / bilateral MIFOR swaps as well. CCIL responded that it agrees to conduct a conversion run for non-cleared MIFOR trades if there is a member consensus on the same.
- f) Some members suggested that the conversion date be set much before the Index cessation end date and care be taken so that CCIL conversion program does not clash with the conversion programs of other CCPs. CCIL responded that the proposed conversion date is likely to be 12th May 2023 with 26th May 2023 as the backup date.
- g) Some members requested CCIL to share the format of the files with replacement trades well in advance and also requested that linkages be mapped/ specified between legacy MIFOR trade and the newly converted trades. Some members requested CCIL to hold trial run prior to the actual conversion. CCIL responded that it will consider having a trial run and will provide sample input files and linkages between legacy trades and new trades.
- h) One member sought a clarification as to whether the 3 new trades will be considered as “amendment” as mentioned in the consultation paper. CCIL responded that operationally 3 trades will be booked as new trades. These trades may be considered as “amendment” as they will be booked due to benchmark change.

4.0 Summary of Member Meeting held on 9th Sept 2022

4.1 In pursuance of CCIL’s proposal in its consultation paper titled ‘*Proposed Approach for Legacy Cleared INR MIFOR IRS trades post Index Cessation*’, an online member meeting was held on 9th September 2022 to discuss CCIL’s proposed transition methodology and feedback received from members. Officials from 19 banks which trade in MIFOR attended the meeting. Officials from industry associations (IBA, FBIL, FIMMDA, and FEDAI) also attended the meeting. The meeting discussion is summarized below:

- a) A Member mentioned that a constant trade spread (over 6M Modified MIFOR) will not make the replacement trade economically equivalent to the 6M MIFOR trade because it ignores the term structure of the forward premia. He further stated that in case a constant spread is agreed, cash compensation needs to be exchanged to make the replacement trades NPV neutral as the input trades. He requested that CCIL circulate its approach of computing cash compensation for members to review and provide their feedback on the same. CCIL agreed and the proposed cash compensation methodology is outlined in Section – 5 of this paper.
- b) One member mentioned that as LIBOR is getting replaced by SOFR, the difference between MIFOR and Modified MIFOR should be equal to the ISDA spread between 6M LIBOR and 6M SOFR. CCIL explained that because of USD INR forward premia component is present in both 6M MIFOR and 6M Modified MIFOR, the spread between 6M MIFOR and 6M Modified MIFOR is higher than the ISDA spread of 42.826 bps (between 6M LIBOR and 6M SOFR).
- c) One member requested that .CSV files for the new trades be made available starting Jan 2023, because they would need to enhance their systems to incorporate the changes. CCIL is undertaking system developments to provide .CSV files by end Dec 2022.
- d) One member asked if CCIL will provide linkages between the legacy MIFOR trade and newly converted trades. He also asked about the termination messages of the existing MIFOR trade and how they will be communicated to the bank. CCIL responded that the desired linkages will be made available to Members. It was also clarified that the trade cancellations as well as the new trades booked will be communicated to members in system compatible files. These trades will get updated in CCIL's systems and member would not have to report these to CCIL.
- e) One Member asked as to what would be the process of transition for non-cleared MIFOR trades. CCIL responded that if there is a member consensus, CCIL would be in a position to apply the same approach to non-cleared outstanding MIFOR trades as well.
- f) Referring to the discussion on whether the conversion is to be done by booking two new trades (using basis swaps) or by three trades as suggested by CCIL, one member

expressed that basis swap would be a one-time synthetic trade and does not require basis swaps to be traded in the market as mentioned in CCIL's presentation. CCIL responded that as the three proposed trade bookings captures the economics of the trades it would be convenient from a system point of view to book 3 trades by CCIL. It was also highlighted by CCIL that the overlay trades in any case would remain outstanding for a very short duration.

- g) One Member mentioned that post index cessation if the client trades fall back to Adjusted MIFOR as per ISDA protocol but the hedges move to Modified MIFOR as proposed by CCIL, there will be a basis between the client trades and the hedges. He felt that banks may face challenges in addressing the same. CCIL responded that transitioning of client trades to either Adjusted or Modified MIFOR is to be decided bilaterally between the bank and its clients.

4.2 As can be seen from the feedback received on CCIL's Consultation paper (Section -3) and Member meeting discussion (Section -4), there are broadly two issues that needs to be addressed going ahead:

1. Cash compensation needs to be paid/ received by members to make the conversion NPV neutral. Hence, **cash compensation methodology** needs to be formulated by CCIL post Member consultation on which consensuses from all Members will be required.
2. More clarity needs to be provided by CCIL on the **operational aspects of transition**.

The above two points are enumerated in the Sections below.

5.0 Proposed Cash Compensation Methodology

5.1 As mentioned in Section -2, in the proposed transition methodology, existing MIFOR trades are to be cancelled on the proposed conversion date. For each MIFOR trade cancelled, 3 new replacement trades are to be booked as given below:

- a) New short-term MIFOR trade
- b) New short-term Modified MIFOR trade with floating leg as 6M Modified MIFOR +44.25 bps

- c) Replacement Modified MIFOR trade with floating leg as 6M Modified MIFOR +44.25 bps

Cash compensation needs to be exchanged to make the replacement trades NPV neutral as the input trades.

5.2 If PV(s) of 4 trade tickets (i.e. Legacy MIFOR trades and 3 proposed replacement trades) on the proposed trade conversion date are as given below:

PV_1 = PV of a legacy MIFOR trade

PV_2 = PV of New short-term MIFOR trade

PV_3 = PV of New short-term Modified MIFOR trade with floating leg as 6M Modified MIFOR + 44.25 bps

PV_4 = PV of Replacement Modified MIFOR trade with floating leg as 6M Modified MIFOR + 44.25 bps

Then, *Cash Compensation* = $PV_1 - \text{Sum} (PV_2 + PV_3 + PV_4)$

Such Cash Compensation will be computed for each cleared MIFOR trade and summed up across all cleared MIFOR trades of a Member to arrive at Member wise Cash Compensation. If Members agree that a similar methodology for Cash Compensation is to be adopted for non-cleared MIFOR trades, Cash Compensation will be arrived at for non-cleared trades as well, member wise. If the combined value of the replacement trades created is more than that of the legacy contract, member will be required to pay the difference as cash compensation to CCIL. If the combined value of the replacement trades created is less than that of the legacy contract, member will be entitled to receive the difference as cash compensation from CCIL. Cash compensation settlement in CCIL will happen for cleared and non-cleared trades separately.

5.3 To arrive at Cash Compensation for each legacy MIFOR trade, 2 MIFOR trades and 2 Modified MIFOR swap trades are to be valued. While Modified MIFOR swap valuation can

be done based on traded/ quoted swap rates, MIFOR swap valuation poses some challenges in the absence of trades² and very few banks quoting MIFOR.

5.4 Currently, for valuation and margining of outstanding legacy cleared MIFOR trades, CCIL uses end of the day MIFOR rates published by FBIL for standard tenor up to one year and below. For standard tenor points of two years and beyond, average of all quotes available during the day on Reuters page “INRIRS” is used³. We understand that very few banks are providing their quotes in this page and hence to arrive at one time Cash Compensation, the quotes in this page may not be appropriate for valuation of MIFOR trades.

5.5 For valuation of their legacy trades, MIFOR trading banks have their internal models to derive MIFOR swap curve given Modified MIFOR swap curve, USD LIBOR 6M curve and SOFR swap curve. The broad methodology adopted by Banks to derive MIFOR swap curve (given the relevant 3 market curves) is placed in *Annexure-3*.

5.6 CCIL proposes that on the day of the transition, it will obtain MIFOR swap (Mid) rates (for all standard tenors) from all MIFOR trading banks on the proposed conversion date and on a few dates before the conversion date for preparation. There are 25 banks who have outstanding cleared/ non cleared MIFOR swaps. All the 25 banks would be required to submit their MIFOR swap rates to CCIL. Bank(s) not submitting quotes for one or many tenors will naturally be worse off than banks submitting quotes as “trimmed mean” of non-outlier quotes will be considered for valuation. The tenors on which banks will be required to provide their MIFOR swap rates to CCIL on the conversion date and on a few dates before the conversion for preparation are, viz. 1M, 2M, 3M, 6M, 9M, 1Y, 2Y, 3Y, 5Y, 7Y and 10Y. For tenors where no quotes are submitted by banks, CCIL proposes to use the quote available in Reuters page INRIRS. Further, if no quote is available in Reuters, CCIL proposes to arrive at the same by interpolation of swap quotes for nearby tenors.

² As mentioned earlier, no MIFOR swap trade has been executed by Banks since 1st Jan 2022

³ Sources of EOD MIFOR curve used by CCIL in its valuation and margining is in CCIL’s Notification (30th Dec 2021),

https://www.ccilindia.com/Lists/1stRMD_SpecificNotification/Attachments/238/RMDDR2140%20Risk%20Mgt%20Process%20Margin%20mtdlgy%20MIFOR%20rates.pdf

5.7 Post removal of outliers from the submitted quotes, “trimmed mean” will be arrived at by CCIL for each standard tenor point of MIFOR. Outliers are quotes which will be +/- 3 SD (standard deviation) away from the mean. The “trimmed mean” for each swap tenor point will then be used for valuation of MIFOR trades as part of the conversion program. CCIL proposes to publish the polled MIFOR curve (post outlier exclusion) that it will use for arriving at Cash Compensation. CCIL will neither disclose the names of the Banks who submitted quotes nor will it disclose the names of the Bank whose quotes were considered for computation post outlier exclusion. CCIL will only publish the number of Banks who submitted the quotes and number of Banks whose quotes got considered post outlier exclusion for each swap tenor point.

5.8 CCIL will value all MIFOR swap trades using the polled MIFOR curve (post outlier exclusion) and Modified MIFOR discounting. CCIL will value the Modified MIFOR swaps as part of the conversion program using the quotes in Reuters pages USDSROIS= (SOFR OIS swaps), INR=1F (Forward premia), INRMODIRS and Modified MIFOR discounting.

The Spot USDINR Exchange rate used will be the rate of the last interbank trade (of value USD one million or more) concluded till 5:00 PM on the FX Clear Dealing platform operated by Clearcorp Limited.

5.9 To sensitise Members for the conversion program, CCIL plans to compute hypothetical Cash Compensation for all Members on 3 dates, viz. 14th Dec 2022, 6th Jan 2023 and 20th Jan 2023, i.e. well in advance of the conversion date. On these 3 dates, Members will be required to submit their quotes as mentioned in para – 5.6 with CCIL performing the steps as mentioned in para- 5.7. CCIL proposes to compute Cash Compensation on each of these dates for CCIL Cleared and non cleared legacy MIFOR trades for each Member. CCIL will share the results with individual Members to give them an advance idea of likely Cash Compensation on conversion.

6.0 Operational Aspects of Transition

6.1 CCIL will book 3 new trades for each eligible legacy MIFOR trade and cancel the legacy trade close to the market closing hours on the day of the transition as under:

- a) Cancellation of Legacy MIFOR trade
- b) Short Term MIFOR trade
- c) Short Term Modified MIFOR trade
- d) Replacement Modified MIFOR trade

6.2 Margin on the new trades: On the day of the transition, CCIL will compute the margin requirement on account of the newly booked trades that will replace the legacy cleared MIFOR trade. If margins are insufficient post acceptance of these new trades, members will be required to replenish margins by 9:00 AM on the next business day.

6.3 Cash compensation

- a) CCIL shall compute cash compensation as of the transition date as per the methodology detailed in Section- 5 above. The compensation amount is intended to compensate members for any change in value of the MIFOR swaps due to the conversion process to Modified MIFOR.
- b) To determine the member-wise compensation amount, the trade-wise cash compensation value for each trade (cleared and non-cleared) subject to conversion will be calculated. The compensation amount will be rounded to the nearest rupee for each member. A member may be liable for or entitled to receive cash compensation.
- c) Cash compensation settlement in CCIL will happen for cleared and non-cleared trades separately.

6.4 Member Reports: CCIL will be making the following reports available on the day of the transition:

- a) Confirmation of Trades Terminated / Created for Transition of Legacy MIFOR trades
- b) Trade File - Deal Reporting NEWT⁴
- c) Trade File - Deal Reporting CANC⁵
- d) Linkage of Trades Terminated / Created for Transition of Legacy MIFOR trades

⁴ NEWT: New Trade

⁵ CANC: Cancellation Trade

File formats will be made available by CCIL to members on 15th Dec 2022.

6.5 Mock Cycle: CCIL will be conducting two mock cycles with members tentatively in Feb'23 / March'23.

6.6 Members may use the reports provided by CCIL for booking of the transition related trades in their internal systems. Members are not required to report any of these transition related trades to CCIL.

7.0 Portfolio Compression of MIFOR trades

In order to reduce the outstanding trades of MIFOR, CCIL has till date conducted 3 cycles of Portfolio Compression (PC) of MIFOR trades. These PC cycles were conducted in Aug 2021, Dec 2021 and July 2022. The Results of the 3 PC runs (in terms of reduction in number of trades and notional of trades) are summarized in the tables below:

Month	Number of trades considered for Compression	Number of terminated trades (Fully and Partially)	% of Compression (in terms of number of trades cancelled)
Aug-21	3,299	2,797	84.8%
Dec-21	2,140	1,599	74.7%
Jul-22	675	451	66.8%
Total	6,114	4,847	79.3%

Month	Total Notional Amount Considered for Compression (Rs. Crs)	Reduction in Notional Amount by Compression (Rs. Crs)	% of Compression (in terms of reduction of Notional amount)
Aug-21	197,823	141,086	71.3%
Dec-21	155,680	93,647	60.2%
Jul-22	45,208	20,326	45.0%
Total	398,711	255,060	64.0%

Table 3: Results of MIFOR Portfolio Compression runs (Reduction in Number of trades and Notional)

Given that transition from MIFOR to Modified MIFOR is being planned in the second quarter of calendar year 2023, CCIL plans to conduct the fourth PC cycle of outstanding MIFOR trades in the first quarter of calendar year 2023 post regulatory approval. The fourth PC cycle will also be the last PC cycle for MIFOR trades before transition.

8.0 Consultation Questions

Members are requested to send their responses to the following Consultation questions:

1. Do you agree with the approach to arrive at Cash Compensation as outlined in Section - 5 of the paper?
2. For valuation of MIFOR trades, do you agree with CCIL's approach of using Modified MIFOR as the discounting curve? If NO, please indicate what would be your preferred choice of discounting curve for valuation of MIFOR swap trades.
3. Do you agree that outstanding non cleared MIFOR trades be also converted to Modified MIFOR trades by CCIL?
4. If your answer is "YES" to Question -3, do you agree that the same methodology as outlined for Cash Compensation be applied by CCIL to outstanding non cleared MIFOR swap trades as well?
5. Do you agree to participate in the 4th Compression cycle of MIFOR swaps that CCIL plans to conduct in the first quarter of calendar year (2023) as mentioned in Section -7 of the paper?
6. Though CCIL has mentioned in its previous consultation paper (12th July) that proposed conversion is likely to happen in the first week of May 2023, would you be fine with the conversion earlier (say before March 2023 end)?

Members are requested to send their comments and feedback on the proposal and specifically to the "Consultation Questions" in Section-8 of this paper. The feedback may be sent by email to us latest by **15th Dec 2022** at rmd@ccilindia.co.in for attention of Chief Risk Officer, CCIL with Subject line as: "*Consultation Paper: Transitioning Outstanding MIFOR Swaps post Index Cessation - Proposed Cash Computation Methodology and Operational Aspects of Transition*". For clarifications, please feel free to contact Mr. Nandan Pradhan, VP, Risk Management Department on 6154 6422 or Mr. Kausick Saha, Chief Risk Officer, Risk Management Department on 6154 6441.

Annexure

1.0 CCIL's Consultation Paper (12th July 2022)

CCIL's Consultation paper issued for Member feedback is in the link:

https://www.ccilindia.com/Documents/whats_new/Proposed%20Approach%20for%20Legacy%20Cleared%20INR%20MIFOR%20IRS%20trades.pdf

2.0 Update on Proposed transition process in other CCPs (LCH, CME)

a) LCH (USD LIBOR Cleared Swaps transition)

Summary of Consultation Response (7 Jul 2022)

- Respondents were unanimously in favor of converting LIBOR contract to market standard OIS contracts.
- LCH proposed a 2 step tranching process, with a split by product type across two dates, first in April 2023 and second in May 2023 with which majority of the respondents agreed with.
- LCH proposed to do overlay bookings to preserve payments associated with representative LIBORs, respondents agreed to this approach as well.
- LCH proposed compensating in cash for the small valuation difference between the original LIBOR contract valued under ISDA's Supplement 70 fall back and the Market-Standard SOFR OIS contract. Majority of respondents agreed.
- Based on the Member feedback LCH intends to move forward with its proposal in consultation, which the participants can now treat as finalised.

References:

1. USD LIBOR consultation paper - [LCH_USD LIBOR Conversion_Consultation.pdf](#)
2. USD LIBOR consultation response - [LCH's Consultation on Conversion of Outstanding USD LIBOR® SwapClear Contracts | LCH Group](#)

b) CME (USD LIBOR Cleared Swaps transition) (Aug 2022)

CME published the methodology in Aug 2022 in which no changes have been made till now. CME has mentioned that participants can now treat this as finalized methodology.

Reference:

USD LIBOR Conversion consultation paper - [CME Conversion Plan for USD LIBOR Cleared Swaps \(cmegroup.com\)](#)

c) LCH Consultation on Conversion of Outstanding Cleared SGD SOR Contracts (29 Sep 2022)

Consultation respondents were strongly in favour for conversion (of SOR contracts into SORA) instead of outright termination. The other details about the standardization, cash compensation and timing of conversion (9 June 2023) were also agreed. Based on the consensus in the responses received, LCH intends to move forward with the proposals as communicated in the consultation document.

References:

1. SGD SOR cessation consultation paper - [LCH_SGD_SOR_Cessation_Consultation.pdf](#)
2. SGD SOR cessation consultation response - [LCH's Consultation on Conversion of Outstanding SGD SOR SwapClear Contracts | LCH Group](#)

d) Steering Committee for SOR and SIBOR transition to SORA (SC-STC) (18 July 2022)

Response to Consultation feedback on “Adjustment Spreads for the conversion of legacy SOR contracts to SORA”:

- Majority respondents agreed that the MRR Spreads will be determined using the historical median of the spread between SOR and Compounded SORA.
- The MRR Adjustment spreads will be calculated using a 5-year look-back period ending 18-July-2022.

- SC-STS further says it would be inappropriate to use the MRR Adjustment spreads as the spreads for short tenors (for periods until 31 Dec 2024).
- This short term spread (Reference Spot spreads) will be determined using 6M historical median between SOR and SORA rates for relevant periods until 18-July-2022.

3.0 Deriving MIFOR swap curve

Broadly, the methodology followed by banks to derive MIFOR swap curve is placed below.

According to Covered Interest rate parity (CIRP), interest rates on two otherwise identical assets in two different currencies should be equal once the foreign currency risk is hedged.

The CIRP condition states:

$$\frac{1+r_d}{1+r_f} = \frac{F}{S} \quad \text{-----(1)}$$

Where, r_d and r_f stands for domestic (say, INR) and foreign interest rates (say, USD) for some time period respectively and S represents the prevailing spot exchange rate (USD/INR) while F is the forward exchange rate (USD/INR) expected to prevail at the end of the period.

Indian money market does not have a liquid term lending benchmark and forward market for the USD/INR is liquid till one year only. Hence, Indian banks use Modified MIFOR swap quotes (MIFOR swap quotes prior to 31st Dec 2021) to derive Long term forward rates (LTFX) in USD/INR beyond 1 year. As LTFX rates can be derived from MIFOR swap rates or Modified MIFOR swap rates, the following conditions need to hold:

$$\frac{1+MIFOR_t}{1+USD LIBOR_t} = \frac{F_t}{S}, \text{ where } r_d \text{ and } r_f \text{ in (1) correspond to } MIFOR_t \text{ and } USD LIBOR_t$$

respectively in this equation

$$\frac{1+Modified MIFOR_t}{1+SOFR_t} = \frac{F_t}{S}, \text{ where } r_d \text{ and } r_f \text{ in (1) correspond to } Modified MIFOR_t \text{ and}$$

$USD SOFR_t$ respectively in this equation

As Forward rates (F_t) will be unchanged (whether derived from MIFOR or from Modified MIFOR swap rates), the following conditions will then hold:

$$\frac{1 + MIFOR_t}{1 + LIBOR_t} = \frac{1 + Modified\ MIFOR_t}{1 + SOFR_t}$$

That is:

$$\frac{DF\ LIBOR_t}{DF\ MIFOR_t} = \frac{DF\ SOFR_t}{DF\ Modified\ MIFOR_t}$$

Hence,

$$DF\ MIFOR_t = \frac{DF\ Modified\ MIFOR_t}{DF\ SOFR_t} * DF\ LIBOR_t \text{ -----(2)}$$

Where,

- $DF\ MIFOR_t$ = Discount Factor of MIFOR at time t
- $DF\ LIBOR_t$ = Discount Factor of LIBOR at time t
- $DF\ Modified\ MIFOR_t$ = Discount Factor of *Modified MIFOR* at time t
- $DF\ SOFR_t$ = Discount Factor of SOFR at time t

Hence, $DF\ MIFOR_t$ can be derived from $DF\ Modified\ MIFOR_t$, $DF\ SOFR_t$ and $DF\ LIBOR_t$. Once, $DF\ MIFOR_t$ is derived for all the relevant tenor points (t), a MIFOR swap trade can be valued. The MIFOR swap curve can also be derived from MIFOR discount factors.

Discount factors are model dependent, varying with individual bank's assumptions in setting various parameters (interpolation technique, CSA/ non CSA etc.). Hence, though the market curves are the same, the discount factors arrived at for different tenors can show divergences between various banks depending upon the model parameters.
