



Attendees:

Members:

Harriet Hunnable (HH)	Independent	Present
Robert Merton (RM)	Independent	Present
Karl Abdelnour	Citigroup	Not Present
Meredith Coffey (MC)	LSTA	Present
Sunil Cutinho (SC)	CME Group – CME Clearing	Present
Agha Mirza (AM)	CME Group – Interest Rate Products	Present
Owain Johnson (Chair) (OJ)	CME Group – Research & Product Development	Present

Observers & Guests:

Gavin Lee (GL)	CME Benchmark Administration	Observer
Vincenzo Albano (VA)	CME Benchmark Administration	Observer
Joe Dervish (JD)	CME Group – Compliance	Observer
Tao Van De Graaff (TvdG)	CME Group – Legal & Regulation	Observer

Agenda

- 1. Introduction
- 2. Conflict of Interest declaration
- 3. Prior Meeting Minutes
- 4. Benchmark Administrator Update
- 5. Interest Rate Markets Update
- 6. Licensing & Distribution update
- 7. Legal & Compliance update
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- 8. Items for discussion at next Oversight Committee

For approval

For discussion

For discussion

For discussion

For discussion

1. Introduction

The Chair welcomed the attendees and reminded them of the goal of the Committee: to review the integrity of Term SOFR which is administered by CBA (CME Benchmark Administration).

The Chair confirmed the meeting was quorate and highlighted that any decisions or voting will be according to a simple majority.

2. Conflict of Interest declaration

The Chair reminded attendees that the meeting would be held in accordance with best practices, an agenda was established and circulated beforehand and if anyone wanted to raise anything outside of the agenda it can be tabled for a future meeting pending legal review. The Chair added that by joining the Committee the members acknowledge the importance of Term SOFR integrity, accuracy, impartiality and regulatory obligation. The members also agree they do not represent the interests of their employers, if any, act in best interest of the terms of benchmark in an independent manner and that the interest of their employer, if any, is of secondary importance. The Chair asked attendees not to share sensitive/confidential information, to consider the competition law best practices and to comply with any legal compliance responsibilities and check with their own legal counsel in case of any uncertainty.

The Chair noted that minutes will be circulated after this meeting and asked attendees not to circulate any information to third parties without the consent of the Administrator.

3. Prior Meeting Minutes

The Chair asked the Committee to approve the Prior Meeting Minutes. The Committee approved the minutes.

4. Benchmark Administrator Update

The Administrator reminded the Committee that the 12 month Term SOFR tenor was introduced back in September. Since the last meeting, all Term SOFR rates have been published as expected and within the expected tolerance checks.

There has been an increase in volumes in SOFR Futures, particularly in November when the SR-3 (the three months futures) have increased significantly. There's an upward trend in Open Interest too, showing that contracts are actively traded and held. There have been a couple of dips in OI, expected as future's expiry approaches. There are no concerns from the Administrators perspective on SOFR Futures Volumes and Open Interest trends, actually the Administrator is satisfied by increased volume and the activity supporting the rates.

The analysis of active calculation intervals appears satisfactory, showing that most intervals are populated with executed transactions. Granular analysis of SR-1s and SR-3s contracts shows more in detail the most active intervals. If the analysis was produced for the month of November only, the increased volumes would have populated more intervals. Nevertheless, as more than 90% of intervals are actively populated, there are no reasons for concern.

The Administrator monitors SOFR Futures prices against a set tolerance threshold, to highlight unusual futures input data. During the observation period there were 17 breaches recorded by the Administrator. While those breaches do not appear of concern, the Administrator has reported the events to CME Market Surveillance for their attention. At this point in time, the Administrator is not aware of any further investigation conducted by Market Surveillance.

A member confirmed how important is for the Administrator to perform those market integrity checks; however, the occurrence of 17 breaches should not be of any concern as the market has been trending in the last 3 months and it's been very sensitive to incoming news, which have triggered increased volatility. The nature of the random snapshots and the tight thresholds set by the Administrator, also might cause additional triggers.

The Administrator added that the monitoring of the tolerance breaches is extended to transactions adjacent to the random snapshot, and no activity of concern has been identified.

A member asked whether CME Market Surveillance would proactively reach out to the Administrator if needed.

The Administrator replied that it would depend on the nature of what they have observed. As the Market Surveillance Team of CME Regulated Markets, they need to be careful on what they can disclose to prevent the risk of tipping-off. Nevertheless, the Administrator and Market Surveillance have a two-way, open communication channel.

The Administrator moved to describe the findings of the Reliability Checks. Those were improved incorporating suggestions from the previous Oversight Committee meeting, including the measure of standard deviations where a trigger was generated. That's now reported in the table for each breach of the reliability checks. There is also a separate table for key economic releases (actual and forecast) that might help to identify intra-month volatility.

In September four breaches of the SD were identified, but the 150% checks were all successful, leading to an overall pass.

In October and November the Aministrator recorded a few more breaches of the SD due to increased market volatility, but overall passese were again successful. The Administrator is comfortable that the recorded breaches of SD were not a cause of concern.

Having reviewed market volatility and the economic releases, the Administrator is comfortable that the Term SOFR reference rates were accurate, reliable and representative of the underlying markets.

The Administrator informed that on 20th September, the first day of publication of the 12 Month Term SOFR rate, the website publication was not accurate due to a formatting issue. It was not a calculation error per se, just an issue with decimals' presentation. A temporary fix was promptly implemented, followed by a permanent solution. This occurrence led to an update of the methodology clarifying the republication rules.

A member asked a broad question about the 12 Month Term SOFR rate, with regard to ARRC endorsement and whether there is an expected timeline for endorsement.

The Administrator replied that whilst the 12 Month rate that has not been endorsed by the ARRC yet, the ARRC has recognised that the 12 month rate falls within the remit of the FCA as a regulated benchmark; no timeline yet has been announced by ARRC for their review.

A member added that David Bowman (ARRC) commented that ARRC has plans to make a decision by June 30th, 2022, 12 months prior to USD LIBOR decommissioning.

The Administrator moved to the SOFR OIS volume analysis, including November figures which were only made available to the Administrator yesterday. OIS volumes vs Futures are still within the 25% threshold by a considerable margin and the threshold has not triggered in any of the previous months. The Administrator will continue to monitor OIS/Futures volumes, with a view of including OIS in the Term SOFR calculation.

The Administrator will present any recommendation for inclusion for OC attention, especially as including OIS would also require a public consutation. Currently the Administrator is exploring data source (LCH, CME Clearing) that could contribute executed transactions.

A member asked whether the second column of the table, titled "OIS ratio" indicates the Administration estimate based on extrapolation or interpolation of the LCH reporting. For example, the table reports 71.7% In September 21. Does it represent 71.7% of the 0 to 2 years OIS volumes?

The Administrator replied that the 71.7% assumption is based on CME Clearing known volumes, then the same ratio is applied to LCH data.

The Administrator also added that the futures contracts volumes included are just the futures contracts used within the calculation of Term SOFR.

5. Interest Rate Markets Update

A member provided a high level view of the FED Policy, the short term interest rate market volatility and the impact of strong growth seen in SOFR Futures volumes.

On the policy front, the Federal Reserve has started to reduce their holdings of Treasury bonds and notes, as well as mortgage products. The FED expects to complete their tapering by March and not to increase their holding until June 2022.

SOFR futures, a primary ingredient of Term SOFR calculation, are impacted by potential changes in monetary policy and market expectations, therefore SOFR Futures contracts prices and volumes volatility are affected by FED potential changes in monetary policy.

CME offers a FED watch tool that helps modelling the implied probability of a FED rate change. At this moment, the FED watch tool indicates that the market is expecting a policy normalisation, implying a 0.25% rate hike.

Currently there is a 1/3 chance of a rate hike in March 2022 and just under 60% chance of a rate hike in May, if it doesn't take place at the March meeting. As a reminder the Federal Reserve meetings are pre-scheduled.

Recent volatility has been a change over Q3 2021, when markets were less volatile as no FED policy change was expected. The increased volatility can also be seen in the CME CVOL Indices, in particular the 2yr US Treasuries, recording a highest level of 54 in the last six months, before retracing to the current 43 level.

Then looking at the realised volatility in the contracts themselves, looking at SOFR or FED Funds or Eurodollars we have seen an uptake in volatility on a realise basis, which explains why our volumes have been strong, in particular in October, November and December. That completes the policy and volatility topic.

SOFR futures volumes are growing very strongly; SOFR Futures have been traded for about 3 $\frac{1}{2}$ years now, therefore still a relatively young product comparing to the over 40 years of Eurodollar trading. Despite being a young product, SOFR Futures are on track to pass the 350,000 contracts per day, one of the most successful products in CME's 170+year history.

In Q4 2021 CME is on track to exceed 300/350,000 contracts, from a record month of 230,000ca contracts in October 2021, to 300,000ca in November and now approaching 350,000ca. The Open Interest have reached 1 million contracts for the first time in September and today we are nearly at 1.8 million contracts; that's an important measure of market strength and robustness.

SOFR Futures market participants now exceeed 700 global banks, hedge funds, asset managers and proprietary trading firms. The diversity of market participants matches the breath of more mature products, like US Treasury Futures and Eurodollar Futures.

The Eurodollar Futures market (currently about 2.5mln contracts, equivalent to ca. \$2.5trn daily notional) will continue to trade until June 2023, when LIBOR will cease; the SOFR Futures 700+ participants, currently represent 93% of the activity in Eurodollar volumes today, which means that Eurodollars Futures trading are likely to transition into 3-month SOFR Futures, further strengthening Term SOFR. It is legitimate wondering whether Term SOFR has the Final point, looking broadly at Libor transitionone question being asked is whether SOFR will inherit the \$240 trillion LIBOR exposure.

CME is very encouraged by the trends of Eurodollar Futures beyond June 30th 2023, not only they are trading as expected, but they have shown tremendous growth this year.

In fact, versus the second half of last year, volumes were up over 300% in contracts that would settle after LIBOR cessation, which means that the market expects seamless continuity as CME announced a fallback procedure which has been incorporated in the Futures Rulebook.

Finally, the market pricing also confirms that observation, the corresponding LIBOR and SOFR contracts are very stable near 26bps spread, which is the conversion spread set through a market consultation process.

A member asked about market acceptance and adoption, whether market participants are asking questions on the robustness of Term SOFR. Would the Administrator consider publishing some of the information you shared, to demonstrate that volumes are robust?

In response, a member stated that the average daily volume in SOFR futures are an input to Term SOFR calculation and it is currently \$240 billion daily, evenly distributed across trading days, the average rarely falls below \$200bn. No direct questions have been asked from market participants on Term SOFR robustness or volumes sufficiency, Last discussion on this was during an event hosted by the FED, where comments were made on 1-month SOFR contract liquidity past 6-7 months with regard to the 12-month prototype rate. CME continue to educate market participants and communicate clearly Term SOFR characteristics and benefits.

6. Licensing & Distribution update

The Administrator reminded that commercial discussions are outside the scope of the OC. However, the Administrator is committed to provide the OC with an update on usage of the benchmarks.

Term SOFR has being licenced to customers in line with CME overall approach, which includes the execution of an ILA (Information Licence Agreement) which could be compared to a master agreement, supplemented by a number of schedules for each benchmark.

Specifically, for Term SOFR there are three types of licences:

- Category one licence: for use in cash market financial products, like for example bonds, loans, mortgages, etc.
- Category two licence: for use in OTC derivative products, limited to hedges of end user exposure from Cash Market Financial Products.
- Category three licence: for use in Treasury, Risk & Transaction Admin Service, as an input to
 a data product or service that help clients manage their treasury and risk management
 activities and/or provide transaction administration services.

The three licences categories are aligned with the ARRC's recommended use of Term SOFR. The Administrator is constantly monitoring new, permissible use cases and will report to the OC any further development.

Currently, there are about 280ca. individual firms that have licensed Term SOFR; most are located in North America, followed by the Asia Pacific region; EMEA is starting to pick up the numbers of firms applying for a licence. It is worth noting that licences are issued at Group level, hence only the Group needs to be licenced, then the affiliates within that Group will all have access to use Term SOFR under the same licence.

A Group entity might also have multiple licences, in fact currently there are about 1,100 total licences with over 280 Firms.

The number of licences has grown fast, from 35 new licences in August to 344 in October and 389 in November. The Administrator expects the uptrend to continue in 2022.

A member asked whether there are pending licences.

The Administrator replied that there are about 350 licenses in the queue; the Administrator has implemented an accelerated licence model that allows customer to execute the ILA faster; the current model allows for execution within five hours; however, many clients take time to examine the documentation and to ask questions; they want to go through details and many don't even realise that they already had licences – not too different from the CME model - to use LIBOR.

The CME licensing model is not too different to the LIBOR licensing and helps clients facilitating the transition; the addition of the three categories is necessary due to the different usages, but it doesn't represent a change from standard T&C.

A member mentioned that LSTA is committed to educate its members. The 5-hour fast track is excellent news as one of members concerns was execution turnaround time. Also MC has informed LSTA members that they must have had a LIBOR licence already with ICE BA and that, if they don't, they might have have a compliance gap.

7. Legal & Compliance update

There were no Legal updates.

CME Compliance representative gave an update on the Conflicts of Interest disclosure document. It was determined that there was a gap in relation to the Administrator obligations in publishing Committee's Members actual or perceived conflicts of interest.

The Administrator is comfortable that the professional positions held by Committee's Members do not present any Conflict of Interest.

The Conflict of Interest Disclosure is now a published document available on the website, alongside the Committee's membership composition; for each Committee member directorships, memberships or other positions are listed.

The Administrator will endeavour to update the document as and when there are changes required and an annual review will be undertaken.

8. Items for discussion at next Oversight Committee

A member suggested to report to the OC complaints (any or none) received by the Administrator and how those are dealt with, as no such report has been produced since the formation of the OC.

The Administrator committed to produce the suggested Complaints Report and that it will be presented at the next Oversight Committee.
The Administrator reminded that the OC meetings schedule for 2022 is being drafted and that invites will be emailed imminently.

