Global IBOR and TLREF Project

1 Contents

Executive Summary

As it is known, within the framework of the benchmark interest rate reform carried out by the Financial Stability Board (FSB), the British Financial Management Authority (FCA) has announced that it will not support LIBOR as of the end of 2021, and following this decision, studies have been initiated by the institutions that set the standards to determine alternative reference interest rates. Within the scope of the transition studies carried out by the global authorities for a while, new reference interest rates were determined and the activities related to the IBOR transition process gained momentum.

Within the scope of IBOR reform, to replace TRLIBOR, Borsa Istanbul has published the Turkish Lira reference interest rate (TLREF) and TLREF index since June 2019. TLREF is the Turkish Lira short-term reference interest rate that can be used in derivative products, debt instruments, loans and various financial contracts and complies with international standards. TLREF is created in order to meet the need of Turkish Lira short-term reference rate that can be used as an underlying or a benchmark in financial products, debt instruments and different types of financial contracts. TLREF Rules are determined by the Committee which is made up of representatives of the Central Bank of the Republic of Turkey, Republic of Turkey Ministry of Treasury and Finance, The Banks Association of Turkey (TBB), Turkish Capital Markets Association, İstanbul Settlement and Custody Bank and Borsa İstanbul. The final recommended schedule for the transition to TLREF is 1/1/2022, and it is predicted that the transition may occur in 2021 if the work is completed before.

Within the scope of the transition to Global IBOR and TLREF, 6 separate Sub-Working Groups (AÇG) were established, coordinated by the National Working Committee. In order to complete the transition process from TRLIBOR to TLREF in coordination with sub-working groups formed by TBB, studies were carried out in line with a project plan with EY Turkey Advisory Services. Working with the Sub-Working Groups of "Financial Coordination, Accounting, Operations and Legal Reporting", "Local Legislation and Law", "Communication", "TLREF Products" and "Compliance with International Regulations" started on 10 November 2020 and it is planned to terminate the work in May 2021.

During the project scope, meetings were held with each sub-working group, regular workshops were held in agreement with the project schedule and outputs, presentations and reports were prepared on certain topics and presented to the participants.

1. Financial Coordination, Accounting, Operations and Legal Reporting Working Group

In 2018, the IASB added a project to its agenda to consider the financial reporting implications of the Reform. It identified two groups of accounting issues that could have financial reporting implications. These were:

i. Phase 1: pre-replacement issues - issues affecting financial reporting in the period before the replacement of an existing interest rate benchmark with an alternative RFR.
ii. Phase 2: replacement issues - issues that might affect financial reporting when an existing interest rate benchmark is replaced with an alternative RFR.

The IASB gave priority to the Phase 1 issues because they were more urgent and in September 2019, The Board issued Interest Rate Benchmark Reform, Amendments to IFRS 9, IAS 39 and IFRS 7 (the Phase 1 Amendments) to address them. The Phase 1 Amendments provided a number of temporary exceptions from applying specific hedge accounting requirements of both IFRS 9 Financial Instruments and IAS 39 Financial Instruments: Recognition and Measurement, but also added some additional disclosure requirements to IFRS 7 Financial Instruments: Disclosures.

Practical solutions were brought to companies for the changes in the basis of determining contractual cash flows with Phase 2 Reliefs published by IASB and KGK. Companies will be eligible for reliefs if the changes are the direct result of the transition to IBOR and on an economically equivalent basis to the terms of the previous contract.

As part of the IBOR Reform project, in October 201926, the IASB considered whether, if IBORs are replaced with backward-looking term rates (such as a rate for the next six months based on the average overnight rate for the previous six months), this would cause instruments to fail the SPPI assessment. The IASB noted that there are no specific conditions or exceptions that would automatically disqualify contractual cash flows to be SPPI. Any assessment of interest should focus on what the entity is being compensated for (i.e., whether the entity is receiving consideration for basic lending risks, costs and a profit margin). The IASB concluded that the current guidance in IFRS 9 provides an adequate basis to determine whether alternative benchmark rates are SPPI and that, provided the interest rate continues to reflect the time value of money and does not reflect other risks and features, the new instrument should pass the SPPI assessment.

The Phase 1 reliefs apply to all hedging relationships that are directly affected by uncertainties due to the Reform, regarding the timing or amount of interest rate benchmark-based cash flows of the hedged item or hedging instrument (i.e., uncertainty about what the new benchmark will be and when it will take effect). However, if the hedged item or hedging instrument is designated for risks other than just interest rate risk, the exceptions only apply to the interest rate benchmark-based cash flows. The relief does not, therefore, apply to net investment hedges, as the hedged item must have interest-based cash flows to be eligible. Application of the reliefs is mandatory. The first three reliefs for IFRS 9 provide for:

i. The assessment of whether a forecast transaction (or component thereof) is highly probable
ii. Assessing when to reclassify the amount in the cash flow hedge reserve toprofit and loss
iii. The assessment of the economic relationship between the hedged item and the hedging instrument

As Phase 1 Amendments only cover pre-replacement issues. The issues that affect financial reporting when an existing interest rate benchmark is replaced with an RFR, are addressed by Phase 2.

Hedge relationships within the scope of Phase 2 are the same as those within the scope of Phase 1. The Phase 2 Amendments for IFRS 9 provide the following reliefs (the ‘Phase 2 reliefs’):

i. Relief from discontinuing hedge relationships because of changes to hedge documentation required by the Reform
ii. Temporary relief from having to meet the separately identifiable requirement
iii. Exemptions on macro hedge accounting

iv. In cases where the alternative reference interest rate is determined as a risk component in the hedging relationship, the 24-month temporary exemptions for the requirement to define risk components separately
v. Exemptions under hedge accounting at fair value risk
vi. Exemptions brought within the scope of IAS 39 Standard

Considering the exceptions provided to banking transactions and securities in the Turkish Tax Legislation and the structure of the tax legislation, it is not expected that the tax legislation creates a serious financial obligation in the IBOR Transition or there will be a serious revision due to the transition in the tax legislation. As a matter of fact, tax authorities in the world interpret the process in this way. For example, the UK Tax Authority stated in a report that the tax effect in IBOR Transition would be very limited.

Today, systems, business processes, data sets and models generally refer to IBOR. It is expected that the process of transition from IBOR to alternative reference interest rates will lead to significant changes and updates in processes and systems. Therefore, the effects of the IBOR transition on operations and processes should be evaluated. The level of technological support that this transition will require will differ in each function. At this stage; All information systems infrastructure affected by the IBOR transition throughout the organization, including in-house systems, end-user applications, and supplier applications, should be identified, and an inventory of all systems affected by the IBOR transition should be established throughout the organization.

With the IBOR transition; Coding and configuration changes should be made especially in systems related to front office, risk management, treasury, finance, tax and accounting activities. Supplier platforms are also used in many institutions as well as in-house systems. For this reason, some changes will be required to make the supplier platforms used compatible with alternative reference interest rates. Position papers in which accounting, reporting standards, tax and operational issues are discussed in detail within the scope of the transition are shared below.

TBB_Finansal Koordinasyon AÇG

TBB - IBOR Geçişinin Süreçler, Bilgi Sistemle

2. Local Legislation and Law Working Group

Legal risks that may be exposed due to the suspension of the publication of IBOR rates were identified and workshops were held for the necessary transaction steps in order to minimize these risks. In these workshops, guiding global examples regarding fallback provisions were shared, legal analysis of the draft articles in question was made and studies were carried out on local legislation.

Summary information regarding the contractual fallback provision and local legislation during the transition to IBOR is as follows;

a) Various workshops were held on whether the calculations made in order to reflect the time value of money by TLREF and other alternative reference interest rates will be evaluated within the scope of the "compound interest ban" and subsequently, the opinions of the banks should be sent to the regulator and the relevant matter should be clarified and the compliance of this method with the provisions of the legislation. A draft of the text containing the questions regarding the related questions has been prepared.

EY_TBB Regülatöre
Yazı Taslağı.docx

b) Survey studies were sent to banks regarding the addition of a legal reserve interest clause (regarding the benchmark interest rate) to the Banking Law, Law No. 3095 or a special law to be determined, the legal reserve interest status and proposal document was prepared and shared with the banks. Subsequently, the draft article text regarding the legislative change was prepared by taking into account the opinions of the banks.

EY_TBB-Yedek Faiz
Yasal Düzenleme Mac

As it is known, an applicable interest rate must be found for each contract during the transition period. For this, banks must first determine their futures contracts, products and transactions after 2021 and prepare an action plan to implement an alternative reference interest rate deemed appropriate for them. In this action plan, the distinction between "priority contracts" and the transfer of the bank's time and resources to these contracts depends on the existence of a safety net for contracts that do not fall within the scope of "priority contracts". During the transition from TRLIBOR to TLREF, the legislative studies carried out in the United States of America, the European Union and the United Kingdom can be examined in order to create the safety net and provide the necessary legal support for the market.

The law amendment, which was enacted in the United States on April 6, 2021, is a regulation prepared for the State of New York and aims to amend the New York General Obligations Law.[1]

The amendment of the law that came into force; In the contracts that refer to USD LIBOR in determining the interest rate or dividend amount and where New York law is selected as the applicable law, to reduce the costs of the litigation process in cases where the fallback provisions do not work if there is no fallback provision or if the USD LIBOR terminates aims to provide legal certainty. In this context, it is aimed to solve the following issues:

i. To prevent a contractual party from refusing to fulfill its obligations arising from the relevant contract or making a statement regarding the breach of the contract by claiming that the publication of the LIBOR (London Inter-bank Offered Rate) is ceased or the benchmark replacement is applied;

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[1] Link: https://www.nysenate.gov/legislation/bills/2021/S297, NY State Assembly Bill A164B (nysenate.gov)

ii. Determine that the proposed benchmark replacement is a commercially reasonable substitute and equivalent to LIBOR; and

iii. Providing a safe haven to avoid litigation against the use of the proposed benchmark interest rate change.

In accordance with the studies carried out in the European Union, the currently in force Indicator Regulation (Benchmark Regulation (EU) 2016/1011, BMR) was amended by Regulation 2021/168, published in the EU Official Gazette on February 12, 2021. With the change made within the scope of the aforementioned studies, the state of the end of IBOR rates was considered, however, it was aimed to draw a road map for all interest rates that could be suspended.[2]

With this regulation, certain powers have been given to the European Commission in determining the legal reserve interest. In the regulation, one of the following is sought to occur as the moment when any interest rate expires (trigger event):

i. Explanation by the regulatory agency subject / affiliated to the institution that discloses the interest rate that the indicative nature of the interest rate has deteriorated in such a way that it cannot be recovered by the use of the powers stated in article 23 of the regulation,

ii. Explanation that the publication of LIBOR is permanently or indefinitely suspended or will be stopped and the rate will not be continued by another institution,

iii. The announcement by the institution with administrative authority over the LIBOR administrator or an official with the liquidation authority over the LIBOR administrator that the publication of LIBOR is suspended or will be suspended for an indefinite period and the rate will not be continued by another institution.

With the regulation adopted in the United Kingdom on April 29, 2021, the BMR, which was transferred to domestic law during the European Union membership period, has been amended. The regulation is called the "Financial Services Bill" and covers many issues. The articles concerning the transition to IBOR authorize the FCA (Financial Conduct Authority) to evaluate whether an interest rate loses its indicative nature or whether this nature is at risk. With the regulation, clauses 21A, 22A, 22B, 23A, 23B, 23C and 23D have been added to the article 21 of the BMR in order to facilitate the IBOR transition process.

With the additions made, FCA gains the authority to assess whether an interest rate measures the market and economic reality it should represent. This measurement, on the other hand, will be made according to the definitions of "loss of indicator nature" and "risk of indicator nature" defined in other articles in the regulation. These measurements will be made by checking whether the relevant interest rate represents the market and economic reality that it should represent.

FCA, which determines that the indicative nature of an interest rate is lost or that its indicative nature is at risk, has the authority to prohibit the "supervised entities", namely banks, credit institutions and other financial institutions, from using these interest rates under this regulation.

c) FCA, in addition to these decisions, is also authorized to determine the replacement interest rate. However, it is also possible for FCA to change the methodology of calculating the relevant interest rate or to make the relevant interest rate an indicator again by means of other measures. Fallback language, which determine the interest to be applied after the expiry of the IBOR rates, emerge as the first option in solving these

[2] Link: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32021R0168

problems. Since the fallback provisions in existing contracts are generally far from meeting the requirements of the IBOR transition process, the new provisions adapted / to be adapted to the contracts as a result of the negotiations of the parties are of great importance in terms of eliminating potential uncertainties and preventing disputes. However, there are some factors that should be taken into consideration when writing a contractual fallback provision.

In addition, banks will need to carry out a comprehensive project for the transition period due to the number of post-2021 futures contracts using IBOR rates. In this process, the applicable interest rate for each contract and the method of applying this rate should be determined. At this stage, first, it is required to identify futures contracts, products and transactions after 2021 and to prepare an action plan to implement an alternative reference interest rate that will be deemed appropriate for them.

The position papers which the contractual and legal fallback provisions are discussed in detail are shared below.

TBB-Sözleşmesel Yedek Faiz Durum ve (

Yasal Yedek Faiz Durum Raporu

3. Communication Working Group

The most important task for banks in managing the impacts of the IBOR transition on the financial and real sector is to establish an effective communication strategy with stakeholders. Banks should have a good grasp of what is aimed by this strategy before preparing their communication strategies.

While developing customer-specific approaches by considering customer segments and product types forms the basis of the communication strategy, the communication strategy must be flexible enough to adapt to the developments in the market and the changing customer needs over time. Identifying segment-based customer communication channels will be the key to effective communication in the IBOR transition. In this context, a comprehensive situation table should be prepared about the risk situations of the customers as far as possible.

Providing necessary information about the benefits, costs and risks of alternative reference interest rates in order to raise the awareness of customers will be effective in establishing customer satisfaction. It is important that the information to be provided is tailored to the relevant target audience in each customer segment, and the customer's individual circumstances and level of knowledge are taken into account. It should be taken into account that the agenda for the IBOR transition is changing very rapidly, and issues open to change should be identified while communicating with customers. Banks must ensure that clients are provided with sufficient information, given the opportunity to ask questions, and ultimately the client has mastered the IBOR transition issues. In addition, the main topics that banks should pay attention to in customer information are discussed below.

1	Each customer segment should be considered when informing customers.
2	Communication must be timely to allow customers to make informed decisions.
3	A consistent and transparent method should be determined in case of differences of opinion in the market about calculation methods, and supporting ideas and documents should be developed that this is an appropriate method.
4	A continuous communication system should be developed to increase the awareness of customers and to keep them updated on developments.
5	Personnel in contact with the customer should be familiar with new products and should be trained and supported on what each alternative reference interest rate means to customers.
6	Processes should be developed to ensure that customers understand the information being passed on to them.
7	It must be ensured that the personnel in contact with the customer do not give advisory information.
8	Customers who may have difficulties with IBOR transition should be identified as soon as possible and communication with these customers should be prioritized.
9	Contracts that need to be rearranged should be determined.
10	Alternative reference interest rates should be presented in a suitable range for the evaluation of customers, and the marketing and sales process should be planned in which customer compliance is observed by providing all necessary information.
11	As part of the communication strategy, customers should be contacted about possible legal costs as early as possible.
12	It should be ensured that possible legal costs do not impede the customer to transition to IBOR.
13	Proactively communicate with customers on operational studies to ensure that customers can complete their IBOR transition according to the industry's planned timelines.

Holistic View

Although technology plays an important role in the IBOR transition, there are concerns that companies will not pay enough attention to it. With the lack of technology to process and analyze large numbers of documents, technology should be considered as part of the IBOR transition.

IBOR migration planning requires collaboration between organizations. As the IBOR rate is mainly related to contract and legal issues, the rate change will have extensive effects on the products and banking system. If all affected areas of the bank work together, the transition will be managed more effectively.

Technological Competence

The technology that supports the products, processes and infrastructure affected by the transition throughout the bank is among the most fundamental issues that need to be evaluated. It is critical that the technology requirements arising from the transition from current reference interest rates are managed well during the transition period. It is necessary to determine the necessary technological investments in order to design an architecture compatible with processes and applications and to implement the transition smoothly.

Human and Human Dimension

In accordance with the roadmap planned in the IBOR transition process, detailed impact analyzes on documents and data should be carried out, and the points regarding the areas that need improvement / correction should be evaluated by the legal teams of the relevant institutions and organizations.

While it is important to take action quickly, it is even more important that the right people make the right moves on time. In this context, banks should work with experienced lawyers and project managers who took part in large-scale review and improvement programs in legal affairs. Working with an experienced and pragmatic team that understands how these projects should be carried out in order to minimize the impact of the process on the bank is of great importance for success.

Risk Management

Potential risks of actions for the transition to IBOR should be evaluated at the project stage, including operational, legal and reputational dimensions. When planning the IBOR transition roadmap, the first step should be to reflect on tough questions rather than focusing on where the negotiations might lead. However, considering that it is not possible to predict everything, we will have to deal with unexpected situations. In addition, it is necessary to avoid overly strict or hierarchical approval systems to ensure that there are no bottlenecks in the decision-making process. There should be a certain flexibility with a solid governance structure.

Since the rates will not be similar as a result of the change in reference interest rates, there may also be a risk of legal disputes. Other parties may conclude that the changes are harmful to them or that the process is not explained in a sufficiently clear language. Therefore, if the parties do not invest in a robust and auditable system from the outset, a serious compensation process may be required after the transition is complete.

Communication Strategy Implementation Checklist

A clear-targeted strategy across the organization should be developed and implemented to proactively engage with affected stakeholders, including senior management and the board, and to increase communication continuity and education levels.

i. The main objectives and priorities of the external communication plan should be defined in a consistent manner with internal communication efforts.
ii. Internal and external stakeholders (customers, regulators, trade associations, etc.) should be identified and properly prioritized and segmented.
iii. Channels to be used in communication should be determined.
iv. Appropriate communication documents should be developed to inform internal and external stakeholders. (e.g. training documents and videos)
v. Internal stakeholders (including management) should be informed and trained on current developments in the industry, the goals and impacts of the IBOR transition.
vi. Clear and consistent information about the effects of the transition should be provided to external stakeholders (customers and investors).
vii. External relations should be developed in order to proactively manage legal, management and reputational risks.

Assessment of the transition risks that may be exposed during the transition to IBOR, the situation and recommendation documents that address the approaches that banks should adopt in their customer communication strategies, and the draft sample information text that banks can refer to in publishing for their customers are shared below.

TBB_IBOR Geçişi Zorlukları ve Yönetim

TBB_IBOR Geçişi İletişim Stratejisi Kılavı

TBB_Alternatif Referans Faiz Oranları

IBOR Bilgilendirme Metni

4. TLREF Products Working Group

TLREF Analysis

The overnight repo rate TLREF, published by Borsa İstanbul since June 2019, is the reference interest rate, which is the starting point for Turkey for the transition from IBOR at a global level. It is calculated as the transaction weighted average of the overnight rates given by banks and other non-bank financial institutions until 14:00 every day. The calculation and publishing method is similar to the methods in other countries. In terms of transaction volume and number of participants, the TLREF market works well and has sufficient depth.

In economic terms, it has been previously stated that TLREF, which is based on daily and fully collateralized real transactions, is a meaningful and highly representative reference rate. The depth of the market and the high level of participation also support this claim. In fact, overnight interest rates <For example, "federal funds rate" and "prime rate" in the USA and OIS (overnight indexed swap) contracts and floating rate loans based on these> have been used in many financial products since much older times than LIBOR. TLREF-based OIS contracts traded on BIST are a more recent example.

TLREF and similar rates are daily rates and it is necessary to calculate the average of daily numbers for periods longer than one day. The use of average interest rates produces two meaningful results:

i. The use of average interest rates neutralizes daily and temporary price fluctuations and cleans up the dirt ("noise") in the data.
ii. The average of TLREFs realized over a certain period better represents both the period interest and the possible trend in interest. This fact shows the "semantic" superiority of the average TLREF or a similar ratio over LIBOR.

In 2013, the criteria recommended to comply with the financial indicators (benchmarks) published by IOSCO's Principles for Financial Benchmarks report were approved by the FSB as the "best practice in financial indicators" standard. Managing bodies of alternative reference interest rates such as SOFR, SONIA and € STR have published their compliance statements and / or audit reports. Since the management of the TLREF is made by the relevant public authorities and / or the parties they authorize, there is no legal obligation to question the compliance with the IOSCO criteria. A similar situation is also valid for SOFR and €STR. Nevertheless, the benefit of complying with the best practice standard for TLREF on the reputation and possible cooperation in international markets is high.

Compliance with IOSCO Principles

IOSCO principles can be summarized under four main topics:

i. ☐Governance: Issues related to the management of TLREF are explained in detail on the BIST website under the name of "TLREF TURKISH LIRA NIGHT REFERENCE INTEREST RATE RULES". Critical information such as the structure of the responsible committee, meeting and decision-making rules, public disclosure procedures, indicator calculation formulas and appointment of a manager can be found in this document.
ii. ☐Quality of the benchmark: As stated in the same document, the TLREF Overnight Reference Interest Rate is a realistic and reliable indicator that is the result of the actual transactions made by banks and non-bank financial institutions.

iii. ☐Quality of the methodology: TLREF is a transaction-weighted average rate calculated from the data remaining after the lowest and highest 15% extreme values have been removed. The TLREF index, on the other hand, is a time series produced using the compound interest formula from the rates consisting of the transactions within this scope. Issues such as the time of publication, possible changes in the method and under which conditions there may be deviations from the routine method are written in the same document.

iv. ☐Accountability: The TLREF Committee also includes official authority representatives and the daily management of the process is carried out by the BIST Index Directorate. In this way, the accountability of the process depends on the BIST internal audit mechanism and the oversight of the official authorities in the Committee.

Interest Calculation

The average of the daily interests incurred during a period is calculated using the "compound average interest" or "simple average interest" methods. The composite average is always higher than the simple average. This difference is more evident in high interest periods, longer maturities and periods of high interest volatility.

As a result of the long years in which LIBOR has been used globally, the rates determined in IBOR (LIBOR, Ice-fix etc.) or derivative markets (swap and forward contracts) could be used as the forward-looking period interest. The amount to be paid at the end of the period is known at the beginning of the period. In practice, the operational infrastructures of financial institutions have been shaped to a great extent in accordance with this mechanism.

It is not yet clear how the forward-looking period interest will be calculated after the decision has been taken to abandon LIBOR due to known problems and to develop reference interest rates (TLREF, SOFR, etc.) in accordance with IOSCO principles. Different working groups in various countries mainly consider two different approaches:

The first approach is a method that occurs in OIS and forward contract markets based on the reference interest rate, determined in accordance with IOSCO principles and determines and publishes period interests such as IBOR-like "forward-looking TLREF".

The approach of calculating the retrospective period interest is a second approach. There are two different methods in this context:

i. The average of TLREF formed during the period as the period interest (in arrears). The period interest to be paid will only be determined at the end of the period.

ii. Tthe average of TLREF rates that came just before the beginning of the period and occurred during a past period of an appropriate length ("in advance"). Here, the interest to be paid at the end of the period is known at the beginning of the period.

To briefly evaluate the subject in terms of economic logic: What we want to reach is what will be the interest rate for the upcoming period in a contract entered today. In the current LIBOR world, the interest to be applied after T days is the T-day LIBOR known today. Aside from other drawbacks, this LIBOR rate is a rate based on market expectations and both expectations and actual rates may change during the period. Therefore, it is possible that it will result in the disadvantage of the lender or the borrower. A period interest calculated with a retrospective method (preferably "in arrears") based on TLREF or a similar alternative reference interest rate will not bear the unnecessary risks and fictional errors caused by the LIBOR mechanism, as it will be the average of the interests realized in the market.

Forward-looking Term Rates

LIBOR is both a forward-looking and pre-known period interest rate and claimed to reflect market expectations. Even today, trillions of dollars worth of notional and spot values are directly or indirectly based on LIBOR. Ratios such as TLREF and SOFR, which are recommended instead of LIBOR, are one-day rates. For this reason, it is argued that it is necessary to produce forward-looking rates from these rates in order to terminate LIBOR completely.

It can be said that derivatives will not be a major problem, as pricing in derivatives markets such as OIS is predominantly based on backward rates and largely defines the ISDA transition methodology. The problem is more related to spot (cash) products such as credit. It is a common procedure and habit to know the period interest to be paid in advance, especially for consumer loans such as SME loans and housing loans. It should be emphasized here that what is essentially desired is the ease of knowing the period interest in advance rather than the forward-looking feature of LIBOR reflecting the market expectations. This priority should be kept in mind when looking for a solution based on TLREF.

Product Based Evaluation and Transition Logic

Since the forward-looking period interest model has not been foreseen yet and it is necessary to discuss the retrospective calculation methods in terms of different products in order to direct the following studies.

Choosing a product-based uniform method may not be easy. Therefore, in the transition period, it may be necessary to leave the decision to the professional organizations or the regulatory authority in some product groups where the method cannot be decided (eg personal loans).

In cases where the new reference interest rates are fully guaranteed (TLREF, SOFR, etc.), they are considered risk free to a large extent. IBOR also includes bank credit risk and maturity risk premiums. Therefore, the IBOR must be higher than the alternative reference interest rate with the same maturity. For this reason, a risk premium ("spread") should be calculated that will not cause unfair value transfer between debtors and creditors and stop the market when switching from IBOR to an alternative reference interest rate. Among the many alternatives considered, the most widely accepted approach was the idea of estimating the average or median of the difference between the IBOR and the alternative reference interest rate from historical data and adapting it to ongoing contracts. At the beginning of the questions that are sought to be answered here, is how long to go to the past. Using the data of the past 5 - 10 years will be more inclusive as a statistical technique, as suggested in some studies. However, it is a question mark to what extent very old data can represent current market conditions. In any case, this approach is the fairest, even if it doesn't provide full fixes.

TLREF Products User Guide Interim Report, where all titles are evaluated in detail, is shared below.

TLREF Ürünleri Ara Rapor

5. Compliance with International Regulations Working Group

ISDA Protocol

As of January 25, 2021, the ISDA protocol and its annexes have entered into force. From January 25, 2021, all new derivatives referring to the ISDA definitions introduced in 2006 will automatically include updated reserve interest provisions for the covered IBORs. Changes will also apply to older derivatives if both parties have followed the ISDA protocol in contracts or have accepted similar binary changes.

The ISDA fallback protocol has an implicit rule of review drift and payment delay and two business days of review. However, the ISDA protocol provides flexibility in changing or excluding the parameters of the contracts:

i. Changing the spread margin
ii. Changing any text of the protocol
iii. Including non-ISDA documents within the scope of the protocol
iv. Derecognition of documents under ISDA to align conditions with hedges associated with cash loans

Announcement of Cessation of LIBOR

In the statement made by the Financial Conduct Authority (FCA); announced that one, three, six and twelve-month USDLIBOR rates will continue to be announced until June 30, 2023. In the statement, it was noted that the benchmark interest rates of euro, yen, Swiss franc and pound and the one-week and two-month USDLIBOR will be determined for the last time on December 31, 2021. With the spread rates fixed as a result of the pre-cessation event realized with this statement, the market participants became clear about the economics of having contractual reserve interest provisions during the termination of LIBOR.

During this time, the rate shift is the preferred option actively. This is because in the long run synthetic LIBOR will have a lower economic incentive and certainty. Banks should take action on remediation activities, especially for tough legacy contracts. In order to manage the risk, customers should be informed about the deadlines for the relevant LIBOR currencies.

6. Abbreviations and Terminologies

BMR	Benchmark Regulation
FCA	Financial Conduct Authority
FSB	Financial Stability Board
IASB	International Accounting Standards Board
IOSCO	International Organization of Securities Commissions
ISDA	International Swaps and Derivatives Association

IBOR	Interbank Offered Rate
LIBOR	London Interbank Offered Rate
€STR	Euro Short-Term Rate
SOFR	Secured Overnigt Finance Rate
SONIA	Sterling Overnight Index Average
TLREF	Turkish Lira Overnight Reference Rate

In advance	Fixing method at the beginning of the interest period
In arrears	Fixing method at the end of the interest period
Spread	Correction rate resulting from the difference between the two rates
Tough legacy	Non-convertible contracts after IBOR transition

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