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Public Consultation on the Appropriate Choice and Usage of Japanese Yen Interest Rate Benchmarks

July 2019

Cross-Industry Committee on Japanese Yen Interest Rate Benchmarks

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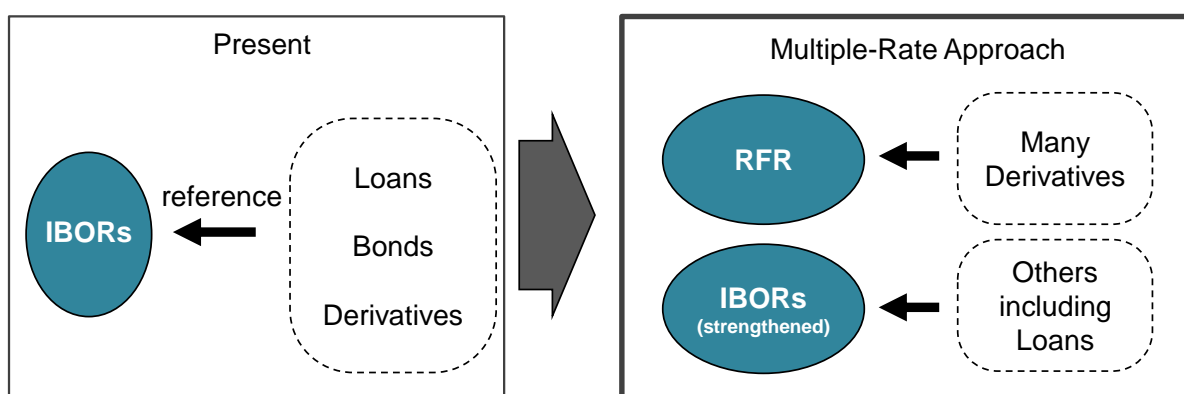
1. Introduction

(1) Background—Developments surrounding interest rate benchmark¹ reform

The Financial Stability Board (FSB) published a report titled “Reforming Major Interest Rate Benchmarks²” in July 2014. In this report, the FSB recommended the following:

- (i) improving the reliability and robustness of existing interbank offered rates (IBORs) such as LIBOR, EURIBOR, and TIBOR, and developing nearly risk-free reference rates (RFRs) without bank credit risk; and
- (ii) promoting the usage of existing IBORs and RFRs, in ways suited to the characteristics of financial instruments and financial transactions (multiple-rate approach; Figure 1-1).

Figure 1-1: Multiple-Rate Approach



In line with the recommendation in (i) above, in Japan, the JBA TIBOR Administration (JBATA) implemented TIBOR reform³ in July 2017, and the “Study Group on Risk-Free Reference Rates” identified the uncollateralized overnight call rate as the Japanese yen (JPY) RFR in December 2016. As a next step, in order to comply with the recommendation in (ii) above, it is important that market participants and interest rate benchmark users make preparations to appropriately choose and use interest rate benchmarks in ways suited to the characteristics of financial instruments and financial transactions.

¹ For details on interest rate benchmarks, see BOX 1.

² http://www.fsb.org/wp-content/uploads/r_140722.pdf

³ In July 2017, JBATA implemented JBA TIBOR reform. The basic concepts of JBA TIBOR reform are to expand the scope of referenced actual transactions to make JBA TIBOR more anchored in actual transactions and integrate and clarify the calculation and determination processes of reference banks' submission rates based on which JBA TIBOR is calculated to enhance its transparency and integrity. In the processes of the calculation and determination of reference banks' submission rates, when actual transaction data or quotes data cannot be obtained from the underlying market (e.g., unsecured call market) or from the markets equivalent to the underlying market, actual transaction data of the wholesale funding markets (e.g., NCD transactions and large term deposits with corporates), which are the relevant markets, will be used. For details, see the following.

http://www.jbatibor.or.jp/english/%E5%88%A9%E7%94%A8%E8%80%85%E5%90%91%E3%81%91%E8%AA%AC%E6%98%8E%E8%B3%87%E6%96%99%E6%A1%88_EN_100217.pdf

Meanwhile, concerns about the sustainability of LIBOR beyond the end of 2021 have rapidly heightened⁴. Since the volume of transactions referencing LIBOR is considerably large in global markets, and various rules and business practices are interdependent and underpinned by LIBOR, the permanent discontinuation of LIBOR will have a wide-ranging impact (Appendix 1-a). Against this backdrop, for major currencies other than JPY, the identification of RFRs⁵ and preparations for the discontinuation of LIBOR have been discussed. While bearing in mind these developments overseas, it is also necessary in Japan to prepare for LIBOR discontinuation⁶.

(2) The framework for deliberation in Japan (Appendix 1-c)

(i) Objectives of the Committee

To address issues described in (1) above, the “Cross-Industry Committee on Japanese Yen Interest Rates Benchmarks” (referred to simply as “Committee” hereinafter) was established in August 2018 with the mandate of conducting deliberations on the following:

- (a) developing recommendations for the stocktaking of ideas on the appropriate choice and usage of JPY interest rate benchmarks;
- (b) identifying specific challenges arising from (a) above and proposing solutions; and
- (c) developing transition plans based on (a) and (b) above for a new framework enabling the use of JPY interest rate benchmarks.

(ii) Participants of the Committee

Considering that interest rate benchmarks are used by a wide variety of parties, the members of the Committee are drawn from a diverse set of market participants and interest rate benchmark users, including financial institutions, institutional investors, and non-financial corporates. In addition, the Financial Services Agency (FSA), the Bank of Japan (BOJ), trade associations, and market infrastructure institutions take part in the Committee as observers.

(iii) Formation of sub-groups

Under the Committee, the following three sub-groups were formed to deliberate on matters including ensuring the robustness of contracts in case LIBOR is permanently discontinued and developing term reference rates based on RFRs, drawing on the views of practitioners or experts.

- Sub-Group on Loans

⁴ In July 2017, Andrew Bailey, Chief Executive of the Financial Conduct Authority (FCA) of the United Kingdom, announced in a speech that panel banks would no longer be obliged to submit to LIBOR after 2021. As a result, the likelihood that LIBOR will cease at end-2021 has rapidly increased. Reasons given by Mr. Bailey in his speech in July 2017 on why it would be difficult to continue with the publication of LIBOR despite the reform efforts were that (1) “the underlying market that LIBOR seeks to measure — the market for unsecured wholesale term lending to banks — is no longer sufficiently active,” and (2) “panel banks feel understandable discomfort about providing submissions based on judgments with so little actual borrowing activity against which to validate those judgments.”

⁵ For details on RFRs identified in other major currencies, see Appendix 1-b.

⁶ “Interest rate benchmark reform – overnight risk-free rates and term rates,” published by the FSB on July 12, 2018, states, “Because derivatives represent a particularly large exposure to certain IBORs, . . . transition of most derivatives to the more robust overnight RFRs is important to ensuring financial stability.”

- Sub-Group on Bonds
- Sub-Group for the Development of Term Reference Rates

Each sub-group conducted detailed deliberations and reported the outcome of the deliberations to the Committee, and the Committee discussed and reviewed the reports.

In addition, the Committee participates in the Cross-Currency Basis Swap Subgroup (CBSS) of the Alternative Reference Rates Committee (ARRC) in the United States, which is a deliberating body of the U.S. dollar interest rate benchmark. The Working Group on Currency Swaps was formed under the Committee to discuss technical and practical matters regarding cross-currency basis swaps and FX swaps and express opinions to the CBSS.

(iv) Past activities

Before publishing this consultation, the Committee and each sub-group held meetings eight and nine times, respectively. In addition, the Working Group on Currency Swaps held two meetings.

Moreover, the Committee published its meeting materials in Japanese and English and vigorously engaged in activities such as the regular exchange of views with the chairs of deliberating bodies in other jurisdictions⁷ and external communication⁸.

(3) Purpose and structure of the consultation

The purpose of this public consultation is to outline the outcome of the past deliberations in the Committee and seek comments regarding the future structure of JPY interest rate benchmarks from a wide range of relevant parties.

The structure of this consultation is as follows. Based on the deliberations in the Committee, “2. Specific matters for consideration” outlines the way of thinking about the appropriate choice and usage of JPY interest rate benchmarks, and specific challenges arising from them and their possible solutions. “3. Potential course of action along a time line” outlines the potential choice of interest rate benchmarks based on the deliberations in the Committee and describes the action plan toward the use of alternative interest rate benchmarks. “4. Transition plan” provides an overview of market-wide and firm-led efforts to prepare for the permanent discontinuation of LIBOR. “5. Issues subject to public comments” lays out the questions for consultation.

Based on the responses to this consultation, the Committee plans to publish the deliverables reflecting the outcome of the consultation around fall 2019.

Please note that mutual agreement by parties is necessary when engaging in contractual arrangements or other arrangements based on the deliverables. Also, the final report shall not preclude parties from engaging in contractual arrangements agreed otherwise.

⁷ The deliberating bodies of the five LIBOR currencies in other countries/jurisdictions, such as the ARRC mentioned above, the UK Working Group on Sterling Risk-Free Reference Rates, the EU Working Group on Euro Risk-Free Rates, and the Swiss National Working Group on Swiss Franc Reference Rates engage in deliberations regarding each currency. See also Appendices 1-b above and 1-d for the structure and an overview of deliberations by currency.

⁸ For details on the developments in each jurisdiction and internationally as well as the past activities of the Committee, see the following.

http://www.boj.or.jp/en/paym/market/jpy_cmte/index.htm/

2. Specific matters for consideration

The following section describes basic ideas on the appropriate choice and usage of JPY interest rate benchmarks, specific challenges arising from them, and their possible solutions. After laying (1) the foundation for discussions, this section provides (2) an evaluation of each option for alternative benchmarks, (3) fallbacks, and (4) issues regarding accounting.

It should be noted that cash instruments discussed as the subject of this consultation are yen-denominated products governed by domestic laws, while cash instruments governed by foreign laws are deliberated by the deliberating bodies of foreign jurisdictions⁹.

(1) Identification of basic ideas

(i) Two approaches in preparation for the permanent discontinuation of JPY LIBOR

The Committee has discussed the following transition and fallbacks which envisage the permanent discontinuation of JPY LIBOR for existing financial products and transactions referencing JPY LIBOR (Figure 2-1).

a. Transition

It is an approach to use interest rate benchmarks other than JPY LIBOR (e.g., RFRs and TIBOR) as the reference rate for financial instruments and transactions which are newly contracted due to the reasons such as expiration of existing contracts before the permanent discontinuation of LIBOR.

Even if the expiration date of new contracts is set for after the permanent discontinuation of LIBOR, impact of the permanent discontinuation of LIBOR could be avoided by using interest rate benchmarks other than JPY LIBOR as the reference interest rate when concluding new contracts. Even if the expiration date of the existing contracts is set for after the permanent discontinuation of LIBOR, it is deemed to be possible to change the reference interest rate to interest rate benchmarks other than JPY LIBOR through procedures to amend the contract¹⁰.

However, it takes some time to newly develop alternative benchmarks, develop market conventions, and revise contracts, among other initiatives. Accordingly, it is deemed to require a certain amount of time to be able to readily transition to new alternative benchmarks.

b. Fallbacks

It is an approach where contracting parties reach an agreement in advance on the

⁹ Moreover, it should be noted that since the FSB requested in its letter addressed to the International Swaps and Derivatives Association (ISDA) in July 2016 to internationally aggregate initiatives to improve the contractual robustness of derivatives in major currencies including the yen in the event that IBORs are permanently discontinued, this issue will not be covered by this public consultation.

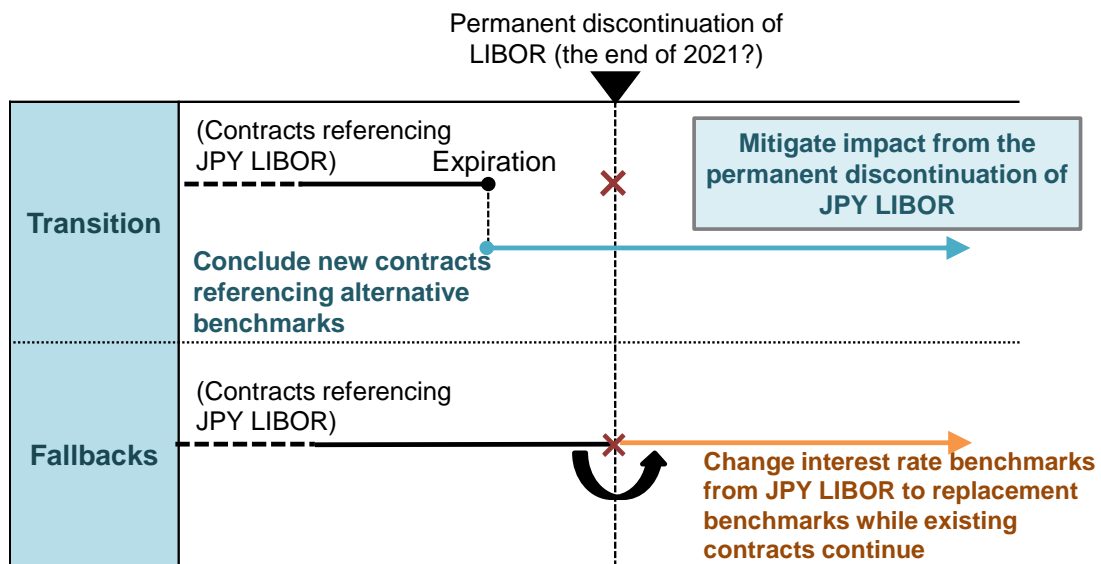
¹⁰ In such a case, it also seems possible to cancel existing contracts and conclude new contracts. The transition method to be used will be selected among the contracting parties.

replacement rate for JPY LIBOR used in situations such as after the permanent discontinuation of LIBOR¹¹ referencing JPY LIBOR and whose term runs beyond the permanent discontinuation of LIBOR.

If an agreement is not reached on the replacement rate in advance, the contracting parties will cease to have interest rate benchmarks that they should reference in the course of the contract, causing direct impact on its fulfillment. The approach to be taken at the time of the permanent discontinuation of LIBOR can be clarified by specifying the replacement rate in advance in a contract to avoid such impact¹².

It should be noted, however, that with the change of the reference rate from JPY LIBOR to the replacement rate, it will become unfeasible to obtain exactly the same economic effect as when referencing JPY LIBOR (there will be a certain amount of value transfer¹³).

Figure 2-1: Transition and Fallbacks



(ii) Need for the development of term reference rates

The uncollateralized overnight call rate specified as the RFR by the “Study Group on Risk-Free Reference Rates” is an overnight rate. On the other hand, JPY LIBOR, the existing interest rate benchmark, has a term structure, and term reference rates including those with tenors of three months or six months are referenced in existing contracts.

Accordingly, to achieve smooth transition from JPY LIBOR to RFRs, it is necessary to develop term reference rates, for instance, with tenors of three months or six months, based on RFRs,

¹¹ The conditions on which fallback provisions (triggers) are activated will be explained in 2.(3)(i)(Issue 1) below.

¹² It is necessary to fully deliberate in the legal department of each company in consultation with the corporation lawyer on contractual risk and other related issues arising from a case in which a mutual agreement regarding fallbacks cannot be reached between parties at the time of the permanent discontinuation of LIBOR.

¹³ “Value transfer” will be described in 2.(3)(i)(Issue 2) below.

which will be the successors (Figure 2-2).

Figure 2-2: Term Reference Rate

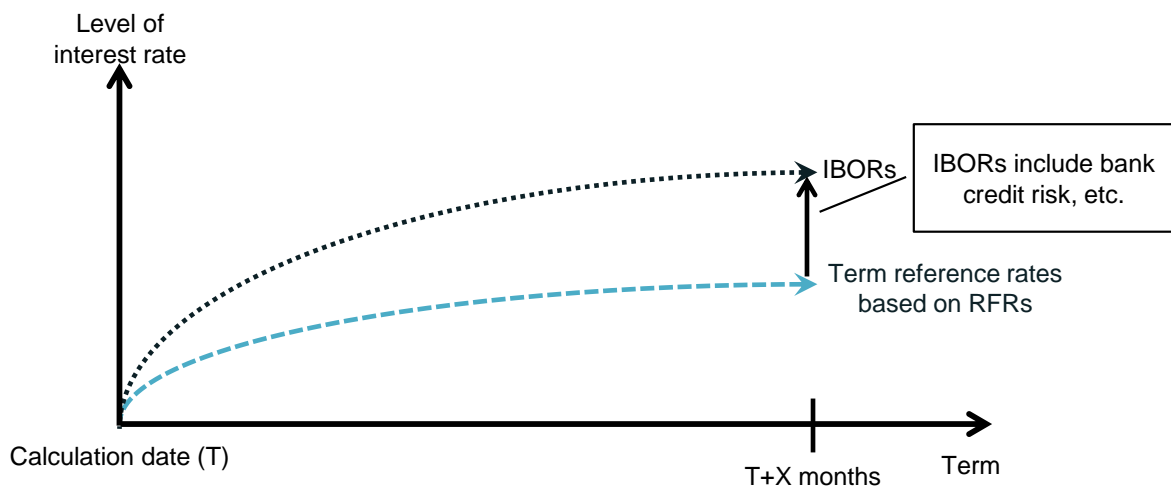
	O/N	1M	3M	6M
JPY LIBOR	×	○	○	○
RFRs	○	×	×	×

(1) Developing Term Reference Rates

(2) Transition

Since RFRs do not reflect risks such as credit risks of banks, the features and levels differ between term reference rates based on RFRs and interbank offered rates (IBORs), which are existing interest rate benchmarks (Figure 2-3).

Figure 2-3: Difference between Term Reference Rates based on RFRs and IBORs



(2) Options for alternative benchmarks

The following section describes the contents discussed by the Committee regarding interest rate benchmarks which could replace JPY LIBOR. It describes (i) a summary of options for alternative benchmarks; (ii) an evaluation of each option for loans; (iii) an evaluation of each option for bonds; and (iv) specific requirements for developing term reference rates based on RFRs among these options.

(i) Summary (Appendix 2-a)

First, among possible interest rate benchmarks to replace JPY LIBOR, methods for developing term reference rates based on RFRs are broadly categorized into the following two methods.

- Calculate by compounding¹⁴ the actual uncollateralized overnight call rate published every business day
- Derive term reference rates based on derivatives transactions which represent the outlook for the uncollateralized overnight call rate

Among them, the former can be further classified into two methods according to the timing for fixing the interest rate used to calculate the amount of interest and the Reference Period.

Option (1) O/N RFR Compounding (Fixing in Advance)

It is a method of calculating the applied interest rate by accumulating uncollateralized overnight call rates through daily compounding for a certain period up through the Calculation Period. Moreover, the applied interest rate is fixed in advance at the beginning of the Calculation Period by bringing forward the Reference Period to actually conduct compounding one term before the Calculation Period (i.e., fixing in advance).

Option (2) O/N RFR Compounding (Fixing in Arrears)

It is a method of calculating the applied interest rate by accumulating uncollateralized overnight call rates through daily compounding from the beginning of the Calculation Period to the end of the Calculation Period. As it differs from Option (1) in that the Reference Period and the Calculation Period are a near match, the applied interest rate is fixed as the end date of the Calculation Period comes close (i.e., fixing in arrears).

On the other hand, the latter method of deriving term reference rates based on derivatives transactions uses the data from interest rate swaps and interest rate futures with the uncollateralized overnight call rate as underlying assets.

Option (3) Term Reference Rates (Swap)

It is a method to develop rates based on market data for JPY OIS¹⁵. These rates reflect the forecast for future interest rates. The applied interest rate is fixed in advance at the beginning of the Calculation Period (i.e., fixing in advance), and the Reference Period and the Calculation Period are a near match.

Option (4) Term Reference Rates (Futures)

It is a method to develop rates based on prices of Over-Night Call Rate Futures listed on the Tokyo Financial Exchange (trading is currently suspended). As with Option (3), these rates reflect the forecast for future interest rates. The applied interest rate is fixed in advance at the beginning of the Calculation Period (i.e., fixing in advance), and the Reference Period and the Calculation Period are a near match.

In addition to term reference rates based on RFRs, which will be newly developed, the existing interbank offered rate, TIBOR, is also listed as an option.

¹⁴ Considering the actual cases of usage overseas, it is also possible to take the simple average of the actual values for every business day.

¹⁵ JPY OIS is described in detail in BOX 2.

Option (5) TIBOR

The rate reflects the forecast for future interest rates. The applied interest rate is fixed in advance at the beginning of the Calculation Period (i.e., fixing in advance), and the Reference Period and the Calculation Period are a near match.

As with JPY LIBOR, it includes credit risks of banks.

The above options from Option (1) O/N RFR Compounding (Fixing in Advance) to Option (5) TIBOR are hereinafter simply referred to as Option (1) – Option (5).

(ii) Evaluation of each option for loans

In the discussions in the Committee so far, Option (5), which is currently in wide use, is deemed to be a desirable alternative benchmark to JPY LIBOR for loans, considering that it is an interest rate that is fixed in advance and has a term structure. As with Option (5), Option (3) and Option (4) are also deemed to be desirable because they are highly compatible with JPY LIBOR. However, it has been discussed that since Option (3) and Option (4) take time to develop, until their development, Option (1) or Option (2) could be used. The following section, mainly having in mind transition (see 2.(1)(i)a), describes the background of the discussions and points to note in considering the options.

Option (5)

Option (5) provides cash flow certainty since it is fixed in advance, and has basic characteristics similar to those of JPY LIBOR such that it includes credit risks of banks. Therefore, it is thought to be highly compatible with the current administration and systems, accounting practices, and market conventions.

However, when considering transactions across multiple currencies, e.g., JPY LIBOR and U.S. dollar LIBOR, it needs to be taken into account that discussions are ongoing overseas on transition and fallbacks to alternative benchmarks based on RFRs, instead of adopting the multiple-rate approach.

Option (3) and Option (4)

As with JPY LIBOR, Options (3) and (4) provide cash flow certainty since they are fixed in advance, and are thought to be highly compatible with the current administration and systems, accounting practices, and market conventions. Moreover, they do not include credit risks of banks as Options (3) and (4) will be developed based on the uncollateralized overnight call rate.

However, it should be noted that Option (3) is planned to be developed by around the middle of 2021 (to be discussed below), and resumption of trade in Over-Night Call Rate Futures listed on the Tokyo Financial Exchange in 2020, which is the precondition for the development of Option (4), is under discussion. Specifically, if individual companies start a new loan or change the reference rate of loans referencing JPY LIBOR (with a maturity beyond the end of 2021 and that do not have provisions contemplating the permanent discontinuation of LIBOR) before the development of Option (3) or Option (4), Option (5) could be used, or Option (1) or Option (2) could be used “temporarily.”

Option (1)

While its Reference Period is different from those of loans referencing JPY LIBOR and hedging by JPY OIS could be difficult, it is expected to be used until the development of Option (3) or

Option (4), given that it provides cash flow certainty since it is fixed in advance and the existing administration and systems could be utilized.

Option (2)

Option (2), on the other hand, in light of the public consultation¹⁶ by ISDA, has an advantage of being consistent with the replacement benchmark for JPY LIBOR in derivatives governed by the ISDA Master Agreement (hereinafter, “ISDA Derivatives”); however, it was also pointed out that it poses many challenges for the administration and systems of each company, as well as substantial costs, given that it is fixed in arrears. For example, concerns were raised that unlike the previous loans referencing JPY LIBOR, the period from the fixing of the applied interest rate to Payment Date¹⁷ may become very short¹⁸. Accordingly, careful deliberation is required as to whether costs do not outweigh benefits and whether the understanding of relevant parties could be obtained not only in the case of temporary use limited to a short period of time until the development of Option (3) or Option (4) but also in the case of use for a relatively long period of time.

(iii) Evaluation of each option for bonds

In the deliberations by the Committee so far, Option (3) and Option (4) are deemed desirable as alternative benchmarks to JPY LIBOR; however, it has been discussed that since Option (3) and Option (4) take time to develop, until their development, it will be realistic to use Option (1), Option (2), or Option (5). The following section, mainly having in mind transition (see 2.(1)(i)a), describes the background of the discussions and points to note in considering the options.

Option (3) and Option (4)

As with JPY LIBOR, Options (3) and (4) provide cash flow certainty since they are fixed in advance, and are thought to be highly compatible with the current administration and systems, accounting practices, and market conventions because the Interest Calculation Periods are a match. Moreover, they do not include credit risks of banks since they will be developed based on the uncollateralized overnight call rate.

However, it should be noted that Option (3) is planned to be developed by around the middle of 2021 (to be discussed below), and resumption of trade in Over-Night Call Rate Futures listed on the Tokyo Financial Exchange in 2020, which is the precondition for the development of Option (4), is under discussion. Specifically, if individual companies issue a new floating rate bond or change the reference rate of existing bonds referencing JPY LIBOR (with a maturity beyond the end of 2021 and that do not have provisions contemplating the permanent discontinuation of JPY LIBOR) before the development of Option (3) or Option (4), Option (1), Option (2), or Option (5) could be used “temporarily.”

¹⁶ <http://assets.isda.org/media/04d213b6/db0b0fd7-pdf/>

¹⁷ The day on which the amount of interest fixed on the Calculation Date is paid (for details on Calculation Date, see footnote 20).

¹⁸ For foreign currencies, as a means to secure a sufficient period of time between the timing for fixing the applied interest rate and the Payment Date, deliberation is conducted not only on the “Lock out methodology” in which the Reference Period is shortened by several business days but also on the “Delay methodology” in which the Payment Date is pushed back so that the Reference Period and the Calculation Period are a match and the “Reset days prior methodology” in which the Reference Period is brought forward by several business days so that the Reference Period and Calculation Period are a match (see below for details).

Option (1)

While its Reference Period is different from bonds referencing JPY LIBOR and hedging by JPY OIS could be difficult, it is expected to be used until the development of Option (3) or Option (4), given that it provides cash flow certainty since it is fixed in advance and the existing administration and systems could be utilized.

Option (2)

Option (2), on the other hand, has a track record of overseas issuance using this methodology of fixing, and in light of the public consultation by ISDA, it has an advantage of being consistent with the replacement benchmark for JPY LIBOR in ISDA derivatives; however, it will pose many challenges for administration and systems of each company, as well as substantial costs. Accordingly, careful deliberation is required as to whether costs do not outweigh benefits in the case of temporary use limited to a short period of time until the development of Option (3) or Option (4).

Option (5)

Option (5) could be used until the development of Option (3) or Option (4) because it provides cash flow certainty since it is fixed in advance and the existing administration and systems could be utilized.

However, since deliberation is under way in the United Kingdom, the United States, and Switzerland in the direction of basing alternative benchmarks on RFRs, deliberations focus on RFR-based interest rate benchmarks as the replacement rate for LIBOR in the case of bonds. Given this, there is a risk that overseas issuers may not use TIBOR.

(iv) Specific requirements

For each option for term reference rates based on RFRs, specific requirements of the option were discussed because certain needs were confirmed for loans and bonds as described in (ii) and (iii) above.

a. Option (1) and Option (2) (Appendix 2-b)

The rates are obtained by compounding the uncollateralized overnight call rate published every business day, and thus it is already possible at present to calculate and reference them based on the agreed method of the contracting parties. On the other hand, since many requested publication¹⁹ of the interest rates, requirements on the premise of publication were deliberated, taking into account the opinions of the Committee members. The following section presents proposals for the standard requirements of Option (1) and Option (2) which were discussed by the Committee.

Depending on the status of deliberations on cross-currency basis swaps and other developments, it seems necessary to flexibly conform to market conventions such as by

¹⁹ "Publication" here does not assume a "calculator" which lets benchmark users select tenors and other conditions at their will and automatically calculates applied interest rates; rather, it intends to identify standard tenors and other conditions that are particularly strongly required in the cash instrument market and then publish the rate calculated by information vendors and others. However, given the fact that there are voices requesting a calculator in discussions overseas, it may be necessary to respond while paying attention to such overseas developments going forward.

separately deliberating on changes in requirements as required.

Option (1)

Since the applied interest rate is fixed in advance at the start of the Calculation Period, there is some time from the Calculation Date²⁰ to the Payment Date. Accordingly, it is deemed appropriate that the Calculation Date be on the same day as the Reset Date²¹ because there is no particular problem in the case of interest payments and other operations.

For consistency with the market convention for JPY OIS, compounding of the uncollateralized overnight call rate published every business day without adding spreads is deemed to be appropriate.

For consistency with the market convention for the uncollateralized overnight call rate and JPY OIS, it is deemed to be appropriate to use the Act/365²² day count fraction for the calculation of interest rates.

There were needs for publication in tenors of one month, three months, and six months.

See Appendix 2-b for details of the requirements described above.

Option (2)

Since it was pointed out that the period from the Calculation Date to the Payment Date could become very short, the Committee initially proceeded with discussions on the premise of using the Lock out methodology to secure a certain number of business days from the Calculation Date to the Payment Date by shortening the Reference Period by a certain number of business days.

Regarding the specific business days from the Calculation Date to the Payment Date when adopting the Lock out methodology, the Committee members' opinions were that two business days or five business days were necessary from the Calculation Date to the Payment Date. The former opinion was considered from the perspective of consistency with the market convention for JPY OIS and JPY LIBOR, as well as settlement risk, and the latter opinion was considered from a practical perspective such as for the payment of interest. Based on these opinions, it is deemed to be appropriate to have two types of interest rates for publication, i.e., those with two business days from the Calculation Date to the Payment Date, and those with five business days. However, while some members of the Committee viewed that, from the perspective of incorporating market conditions and for consistency with issuance overseas, it is necessary to set the Calculation Date around five business days before the Payment Date for bonds, other members of the Committee viewed that it is necessary to set the Calculation Date from eight to ten business days before the Payment

²⁰ The day on which it becomes practicable to provide notice on the floating rate and the amount of interest, after all reference rates have been published and the applied interest rate has been fixed.

²¹ Generally, the first day of the Calculation Period. For most financial instruments, the first day of the Calculation Period is designated as the Effective Date.

²² A parameter for the number of days used for calculating the amount of interest. For example, in the case of Act/365, "Act" means actual number of days while "365" means 365 days as the number of days in a year to be used for calculation; if the actual number of days is 185, "185/365" will be used to calculate the amount of interest.

Date, taking account of the Japan Securities Depository Center (JASDEC)'s current system²³ for interest payments²⁴.

For consistency with the market convention for JPY OIS, compounding of the uncollateralized overnight call rate published every business day without adding spreads is deemed to be appropriate.

For consistency with the market convention for the uncollateralized overnight call rate and JPY OIS, it is deemed to be appropriate to use the Act/365 day count fraction for the calculation of interest rates.

For the Calculation Period, deliberation was conducted on the standard method of setting the period based on the Reset Date and tenor (e.g., the method where the Calculation Period is set for three months beginning from the Reset Date in the case of interest rates with tenors of three months), and the method of flexibly setting the period depending on financial instruments. It is deemed to be appropriate to adopt the standard method of setting the period based on the Reset Date and tenor, considering that the rates will be published.

Since the last day of the Reference Period of the interest rate is brought forward from the last day of the Calculation Period by several business days, the actual figures of the uncollateralized overnight call rate published on the last day of the Reference Period will be used consistently for the calculation of interest rates from the last day of the Reference Period to the last day of the Calculation Period. On the other hand, although an adjustment mechanism of interest rates was deliberated on to strictly incorporate changes in interest rates during such period, it was deemed to be appropriate to not introduce such a mechanism for the interest rates to be published because concerns were raised about the complexity, practical issues, and other aspects of the model for such a mechanism.

There were needs for publication in tenors of one month, three months, and six months.

In addition to the above Lock out methodology, the deliberation overseas²⁵ also assumed the Delay methodology in which the Payment Date is delayed by a certain number of business days so that the Reference Period for interest rates and the Calculation Period are a match²⁶.

Moreover, there are some movements in Switzerland to recommend the Reset days prior methodology — in which the Reference Period is brought forward by several business days so that the Reference Period and the Calculation Period are a match — for cash

²³ As for the Book-Entry Transfer System for Corporate Bonds operated by the JASDEC, it is designed so that interest rates are entered seven business days before the Payment Date, taking account of the views of market participants.

²⁴ Both assume that the Payment Date is on the business day following the last day of the Calculation Period. However, with regard to when the Payment Date should be set, we understand that it should be decided flexibly according to market conventions to be established in each market of cash instruments including loans and bonds as well as the selection and agreement between the contracting parties.

²⁵ Examples of the deliberations overseas are as follows:

“Discussion Paper: Conventions for referencing SONIA in new contracts”:

<https://www.bankofengland.co.uk/-/media/boe/files/markets/benchmarks/discussion-paper-conventions-for-referencing-sonia-in-new-contracts.pdf>

“A User's Guide to SOFR”:

https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Users_Guide_to_SOFR.pdf

²⁶ “Delay methodology” is the methodology which is consistent with the current JPY OIS convention.

instruments²⁷.

Under these circumstances, requirements have been discussed not only for the “Lock out methodology” but also for the “Delay methodology” and the “Reset days prior methodology” (see Appendix 2-b). The final requirements will be decided taking account of the conventions overseas and of cross-currency basis swaps.

b. Option (3)

Since Option (3) does not exist at the moment, deliberation has been conducted, paying full attention to its feasibility, while taking into account the recent market environment, among other factors. The following section describes specific requirements and other issues:

Basic approaches

It is deemed to be appropriate that executed transaction data be used if they are available, and that quote data be used if the executed transaction data are unavailable. However, it is necessary to use both executed transaction data and quote data because it is not practical to use only executed transaction data, considering the current JPY OIS trading volume.

Moreover, it is expected to take some time to revitalize trading of JPY OIS, and it is necessary to secure time for market participants and interest rate benchmark users to develop administrative systems and other measures in advance. Accordingly, the Committee deemed it appropriate to take a gradual approach by first calculating and publishing the prototype rate, and then, validating the situation to judge its feasibility, before lastly calculating and publishing the production rate²⁸.

Here, the plan was divided into two phases: Phase 1 to calculate and publish the prototype rate and Phase 2 to calculate and publish the production rate. The Committee deemed it appropriate to implement Phase 1 immediately after the publication of the deliverables of this public consultation and aim to bring forward Phase 2 as early as possible to implement it by around the middle of 2021 at the latest.

Specific requirements

Based on this premise, specific requirements have been outlined as in Appendix 2-c. For Phase 1, while it is basically intended to capture as much data as possible with an all-day data capture time window, means to secure the credibility of benchmarks — such as prioritizing the use of tradeable quote data, and excluding outlier data and weighting according to the quality of data — were sufficiently deliberated.

Moreover, it was deemed to be appropriate to proceed on the premise of adopting the “Waterfall method” to prioritize using executed transactions data, and use quote data if there are no such data²⁹.

²⁷ https://www.snb.ch/n/mmr/reference/minutes_20190205/source/minutes_20190205.n.pdf

²⁸ The prototype rate is not intended to be referred to by actual contracts. On the other hand, the production rate is intended to be referred to by actual contracts.

²⁹ Although the “Composite method” (a method to combine executed transaction data and quote data, giving more weight to the executed transaction data) was also deliberated on, in addition to the Waterfall method, concerns were expressed that in the Composite method, data in the lower level of the hierarchy that are relatively unreliable are used even if there are sufficient data in the higher level of the hierarchy and that it is considerably difficult to ensure the objectiveness and neutrality of parameters, among other concerns. However, it is assumed that

When switching from Phase 1 to Phase 2, while it is important to be conscious of achieving a smooth switch so that disparities do not appear in the rate level, it is deemed important to first judge the accuracy of data in Phase 1.

Data sources for executed transaction data and quote data are assumed to be brokers that are professional intermediary, brokerage or agency of JPY OIS. Members of the Committee expressed that about 3 companies would be appropriate, based on their trading records.

Provisional evaluation of the above requirements

In order for Option (3) to be widely used internationally as a benchmark, it is necessary to take account of the consistency with the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks³⁰ (hereinafter, "IOSCO Principles"). Moreover, in the European Union (EU), it is likely that for financial institutions within the EU to use benchmarks provided by an administrator located in a third country (hereinafter, "third country benchmarks"), it will be required to fulfill the requirements³¹ set out in the EU Benchmarks Regulation. If the said benchmark is deemed to have a material impact on Japan's capital market when its credibility declines, it will be designated as a "Specified Financial Benchmark"³² under the Financial Instruments and Exchange Act³³ and its administrator as a "Specified Financial Benchmark Administrator"³⁴.

Accordingly, the following section describes the current provisional evaluation of requirements for Option (3) provided above against the IOSCO Principles, bearing in mind that the production rate of Option (3) will be calculated and published in Phase 2.

Among the IOSCO Principles for the "Quality of the Benchmark" (Principles 6-10), a provisional evaluation was provided for Principles 6, 7, and 8, which could be evaluated at the

deliberation on the composite methodology and other methodologies will be conducted if deemed necessary, taking account of the future market environment and the result of data validation.

³⁰ In July 2013, regarding benchmarks used in financial markets, the IOSCO published 19 principles on governance, quality of the benchmark, quality of the methodology, and accountability in the "Principles for Financial Benchmarks Final Report" (<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>). It states that while the principles should be understood as a set of recommended practices that should be implemented by benchmark administrators and submitters, the application and implementation of the principles should be proportional to the size and risks posed by each benchmark and/or administrator and the benchmark-setting process.

³¹ For third country benchmarks to be used in Europe, they must comply with one of three options: (1) "Equivalence", in which the European Commission decides that the third country's legal framework and supervisory practice are equivalent to the requirements under the European Benchmarks Regulation, in particular compliance with the IOSCO Principles, thereby enabling the use of the benchmarks under the framework of the third country; (2) "Recognition," in which the third country administrator applies to the competent authority of a member state and acquires recognition; and (3) "Endorsement," in which an administrator or a financial institution in Europe demonstrates to the competent authority of a member state that a third country benchmark complies with requirements set out in the EU Benchmarks Regulation and authorizes the endorsement. See the below link for details.

<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1011&from=EN>

³² Currently, TIBOR is designated.

³³ On May 29, 2015, the Revised Financial Instruments and Exchange Act was implemented to regulate financial benchmarks, considering the necessity to introduce government regulations in Japan on financial benchmarks which are widely used as the basis of financial transactions, taking into account the actions taken by IOSCO and various jurisdictions with regard to financial benchmarks. The Act pays attention to achieving compliance with the IOSCO Principles from the perspective of the consistency with the international regulatory framework for financial benchmarks. For background and other information, see the "Summary of Discussions of the Study Group on Regulation of Financial Benchmarks" (<https://www.fsa.go.jp/en/news/2013/20131225-2/02.pdf>).

³⁴ Currently, the JBATA is designated.

moment, and they were compared with “Compliance with ‘IOSCO Principles for Financial Benchmarks (19 Principles)’” published annually by the JBATA, which is a Specified Financial Benchmark Administrator under the Financial Instruments and Exchange Act.

Among the IOSCO Principles for the “Quality of the Benchmark,” Principle 6 (Benchmark Design) is described as follows (Figure 2-4).

Figure 2-4: Principle 6 Benchmark Design

<p>Overview</p>	<ul style="list-style-type: none"> • The design of the Benchmark should seek to achieve an accurate and reliable representation of the economic realities of the Interest it seeks to measure, and eliminate factors that might result in a distortion of the price, rate, index, or value of the Benchmark.
<p>Provisional Evaluation</p>	<ul style="list-style-type: none"> • The design of the requirements could represent the economic realities of the Interest it seeks to measure based on the premise that the waterfall method, which is better anchored in actual transactions, is adopted. • The design makes use of quote data on CLOBs³⁵ or, in principle, uses the best bid and best offer on voice brokers, which in turn could increase the objectivity of quote data and eliminate factors that might result in a distortion of value. • The objectivity of quote data could also increase through outlier checks and quality-weighting.

Principle 7 (Data Sufficiency) prescribes that it does not mean that every individual Benchmark must be constructed solely from transaction data; however, taking into account the contents of the IOSCO Principles³⁶, it is deemed to be appropriate to design the waterfall method so that quote data on CLOBs or voice brokers (basically the best bid/offer) are used if data on executed transactions are not available. See Figure 2-5 and Figure B2-2 in BOX 2 for the underlying market volume.

³⁵ Central Limit Order Book

³⁶ “A low liquidity market that reflects the commercial realities of a market and functions as a price discovery market could support a Benchmark consistent with this Principle, even though non-transactional data such as verifiable (firm) bids and offers might be used as an adjunct to the low number of transactions in compiling a Benchmark.”

Figure 2-5: Underlying Market Volume

Benchmark	JPY OIS	Reference: Japanese Yen TIBOR	Reference: Uncollateralized overnight call rate
Market volume ³⁷	<p><u>71.7 tril. Yen</u></p> <ul style="list-style-type: none"> The share via brokers in the amount outstanding of JPY OIS transactions (based on notional amounts) is approximately 40 percent. 	<p><u>18.6 tril. Yen</u></p> <ul style="list-style-type: none"> The share of reference banks in the uncollateralized call market is approximately 30 to 60 percent³⁸. 	<p><u>15.1 tril. Yen</u></p> <ul style="list-style-type: none"> The share of broking in the uncollateralized call market is approximately 30 percent³⁹. The transaction volume in the uncollateralized overnight call market generated by broking is 4.9 tril. yen⁴⁰

Details of Principle 8 and other related details are described in Appendix 2-d.

c. Option (4)

As stated above, since Over-Night Call Rate Futures are under deliberation in the working group of the Tokyo Financial Exchange for the resumption of trade in 2020, it is difficult at the moment to deliberate on specific data used for calculation and requirements, among other topics, and thus, going forward, an approach based on the progress of deliberation toward the resumption of trade is expected to be taken.

(3) Fallbacks

The following section describes the contents discussed by the Committee on fallbacks for JPY LIBOR (see 2.(1)(i)b). It provides (i) an overview of fallbacks for cash instruments (loans and bonds), (ii) the direction of deliberations for loans, and (iii) the direction of deliberations for bonds.

(i) Overview of fallbacks for cash instruments (loans and bonds)

In preparation for the permanent discontinuation of LIBOR, it is considered as an option to introduce a fallback provision for contracts referencing JPY LIBOR before the said discontinuation

³⁷ Based on the “Tokyo Money Market Survey” published in October 2018 by the Bank of Japan (data are as at the end of July 2018).

³⁸ Based on “Result of a Periodic Review of the JBA TIBOR Operational Framework” published in March 2019 by the JBATA.

³⁹ The total amount outstanding of transactions via brokers and non-group direct dealings is aggregated in the “Tokyo Money Market Survey.”

⁴⁰ Annual average in 2018. Based on “Call Money Market Data (Updated every business day)” published by the Bank of Japan.

of LIBOR. As stated above, a fallback provision specifies the replacement rate to be referenced instead of JPY LIBOR in the contract in advance in case LIBOR is permanently discontinued.

While there may be provisions in the interest clause of the existing contract that provide for cases in which LIBOR is not published, such a clause assumes cases where the publication of LIBOR is temporarily discontinued for some reason. Therefore, there is a possibility that it may not function effectively in the case of the publication of LIBOR actually being discontinued permanently. Accordingly, it is deemed necessary for contracting parties to confirm whether such a clause is enough to appropriately deal with the permanent discontinuation of LIBOR, and consider the need for introducing a fallback provision.

Whereas a fallback provision should be agreed upon between the contracting parties according to the characteristics of the products, generally speaking, it would be beneficial to confirm, consult, and put in writing trigger events so as to lay out conditions for switching to the replacement rate from JPY LIBOR (Issue 1), the replacement rate (Issue 2), and procedures for introducing a fallback provision (Issue 3).

The following describes each issue and points to note in the order from Issue 1 to Issue 3.

Issue 1: Trigger events (conditions for activation)

Since a fallback provision is meant to prepare for the permanent discontinuation of LIBOR, activation triggers to provide for the permanent discontinuation of LIBOR (permanent cessation triggers) are basically put in place. For example, the following two triggers are assumed for fallbacks for ISDA Derivatives as the permanent cessation triggers⁴¹:

- Examples of permanent cessation triggers
- A public statement or publication of information by or on behalf of the administrator of LIBOR announcing that it has ceased or will cease to provide LIBOR permanently or indefinitely
 - A public statement or publication of information by the regulatory supervisor for the administrator of LIBOR which states that the administrator of LIBOR has ceased or will cease to provide LIBOR permanently or indefinitely

In addition to the above permanent cessation triggers, other jurisdictions proposed pre-cessation triggers for cash instruments. As the background of such proposals, it was pointed out that even if the publication of LIBOR continues after the end of 2021, a decrease in panel banks and changes in the calculation methodology may lead to lower credibility of LIBOR, in which case it may become inappropriate to use LIBOR as the benchmark of floating rates for financial instruments⁴².

⁴¹ Additionally, ISDA is conducting a public consultation on pre-cessation triggers, triggers which anticipate fallback before the permanent discontinuation of LIBOR. See the following link for details. <https://www.isda.org/a/t6tME/Pre-cessation-issues-Consultation.pdf>

⁴² From such a perspective, Andrew Bailey, Chief Executive Officer of the FCA, the supervisory authority of LIBOR, strongly recommends the introduction of pre-cessation triggers.

An example of a pre-cessation trigger⁴³

- A public statement by the regulatory supervisor for the administrator of LIBOR stating that LIBOR is no longer representative

Furthermore, mainly for loan contracts, triggers can be set to activate fallbacks by the choice of contracting parties at an early stage before the permanent discontinuation of LIBOR (early opt-in triggers). By introducing such triggers, it will become possible to negotiate at an early stage based on the judgment of relevant parties, taking into account market conditions regardless of objective circumstances including the permanent discontinuation of LIBOR.

Issue 2: Replacement rate

Details of the replacement rate: Replacement benchmark and spread adjustment

At the time of fallbacks, the reference rate will be succeeded by a rate (replacement rate) other than JPY LIBOR, which is the reference rate of the original contract.

The replacement benchmark which serves as the basis of the replacement rate could be selected by the relevant parties from Options (1) – (5). However, since there is normally a spread between JPY LIBOR and the replacement benchmark (see BOX 3), as a result of fallbacks, value transfer may occur, in which one party enjoys gains while the other suffers losses. As a result, this may give rise to challenges, including in accounting and taxation, as well as litigation risk.

Therefore, in order to minimize value transfer, it is necessary to adjust the spread between JPY LIBOR and the replacement benchmark (spread adjustment) so that the relationship as shown in Figure 2-6 can be achieved to the greatest extent possible.

⁴³ The example is shown based on the recommendations regarding more robust fallback language drawn from the results of the public consultation for syndicated loans and floating rate notes published on April 25, 2019 by the ARRC and that for bilateral loans published on May 31, 2019. See the below links for each document.

Syndicated business loans:

https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Syndicated_Loan_Fallback_Language.pdf

Floating rate notes:

https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/FRN_Fallback_Language.pdf

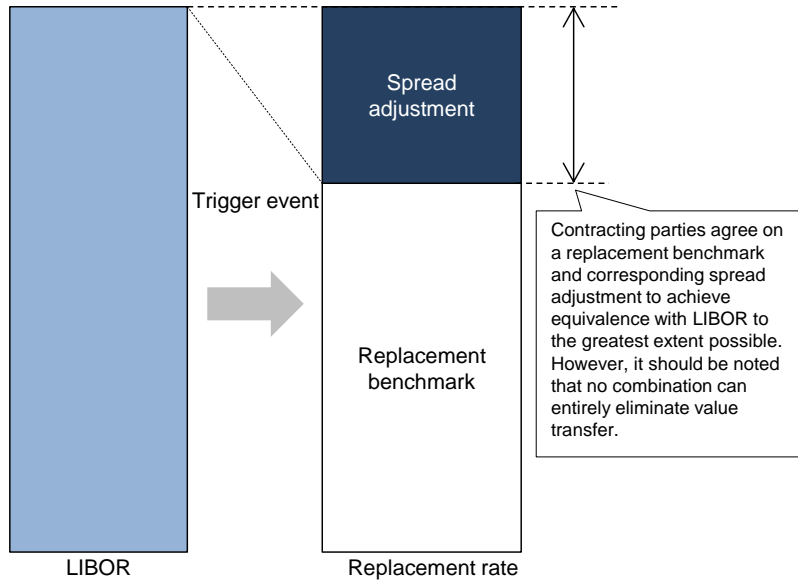
Bilateral business loans:

<https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2018/ARRC-Bilateral-Business-Loans-Consultation.pdf>

Figure 2-6: Spread Adjustment

$$\text{Replacement Rate} = \text{Replacement Benchmark} + \text{Spread Adjustment}$$

Fallbacks for LIBOR
(in the case of using O/N RFR Compounding as a replacement benchmark)



Regarding specific methodologies for spread adjustment, the following three approaches are conceivable according to the proposals in ISDA's public consultation (see Appendix 2-e for details on the pros and cons of each approach and possible combinations with options for replacement benchmarks (Options (1) – (5))). However, it should be noted that none of the combinations eliminates value transfer completely. Given that the spread becomes constant after the activation of fallbacks and that the trends in the spread between JPY LIBOR and the separate options (Options (1) – (5)) vary as shown in BOX 3, the trends and levels of a replacement rate, which is the sum of a replacement benchmark and spread, could differ from those envisaged at the time of closing the contract referencing JPY LIBOR. Therefore, the trends and features of each option should be carefully considered when contracting parties agree on replacement rates.

a. Forward Approach

This approach calculates the spread adjustment for the forward spread between JPY LIBOR and the replacement rate based on observed market prices at the time the fallback is triggered. It basically prevents value transfers near the date the fallback is triggered because the spread adjustment matches the expected market prices as of the business day before the fallback is triggered. However, market data used for calculation may not be readily available and such data may be vulnerable to manipulations and distortions in the market in the run-up to the fallback.

b. Historical Mean/Median Approach

This approach calculates the spread adjustment based on the mean or median spot spread between JPY LIBOR and the replacement rate calculated over a certain lookback period. It is based on readily available market data and requires rather simple implementation and verification processes. It also ameliorates the effects of market distortions and potential manipulation. However, it should be noted that this approach entails a risk of value transfer

because average historical market conditions may not necessary match market expectations for future market conditions. Also, it may not be possible to obtain the amount of historical data required for the calculation when using term reference rate (based on RFRs), which are planned to be developed in the future, as replacement benchmarks.

c. Spot-Spread Approach

This approach calculates the spread adjustment based on the spot spread between JPY LIBOR and the replacement rate on the business day before fallbacks are triggered. It is a simple approach and is easy to implement and understand. However, it should be noted that it is vulnerable to manipulations and distortions in the market in the run-up to the fallback. In addition, the possibility of deviation from market expectation and risk of value transfer will be high during market turmoil.

In the meantime, ISDA's public consultation has shown that O/N RFR Compounding (Fixing in Arrears) (Option (2)) is supported by an overwhelming majority as the replacement benchmark⁴⁴, while b. Historical Mean/Median Approach is supported by a significant majority for spread adjustment.

For derivative contracts other than ISDA Derivatives, and cash instruments which have a hedging relationship with ISDA Derivatives, when stipulating Issue 1: Trigger events and Issue 2: Replacement rate, it is important to take into consideration the consistency with ISDA Derivatives, in addition to the minimization of the value transfer mentioned above. In other words, given that for ISDA Derivatives, O/N RFR Compounding (Fixing in Arrears) (Option (2)) is to be used as the replacement benchmark, while b. Historical Mean/Median Approach is to be employed for spread adjustment, the hedging effectiveness between cash instruments and derivatives should also be noted (see 2.(4) Accounting Issues for issues of hedge accounting).

Determination method of the replacement rate: Setting priorities

To decide the replacement rate for instruments other than ISDA Derivatives, one method is to decide a single replacement benchmark (e.g., the rates shown as options for alternative benchmarks) and a spread adjustment that corresponds to it. For example, if giving weight to the consistency with ISDA Derivatives, it is possible to set a replacement rate by choosing Option (2) as the replacement benchmark, while employing b. Historical Mean/Median Approach for spread adjustment.

On the other hand, another possible method is to establish priorities for the replacement benchmark and spread adjustment taking into account such factors as the features of individual transactions, and use those available in accordance with such priorities ("Waterfall structure"; Figure 2-7).

⁴⁴ ISDA's public consultation proposed four options for replacement rates, which are the RFR and its adjusted rate, as well as the RFRs compounded in advance and in arrears.

Figure 2-7: Waterfall Structure

Examples of setting replacement benchmarks using a waterfall structure

Example 1: When giving weight to the use of benchmarks based on RFRs

1 st priority	Term Reference Rates
2 nd priority	O/N RFR Compounding (Fixing in Arrears)
3 rd priority	O/N RFR Compounding (Fixing in Advance)
4 th priority	TIBOR

Example 2: When giving weight to the use of benchmarks fixed in advance

1 st priority	Term Reference Rates
2 nd priority	TIBOR
3 rd priority	O/N RFR Compounding (Fixing in Advance)
4 th priority	O/N RFR Compounding (Fixing in Arrears)

Issue 3: Procedures

It should be noted that the procedure for introducing a fallback provision differs for each instrument. In this regard, in order to introduce a fallback provision for ISDA Derivatives, ISDA has decided to amend the existing contracts of adhering parties simultaneously through the adherence of protocol to introduce a standardized fallback provision. Moreover, the standardized fallback provision will be introduced for new contracts automatically by referencing the 2006 ISDA Definitions after the revisions of a fallback provision in the 2006 ISDA Definitions⁴⁵.

On the other hand, since there are no such procedures for loans and bonds, individual approaches will be required depending on the instrument. A description of approaches for loans and bonds will be given in (ii) and (iii) respectively.

(ii) Direction of approaches for loans

For the existing loan contracts, which have a maturity beyond the end of 2021 and do not have provisions contemplating the permanent discontinuation of LIBOR, and loan contracts to be concluded going forward, the following section describes the direction of approaches for each item of the fallback provision listed in 2.(3)(i) (Figure 2-8).

⁴⁵ However, it will not be precluded to introduce a fallback provision by an individual agreement between parties without depending on the protocol or the Definitions.

Figure 2-8: Example of a Fallback Provision for Loans

Contents of Fallback Provisions		Potential Course of Action for Loans
Issue 1: Trigger Events		Aligning with the fallback of ISDA Derivatives could be considered. Early opt-in triggers could also be introduced.
Issue 2: Replacement Rate	Components: Replacement Benchmark and Spread Adjustment	Replacement Rate: Any one of Option (2), Option (3), Option (4), and Option (5) is basically expected. Spread Adjustment: Historical Mean/Median Approach is basically expected.
	Rate Determination: Setting Priorities	A waterfall structure could be adopted when choosing a Term Reference Rate (Option (3) and Option (4)) as a replacement benchmark.
Issue 3: Procedures		Replacement rates could be determined at the time of introducing a fallback provision (Hardwired Approach) or triggering (Amendment Approach).

Issue 1: Trigger events

Trigger events can be made in alignment with fallbacks for ISDA Derivatives. On the other hand, while pre-cessation triggers⁴⁶ recommended by the ARRC can be adopted, the consistency with ISDA Derivatives should be noted.

Moreover, in the ARRC's final recommended language for syndicated loans and bilateral loans, examples of early opt-in triggers were proposed for each of the approaches to specify a single replacement rate or one to be decided by waterfall when introducing a fallback provision (Hardwired Approach), and the approach to specify the replacement rate in the fallback provision by agreement between parties at some point in the future (Amendment Approach). These triggers are deemed to have the advantage of enabling succeeding to a replacement rate by the decision of lender, borrower, or agent without relying on the permanent discontinuation of LIBOR or similar events.

⁴⁶ See footnote 43 above.

Examples of early opt-in triggers⁴⁷

Hardwired Approach: At least five syndicated loans are priced over the “Term SOFR + Spread” and the administrative agent, the borrower, and the lender jointly elect triggering

Amendment Approach: The administrative agent or the lender determines that syndicated loans are being executed or amended to incorporate or adopt a new benchmark interest rate to replace LIBOR and the agent or the lender elects triggering

Issue 2: Replacement rate

Regarding the replacement benchmark as part of replacement rates, given ISDA’s public consultation, many supported aligning with the ISDA fallback language to ensure consistency with ISDA Derivatives by using O/N RFR Compounding (Fixing in Arrears) (Option (2)); however, practical concerns are likely to be fairly substantial as with the evaluation in 2.(2)(ii).

On the other hand, a similar number of members expressed that Term Reference Rates (Option (3) and Option (4)) and TIBOR (Option (5)), which has similar features of interest rates with JPY LIBOR, will continue to be options⁴⁸. However, when choosing Term Reference Rates, a waterfall structure could be adopted, as Term Reference Rates have yet to be developed.

Regarding spread adjustment, it was supported by a majority that it should be aligned with fallbacks for ISDA Derivatives and that the Historical Mean/Median Approach should be employed; however, a spread adjustment could be selected by taking account of combinations with replacement benchmarks, as data acquisition may become difficult when choosing a Term Reference Rate as a replacement benchmark.

Issue 3: Procedures

Since there are no statutory procedures for loan contracts to amend the contracts, e.g., by way of Bondholders’ Meetings in the case of bonds, the introduction of a fallback provision will be agreed on through individual negotiations between parties. Moreover, contracting parties are obvious in most cases, which is different from cases of bonds where there are many and unspecified creditors. As a result, it is possible to take more flexible approaches than in the case of bonds.

Namely, regarding the timing for determining the replacement rate, not only the Hardwired Approach but also the Amendment Approach could be employed. Major differences between the two approaches can be described as follows according to the proposals in the ARRC recommendations and others:

⁴⁷ The examples are shown based on the ARRC’s recommendations for syndicated loans. In the document, it is assumed to require the consent of all contracting parties including lenders when introducing early opt-in triggers such as those shown as examples. For details, see the following.
https://www.newyorkfed.org/medialibrary/Microsites/arrc/files/2019/Syndicated_Loan_Fallback_Language.pdf

⁴⁸ Also, a small number of members expressed that Option (1) can be an option.

	Matters to decide when introducing a fallback provision	Matters to decide when triggers are activated
Hardwired Approach	<ul style="list-style-type: none"> • Framework of the contract • Triggers • Replacement rate • Other 	Nothing in particular (falls back to the replacement rate determined upon the introduction of fallback provisions)
Amendment Approach	<ul style="list-style-type: none"> • Framework of the contract • Triggers • Other 	<ul style="list-style-type: none"> • Replacement rate

If employing the Amendment Approach, the replacement rate should be determined when triggers are activated. Accordingly, it could be deemed more appropriate to provide for early opt-in triggers while paying attention to the consistency with triggers for ISDA Derivatives.

The advantages of the Amendment Approach are that it makes it easier for the parties relative to the Hardwired Approach to agree on the introduction of the provision itself because the replacement rate is not determined at the time of introducing a fallback provision, and that when deciding the replacement rate in the future, the rate can be flexibly determined between the parties according to the then-current situation.

However, the Amendment Approach may place burdens on parties, especially borrowers, to twice decide the replacement rate by having negotiations and internal decision-making procedures at the time of introducing a fallback provision and activating triggers. To mitigate such burdens, if it is possible due to the attributes of instruments, provisions can be introduced to simplify the procedures for determining the replacement rate through the consultation between parties at the stage of amending the contract before employing the Amendment Approach.

As an example, regarding bilateral loans, the ARRC proposed the so-called negative consent, in which, for instance, when a replacement rate is proposed by the lender in the Amendment Approach, “it shall be deemed consented to unless the borrower sends a notice to the lender rejecting it within [xx] days.” On the other hand, for syndicated loans, while consent of all the lenders and the borrower is usually deemed to be required when amending the contract, the ARRC and the Loan Market Association (LMA), an international organization for syndicated loans, propose a more streamlined process than for usual contract amendments by presenting a standardized contract format to use with consent of a majority lenders and the borrower in deciding the replacement rate.

However, even if procedures between parties are simplified, it will not necessarily streamline internal procedures and others on the borrower side. Moreover, it should be noted that regarding negative consent, not rejecting does not always mean the approval (consent) of the borrower (e.g., it may lead to a dispute later because the borrower is not aware of the notice), and it may be required for the lender to make corresponding responses such as explaining fully and requesting written approval to avoid disputes.

For simplified procedures among the lenders of syndicated loans, further deliberation is deemed necessary, taking into account the authority of administrative agents and the like.

Moreover, regarding the Amendment Approach, if there is a similar clause in the existing contract (e.g., the so-called good faith consultation), such provision may serve as a substitute for the Amendment Approach in practice.

Other considerations

For the contract of syndicated loans, as there is a standardized contract format presented by the Japan Syndication and Loan-trading Association (JSLA), it is expected that the standardized contract format will be revised through deliberation among relevant parties taking into account the deliberation and deliverables of this consultation by the Committee and other developments⁴⁹. On the other hand, since there is no standardized contract format for bilateral loans, its details corresponding to fallbacks are expected to be deliberated by each financial institution. In doing so, the revision of the standardized contract format for a syndicated loan contract could be used as a reference as necessary⁵⁰.

(iii) Direction of approaches for bonds

For existing bonds which will be redeemed after the end of 2021 and do not have provisions contemplating the permanent discontinuation of LIBOR and new bonds to be issued going forward, the following section describes the direction of approaches for each item of the fallback provision listed in 2.(3)(i) addressed by the Committee (Figure 2-9).

Figure 2-9: Example of a Fallback Provision for Bonds

Contents of Fallback Provisions		Potential Course of Action for Bonds
Issue 1: Trigger		Aligning with the fallback of ISDA Derivatives could be considered.
Issue 2: Replacement Rate	Components: Replacement Benchmark and Spread Adjustment	Replacement Rate: Aligning with the fallback of ISDA Derivatives could be considered. However, Option (3), Option (4), and Option (5) are also expected accordingly to transactions. Spread Adjustment: Historical Mean/Median Approach is basically expected.
	Rate Determination: Setting Priorities	Adopting a waterfall structure could be considered when term reference rates (Option (3) and Option (4)) are selected as a replacement benchmark.
Issue 3: Procedures		Replacement rates could be determined at the time of introducing a fallback provision (Hardwired Approach).

⁴⁹ The JSLA is an organization which one can join voluntarily. The documents available to members and to the public may differ. The plan including the preparation and revision of the contract format has not been decided and it may vary depending on the JSLA's decision.

⁵⁰ The JSLA has no plans to prepare or provide advice on documentation for bilateral loans.

Issue 1: Triggers, Issue 2: Replacement rate

Regarding triggers and the replacement rate, if details differ for triggers and the replacement benchmark between bonds to be hedged and hedging ISDA Derivatives, continued application of hedge accounting will become an issue (see 2.(4) Accounting Issues) for the issues of hedge accounting; as a result, a majority expressed that requirements should be those in Figure 2-9, in alignment with fallbacks for ISDA. Regarding the replacement rate, as it was pointed out that it would be desirable to introduce the waterfall structure as discussed by the ARRC, the waterfall structure could also be adopted.

In addition, as bonds have different characteristics as an instrument from loans in that there are many and unspecified investors (bondholders), it should be noted that the issuer will have to assume extremely heavy administrative burdens for obtaining consent from investors when introducing a fallback provision (see Issue 3: Procedures in this section for details). Namely, since it is likely to be difficult in the context of bonds to consult and coordinate details of fallbacks with each individual investor, it is deemed to be unrealistic in practice to adopt early opt-in triggers, which requires consultation and consent in addition to those at the time of introducing the fallback provision.

Regarding replacement rate (Issue 2), if Option (2) is to be used, it should be borne in mind that practical burdens may be substantial, depending on the status of administration and systems of each company, as well as the number of bonds referencing JPY LIBOR issued and held by each company (those which will be redeemed after the end of 2021 and do not have provisions contemplating the permanent discontinuation of JPY LIBOR)⁵¹.

Issue 3: Procedures

For bonds, the Companies Act provides that Bondholders' Meetings should be held to amend the contract. When holding Bondholders' Meetings, it is specifically stipulated that they should be held for each series; they should be held in person (written resolution are not allowed); they require public notice; and the contents of resolutions should be approved by a court of law (district court with the jurisdiction over the location of the head office of the bond issuer conducts approval procedures). Accordingly, it should be noted that the issuer will assume extremely heavy burdens for obtaining consent of investors when introducing a fallback provision.

In particular, if a fallback provision is to be introduced for publicly offered bonds⁵², it is deemed to be necessary to hold a Bondholders' Meeting in principle, considering their liquidity, anonymity, and the diversity in attributes of bondholders⁵³.

⁵¹ Depending on the result of this public consultation on the requirements for the interest rate fixing date in Option (2), the relationship to the system of the Japan Securities Depository Center (which requires the bond managers/fiscal agents to notify the center of the interest rate and the like seven business days before the interest payment date) should also be noted.

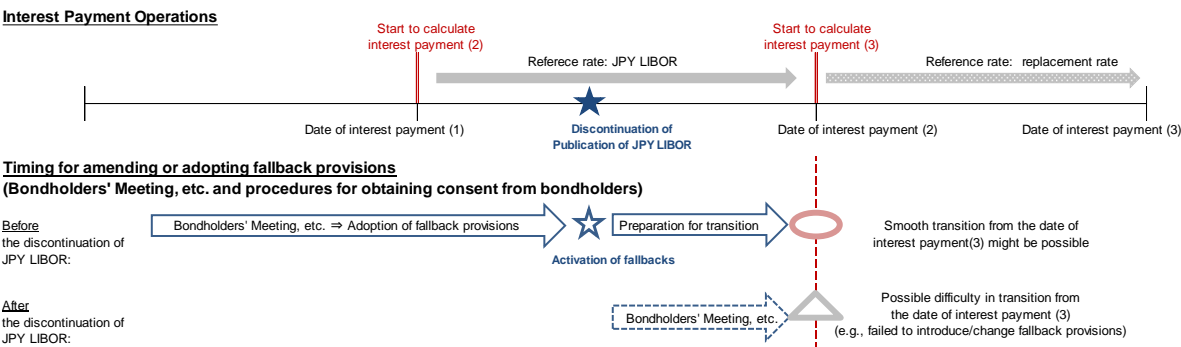
⁵² For privately placed bonds, regarding the measures to reduce burdens of procedures to obtain consent, (e.g., whether it is possible to replace the Bondholders' meetings with obtaining consent directly from all bondholders), it is expected that there will be deliberations led by industry groups and other relevant bodies after the public consultation.

⁵³ In this regard, when judging the need of Bondholders' Meetings, the bond issuer is required to fully deliberate in the legal and other departments of the company in consultation with the corporation lawyer, taking into account provisions of the bond guideline issued by the company. Moreover, if issuing new bonds referencing LIBOR to be redeemed beyond the end of 2021, it is deemed to be desirable to receive advice and the like from the arranger on the needs and other matters of investors.

Therefore, regarding the procedures to introduce a fallback provision for bonds, the approach that requires consultation or consent in addition to the consultation or consent at the time of introducing the provision (Amendment Approach) would not be practicable; rather, the approach that decides on the replacement rate at the time of introducing the fallback provision (Hardwired Approach) would be suitable.

Further, considering these points and the impact on interest payment operations, from the perspective of smooth transition to the replacement rate, it is desirable to introduce a fallback provision in advance by holding a Bondholders' Meeting at the earliest timing possible before the permanent discontinuation of LIBOR (Figure 2-10).

Figure 2-10: Impact on Interest Payment Operations when Fallbacks are Triggered in the Case of Publicly Offered Bonds



(4) Accounting Issues

As stated above, when deliberating the transition to alternative benchmarks and the introduction of a fallback provision, it is necessary to give due consideration to accounting issues⁵⁴, including hedge accounting.

In the cases where application of hedge accounting is deemed to be important, it is necessary to reference similar interest rate benchmarks for assets/liabilities including loans and bonds to be hedged as well as hedging derivatives and other financial instruments. However, depending on the result of negotiations between parties, different interest rates may be referenced between both instruments upon the transition and fallback from JPY LIBOR.

For fallbacks in particular, there may be cases in which the replacement benchmark of a hedged item and that of its hedging instrument to be used after the activation of fallbacks differ (Figure 2-11), and cases in which (with the replacement benchmarks being the same) when the timing of activating fallbacks for a hedged item and its hedging instrument differ because of a difference in trigger events between the two instruments (Figure 2-12); in such cases, it would be debatable whether hedge accounting could continue to be applied in the current framework of Japanese accounting standards.

⁵⁴ The Committee has pointed out, as other issues related to hedge accounting, the eligibility of a forecast transaction, derecognition of a hedged item, changes in the terms of delivery and payment of swap transactions, and the burden of verifying hedge effectiveness, among others. Moreover, as issues of accounting other than hedge accounting, it has listed fair valuation, deferred and accrued accounts (accrued interests) for O/N RFR Compounding (Fixing in Arrears), and disclosure.

Figure 2-11: When the Replacement Benchmark of a Hedged Item and that of its Hedging Instrument to Be Used after the Activation of Fallbacks Differ

e.g., Upon the discontinuation of JPY LIBOR, a hedged item and a hedging instrument simultaneously fall back to their benchmarks which are different from each other.

	Current State	Simultaneous Triggering
Hedged Item (e.g., Loans, Bonds)	JPY LIBOR →	Term RFR + Spread Adjustment
Hedging Instrument (e.g., Derivatives)	JPY LIBOR →	O/N RFR Compounding (Fixing in Arrears) + Spread Adjustment

Figure 2-12: (With the Replacement Benchmarks Being the Same) When the Timing of Activating Fallbacks for a Hedged Item and its Hedging Instrument Differ because of a Difference in Trigger between the Two Products

e.g., While the publication of JPY LIBOR continues, a trigger event occurs for a hedged item alone, resulting in a fallback to its replacement benchmark. Subsequently, upon the discontinuation of JPY LIBOR, a hedging instrument falls back to its replacement benchmark (which is identical to the hedged item's replacement benchmark).

	Current State	Triggering of Hedged Item Alone	Triggering of Hedging Instrument
Hedged Item (e.g., Loans, Bonds)	JPY LIBOR →	O/N RFR Compounding (Fixing in Arrears) + Spread Adjustment	O/N RFR Compounding (Fixing in Arrears) + Spread Adjustment
Hedging Instrument (e.g., Derivatives)	JPY LIBOR	JPY LIBOR →	O/N RFR Compounding (Fixing in Arrears) + Spread Adjustment

Internationally, each accounting standard-setting body is deliberating the revision of accounting standards due to the transition from LIBOR⁵⁵. In Japan, at the meeting of the Accounting Standards Board of Japan (ASBJ) in March 2019, the Chair of the Standards Advisory Council proposed to comprehensively address accounting issues arising from interest rate benchmark reform as a new agenda item, requesting that the ASBJ examine the matter, including the necessity of standard development, in a timely manner. The ASBJ will consider how to deal with the accounting issues arising from interest rate benchmark reform, including the necessity of standard development in a timely manner, and it will do so in accordance with the developments regarding the international accounting standards and the revision of relevant rules.

⁵⁵ For example, the International Accounting Standards Board started the work of setting standards of international accounting standards in December 2018, taking into account the results of research on the effects of interest rate benchmark reform on financial reporting; they published a public draft of revised standards for some issues to receive opinions in May 2019. The revised standards are scheduled to become effective in January 2020.

Moreover, with the existence of industry-specific accounting practices, it is important that the industry group of each business category lead the study and discussion of what is in need of having new standards developed, what requires the standard interpretation of the existing standards, and what needs to be dealt with by individual audits, and engage with the accounting standard-setting bodies and other parties relevant to accounting as necessary.

Each company is also expected to consult with the audit firm that is the accounting auditor at an early stage on issues of accounting associated with the transition and fallback from JPY LIBOR.

3. Potential course of action along a time line

(1) Appropriate use of interest rate benchmarks in the multiple-rate approach

It is important for financial market participants and interest rate benchmark users to fully understand trends and features of each option for alternative benchmarks (see BOX 3 for details), before appropriately choosing and using interest rate benchmarks according to the nature of financial instruments and transactions.

While it is to be determined by a contract between parties as to which alternative benchmark will be used, as stated in 2. Specific matters for consideration, given the deliberations so far in the Committee, different uses of interest rate benchmarks under the multiple-rate approach can be outlined as follows.

(i) Loans

For loans, as described in 2.(2)(ii), in the deliberations at the Committee so far, it was inferred that Option (3) and Option (4) could be used, in addition to Option (5), from the perspective that they are interest rates fixed in advance with a term structure among replacement rates for JPY LIBOR. However, since Option (3) and Option (4) take a certain time to develop, it was deemed to be practicable that Option (1) or Option (2), in addition to Option (5), be used temporarily during this time.

Nonetheless, since it was pointed out that to use Option (2), cost of developing administration and systems compatible with fixing interest rates in arrears would be substantially large, the Sub-Group on Loans under the Committee sought the views of Sub-Group members. As a result, the following two courses of action were supported.

Future use of Options (3) and Option (4)

Given that Option (3) and Option (4) could become global standards, provide cash flow certainty because they are fixed in advance, and are thought to be highly compatible with the current administration and systems, accounting practices, and market conventions, it was the majority view that it would be desirable to use these options in the future. However, Option (3) is planned to be developed by around the middle of 2021, so other options will need to be used temporarily if these options are to be used.

In this regard, many expressed that it would entail a smaller burden to temporarily use Option (5) rather than Option (2) from the perspective of the current administration and systems. Moreover, while small in number, some members expressed an opinion in favor of the temporary use of Option (1), citing its smaller administrative burden relative to Option (2).

On the other hand, although it would require the development of administration and systems compatible with fixing interest rates in arrears to temporarily use Option (2), a certain number of members assessed its temporary use as feasible because there would be advantages such as its consistency with ISDA Derivatives.

Accordingly, it is expected that contracting parties would use appropriate alternative benchmarks until Option (3) and Option (4) begin to be used, taking into account the assessment

of each option, and the cost of developing administration and systems described above or in 2. Specific matters for consideration.

Permanent use of Option (5)

If using a single alternative benchmark from the beginning, there was a certain level of support for permanently using Option (5), which provides cash flow certainty because it is fixed in advance, and it has basic characteristics similar to those of JPY LIBOR, such as that it includes credit risks of banks, while also taking into account that the existing administration and system may be used.

There was also a view, though expressed by only a few, in favor of permanently using Option (2) under limited conditions such as when Option (3) and Option (4) are not developed.

(ii) Bonds

For bonds, as described in 2.(2)(iii), in the deliberations by the Committee so far, it was deemed to be desirable to use Option (3) and Option (4) as the replacement rate for JPY LIBOR; and until such time, it was deemed to be practicable to temporarily use Option (1), Option (2), or Option (5).

Nonetheless, since it was pointed out that to use Option (2), cost of developing administration and systems compatible with fixing interest rates in arrears would be substantially large, the Sub-Group on Bonds under the Committee sought the views of Sub-Group members, including whether or not its temporary use would be feasible in practice. As a result, the following two courses of action were supported.

Future use of Options (3) and Option (4)

Given that Option (3) and Option (4) provide cash flow certainty because they are fixed in advance, do not include credit risks of banks, and are thought to be highly compatible with the current administration and systems, accounting practices, and market conventions, there was a majority view that it would be desirable to use these options in the future. However, as Option (3) is planned to be developed by around the middle of 2021, other options will need to be used temporarily if these options are to be used.

In this regard, although it would require the development of administration and systems compatible with fixing interest rates in arrears to use Option (2), members that recognized no need for system updates assessed its temporary use as feasible due to the track record of issuance overseas and advantages such as its consistency with derivatives. On the other hand, among members that recognized system updates as essential, while some expressed a view in favor of using Option (2), others expressed a view in favor of temporarily using Option (1) or Option (5) because these provide cash flow certainty through their being fixed in advance and the existing systems seem to be capable of dealing with them.

Considering the above, it is expected that contracting parties would temporarily use appropriate alternative benchmarks until Option (3) and Option (4) begin to be used, taking into account the assessment of each option described above or in 2. Specific matters for consideration and the cost of developing administration and systems, associated with the use of Option (2).

Permanent use of **Option (2)**

As stated above, it is expected to require many users to develop administration and systems for Option (2). However, a considerable number of users expressed a view in favor of permanently using Option (2), instead of Option (3) and Option (4), from the start after updating systems, due to the track record of issuance overseas and advantages such as its consistency with derivatives⁵⁶.

From the perspective of using a single alternative benchmark from the start, regarding the possibility of using Option (5) permanently, it was also pointed out that there is no necessity for the reference interest rate of bonds to reflect bank credit cost and overseas market participants may not use it, given that it provides cash flow certainty because it is fixed in advance, the existing administration and systems may be used, and the funding costs are comparable with those of loans.

(iii) Derivative transactions

In derivative contracts such as interest rate swaps, if they fulfill the demand to hedge interest rate volatility itself, there seems to be no need for these contracts to reflect bank credit cost. In international discussions, “Reforming Major Interest Rate Benchmarks,” which the FSB published in July 2014⁵⁷, makes a similar point.

Moreover, regarding ISDA Derivatives, the use of O/N RFR Compounding (Fixing in Arrears) (Option (2)) was supported by overwhelming majority in ISDA’s public consultation.

Considering the above, the assessments of each option before and after the development of Term Reference Rates for each instrument can be summarized as in Figure 3-1.

⁵⁶ Switzerland has already been deliberating in this direction.

⁵⁷ The report points out that, in terms of the economic exposures to which the counterparties would ideally be exposed, many derivative transactions do not need a reference rate that includes bank credit risk. Moreover, it states that shifting a material portion of derivative transactions to a risk-free rate would reduce the incentive to manipulate rates that include bank credit risk and would reduce the risks to bank safety and soundness and to overall financial stability.

Figure 3-1: Evaluation of Alternative Benchmarks

Before the development of Term Reference Rates

Options	(1) O/N RFR Compounding (Fixing in Advance)	(2) O/N RFR Compounding (Fixing in Arrears)	(3) or (4) Term Reference Rates	(5) TIBOR
Loans	Tentative	Tentative	Market-wide efforts to be made toward the development	Tentative or Permanent
Bonds	Tentative	Permanent		Tentative
Derivatives		Permanent	Note	Note

After the development of Term Reference Rates

Options	(1) O/N RFR Compounding (Fixing in Advance)	(2) O/N RFR Compounding (Fixing in Arrears)	(3) or (4) Term Reference Rates	(5) TIBOR
Loans				
Bonds				
Derivatives			Note	Note

	: Options which would be suitable for general use
	: Options which are expected to be used to a certain extent
	: Options which would not be suitable for general use

(Note) While Option (2) is assumed to be used generally for derivatives, derivative transactions may be executed accordingly to loans and bonds when loans and bonds reference Option (3), Option (4), or Option (5).

(2) Introduction of a fallback provision on the premise of early transition to alternative benchmarks and permanent discontinuation of JPY LIBOR

(i) Action plan toward the use of alternative benchmarks

While the production rate is planned to be published by around the middle of 2021 at the latest for Option (3), it is deemed to be important for market participants and administrators to promptly engage in efforts to bring forward the timing of publication to the extent possible. However, it is necessary that each company also fully deliberate on using other alternative benchmarks in case Option (3) (or Option (4)) is not developed by the end of 2021 (see Appendix 3-a for the overall time line).

a. Temporarily using **Option (1)**, **Option (2)**, or **Option (5)**

If temporary use of Option (2) is preferred, it is necessary to judge at an early stage whether its temporary use will be feasible, taking into account the effects on each company's administration and systems⁵⁸. In other words, by using Option (2), for which interest rates are fixed in arrears, a

⁵⁸ If payment and settlement operations and the like are outsourced, effects on such counterparties should also be considered.

wide range of systems may be affected, including those for contract and settlement, fair valuation, risk control, and finance and taxation. Moreover, if a considerable number of transactions for loans and bonds are expected to reference Option (2), this is not likely to be easy to deal with by way of a manual or by a minor alteration of systems. If the development cost of administration and systems is considerably large, the temporary use of Option (2) may not be sufficiently cost effective.

For Option (1) or Option (5), no efforts on the part of the entire market appear to be necessary, because the existing systems and administrative procedures basically provide for them.

b. Permanently using Option (1), Option (2), or Option (5) from the start

As stated above, regarding Option (2) for which interest rates are fixed in arrears, there is a possibility that the cost of changing administration and systems will be considerably large, and its temporary use may not be sufficiently cost effective. Accordingly, if Option (2) is preferred, it could be used permanently without transitioning to Term Reference Rates (Switzerland has already been deliberating in this direction and, as noted above, Option (2) is expected to be used mainly for bonds in Japan). In this case, it is desirable that each company complete its efforts as early as possible by the end of 2021, taking into consideration the future schedule for bond issuance, among other considerations.

For Option (1) or Option (5), on the other hand, no efforts on the part of the entire market appear to be necessary, because the existing systems and administrative procedures basically provide for them.

(ii) Approach to new contracts

After publishing the deliverables based on this public consultation and as soon as the contracting parties decide on their preferred regime, there will presumably be a transition to an alternative benchmark for each new contract. This approach – and not fallbacks – is recommended to the extent possible because there will be no value transfer during the contract period in the case of transition.

(iii) Approach to existing contracts

After publishing the deliverables based on this public consultation (expected to be around fall 2019), and as soon as the contracting parties decide on their preferred regime, it is deemed to be necessary that the following approach be taken for existing contracts (including those referencing JPY LIBOR to be closed going forward) with a maturity before the end of 2021 and that beyond the end of 2021.

a. Contracts with a maturity before the end of 2021

Transition to alternative benchmarks at the time of maturity.

b. Contracts with a maturity beyond the end of 2021

Contracting parties will choose which transition method to adopt for individual contracts. These parties could cancel the existing contract before the end of 2021 to conclude a new one referencing an alternative benchmark (b-1) or agree to introduce a fallback provision at an early stage (b-2).

In either case, it will require the procedures to conclude or amend a contract. Thus, it could be considered to proceed with transition which does not entail value transfer, such as in 3.(2)(ii), 3.(2)(iii) a., or 3.(2)(iii)b.-1 or negotiate with the contracting parties to introduce a fallback provision to minimize value transfer to the extent possible for 3.(2)(iii)b.-2, which could entail value transfer⁵⁹.

⁵⁹ For details on value transfer due to fallbacks, see 2.(3) Fallbacks.

4. Transition plan

(1) Market-wide initiatives

The following section describes market-wide efforts that will be necessary going forward which have been deliberated in the Committee. In particular, an action plan toward the development of Term Reference Rates is provided in this effect (see Appendix 3-a for the overall time line).

(i) Toward publication of **Option (1)** and **Option (2)**

Regarding Option (1) and Option (2), if it becomes expected for them to be used for each financial instrument, they are likely to be published through information vendors and others immediately after the publication of the deliverables based on this public consultation.

To this end, it is necessary to reach out to potential publishing entities of interest rates going forward. After the publishing entities are decided, the entities will need to make practical arrangements for publication, taking into account the requests and the like of financial market participants and benchmark users.

Since amendments to requirements may be deliberated separately depending on the status of deliberations on cross-currency basis swaps and others, it is necessary to continue to closely monitor market developments.

(ii) Toward calculation and publication of **Option (3)**

Regarding Option (3), it is important for financial market participants, relevant companies, industry groups, and the like to systemically proceed to (1) make practical arrangements for the calculation and publication of the prototype rate in Phase 1, (2) validate data and deliberate on the need to amend requirements based on the result of validation before Phase 2, and (3) calculate and publish the production rate (see Appendix 4-a for a details of the expected efforts). Ahead of this, since it will become necessary to publish the prototype rate in Phase 1, publishing entities of the prototype rate⁶⁰ will be solicited separately from this public consultation.

(iii) Toward calculation and publication of **Option (4)**

As the Tokyo Financial Exchange is deliberating in a working group on the resumption of trade in Over-Night Call Rate futures in 2020, it is necessary to continue monitoring the status of deliberations.

If trade resumption becomes a reality before the calculation and publication of the production rate for Option (3) it is expected to be comprehensively determined whether either Option (3) or Option (4) should be chosen as well as other matters⁶¹ based on market conditions and the like.

⁶⁰ Envisaged as the future administrators.

⁶¹ It is also expected to be deliberated as to whether the two should coexist (by treating one as a complement of the other) as necessary.

(2) Initiatives of each company

In the midst of concerns about the possibility of the permanent discontinuation of LIBOR as early as the end of 2021, it is likely that financial institutions, institutional investors, and non-financial corporates will also need to take initiatives with strong commitment made by senior management including top executives while bearing in mind the “end-2021” time limit.

First, in order to engage in firm-wide initiatives, it is likely to require efforts at the management level, such as securing internal resources (staff, budget, etc.) in addition to establishing sections and responsible persons dedicated to addressing the permanent discontinuation of LIBOR and developing policymaking processes. Moreover, it will be necessary to deliberate measures at a company level after comprehensively identifying specific financial instruments and transactions referencing LIBOR, as well as operations other than financial transactions (e.g., financial accounting and management accounting).

Afterwards, the company could assign all tasks to the administrative level for each department so that each department could work on them individually. Another possible idea is to establish a task force from the perspective of enhancing cooperation among departments (for details, see Appendix 4-b for examples of initiatives at each company, such as client services).

5. Issues subject to public comments

As described at the beginning, this public consultation document is intended to outline the outcome of past discussions in the Committee, and then solicit comments from a wide range of relevant parties on the future structure of JPY interest rate benchmarks.

In particular, in the midst of heightened concerns about the sustainability of LIBOR beyond the end of 2021, the volume of transactions in JPY LIBOR, a LIBOR quoted currency, is extremely large, and there is likely to be substantial effects on the various operations of JPY LIBOR users existing widely in Japan and abroad.

Accordingly, the Committee has decided to solicit comments on various issues mentioned in this public consultation document, and based on the results of this solicitation, publish the deliverables as the Committee.

Specific questions are shown in Appendix 5-a⁶². Please provide your answers in accordance with (1) and (2) below.

(1) Answering method

Answer format is provided in Appendix 5-b; please answer using it as appropriate.

Please note the following points when answering:

- Please answer assuming JPY as the denominated currency and Japanese law as the applicable law.
- Please base your answers on the external conditions (i.e., status of international discussions and the status of deliberation on hedge accounting) at the time.

(2) Submission guideline

(i) Submission deadline

September 30, 2019

(ii) Submission address

Please send your comments to the following address by email.

- Secretariat of the “Committee on Japanese Yen Interest Rate Benchmarks” (Market Infrastructure Group, Market Infrastructure Division, Financial Markets Department, Bank of Japan)
- post.fmd33@boj.or.jp

⁶² There is a column titled “Type of institution” in the table, and “◎” in the column indicates that the question is considered to be highly relevant to the business of each type of institution in general. Please use it as a reference in providing answers. Note that this column is not intended to limit the number of questions that need answering.

(iii) Required information

- Your name (or the name of your organization)
- Contact information (telephone number and email address)
- Name of your organization (only if you belong to a corporate or any other type of organization)

(iv) Notes

Information submitted, such as name, contact address, and other personal information, may be used to contact you to clarify and confirm information provided. Your comments may be published with your affiliation, unless specifically requested otherwise.

BOX 1 Interest rate benchmarks

Financial instruments and transactions use various financial benchmarks, including interest rate benchmarks such as LIBOR and TIBOR, stock-related benchmarks such as the TOPIX and the Nikkei 225 Stock Average, and commodity benchmarks such as crude oil prices⁶³.

Among them, interest rate benchmarks covered by this public consultation are JPY interest rate benchmarks which are calculated based on transactions in the interbank market where money transactions are conducted between banks, or the wholesale market where money transactions are conducted by securities companies and institutional investors in addition to banks.

Representative JPY interest rate benchmarks include JPY LIBOR, JPY TIBOR, and the uncollateralized overnight call rate that are published by the ICE Benchmark Administration (IBA), the JBATA, and the BOJ, respectively. For LIBOR and TIBOR, interest rates are published daily for each tenor such as one week, three months, and six months (Appendices B1-a, B1-b).

Interest rate benchmarks are referenced not only in the interbank market and the wholesale market but also by various financial instruments and financial transactions including loans, bonds, and derivatives. Furthermore, these benchmarks are the basis of price formation and fair valuation of many financial instruments. For example, when a non-financial corporate borrows from a bank, the borrowing rate could be calculated by adding a certain interest rate (spread) to LIBOR or TIBOR. For trade and investment in foreign bonds, when a forward exchange contract for which the U.S. dollar/yen exchange rate is determined at some point in the future is used, this forward exchange rate is basically determined by the benchmark interest rate differential⁶⁴ between the dollar and the yen in the period of the contract.

In this way, interest rate benchmarks are used by a wide range of entities including not only financial institutions but also non-financial corporates, functioning as infrastructure for funding, investment, and risk hedging, among other functions.

⁶³ Financial benchmarks are defined by the IOSCO Principles as those (1) made available to users, whether free of charge or for payment, and (2) calculated periodically, entirely or partially, by the application of a formula or another method of calculation to, or an assessment of, the value of one or more underlying interests. They are also defined as those (3) used for reference for purposes that include one or more of the following: (i) determining the interest payable, or other sums due, under loan agreements or under other financial contracts or instruments; (ii) determining the price at which a financial instrument may be bought or sold or traded or redeemed, or the value of a financial instrument; and/or (iii) measuring the performance of a financial instrument. See the link below for details.
<https://www.iosco.org/library/pubdocs/pdf/IOSCOPD415.pdf>

⁶⁴ At present, it is common to use LIBOR as the benchmark interest rate.

BOX 2 Japanese yen OIS

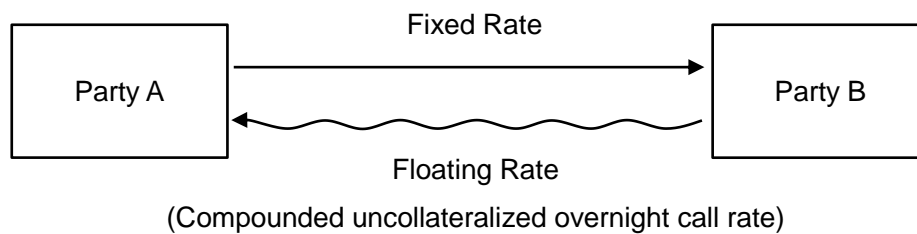
This box describes the definition, the status of trade, and the features of JPY OIS which are described in 2. Specific matters for consideration and elsewhere in the main text.

Definition

An interest rate swap is a transaction to exchange different types of interest rates (a fixed rate and a floating rate, or a floating rate and a floating rate) denominated in the same currency for a certain period. At present, many swaps reference LIBOR as a floating rate.

JPY OIS is a type of interest rate swap in which a floating rate calculated as the (compounded) weighted average of the uncollateralized overnight call rate for a certain period is exchanged for a fixed rate.

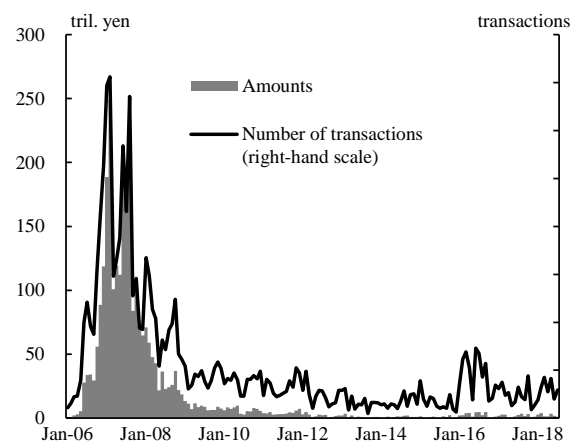
Figure B2-1: JPY OIS



State of trade

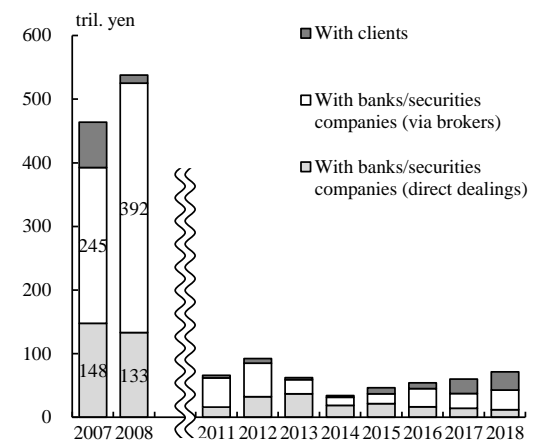
Figure B2-2: State of Trade of JPY OIS

Amount and Number of JPY OIS Transactions via Brokers



Note: The latest data are as at end-July 2018
Source: Money Brokers Association

Amount Outstanding in the JPY OIS Market



Note: The latest data are as at end-July 2018
Source: Bank of Japan, "Tokyo Money Market Survey"

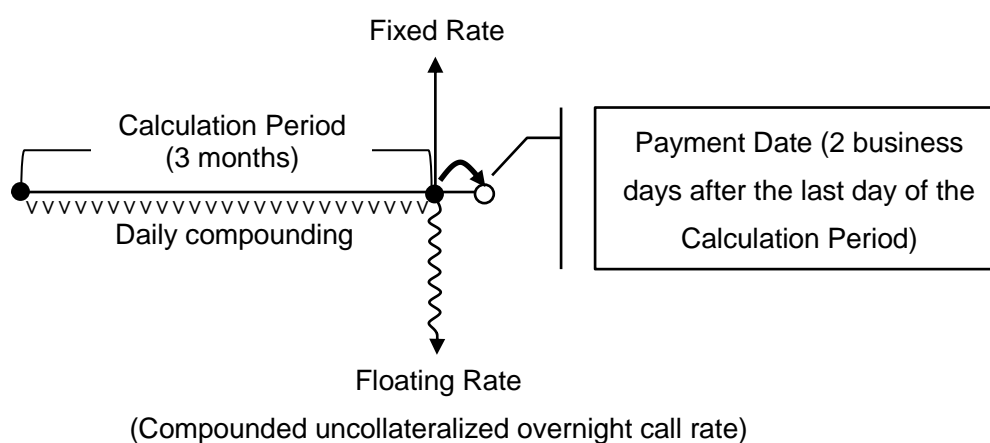
Features

JPY OIS reflects the market forecast for the uncollateralized overnight call rate specified as a RFR, and, as with such rate, does not reflect the credit risks of banks.

Moreover, since the applied interest rate on the floating leg is calculated by compounding the uncollateralized overnight call rate during the Calculation Period, it is fixed on the last day of the Calculation Period and is the result of averaging interest rate fluctuations during this period. Generally, the difference between the fixed rate and the floating rate is settled two business days after the last day of the Calculation Period.

For example, in the case of 3-month JPY OIS, there could be a transaction to settle the difference between the compounded uncollateralized overnight call rate (floating rate) published daily during the Calculation Period (three months) and the fixed rate prescribed in the contract two days after the last day of the Calculation Period (the maturity date in this case).

Figure B2-3: Example of Transaction Mentioned Above



For details on JPY OIS, please refer to “Japanese yen OIS (Overnight Index Swap) — Overview and Case Studies —,” published by the “Study Group on Risk-Free Reference Rates” in April 2018 (available only in Japanese)⁶⁵.

⁶⁵ <http://www.boj.or.jp/paym/market/sg/rfr1804c.htm>

BOX 3 Features of options for interest rate benchmarks

It is necessary to fully understand developments in each option and their features to select alternative benchmarks from Option (1) to Option (5) for the transition and fallback from JPY LIBOR, taking into account specific considerations in 2. Specific matters for consideration in the main text, and to calculate the spread adjustment between JPY LIBOR and the replacement benchmark.

This box describes the features of JPY LIBOR, Option (1), Option (2), Option (3)⁶⁶, and Option (5) based on a 6-month time series graph (Figure B3-1).

Looking at developments in each option since 2015, it can be seen that during the phase of interest rate volatility, while Option (1) has lagged behind fluctuations in JPY LIBOR, Option (2) has preceded such fluctuations. Given that market rates such as JPY LIBOR, TIBOR, or JPY OIS usually price in future policy rates, it seems to be difficult to understand intuitively that interest rates fixed in arrears such as Option (2) precede market rates. This is because, whereas interest rates fixed in arrears such as Option (2) reflect ex post all actual paths of policy rates from the Reset Date, JPY LIBOR/TIBOR/OIS can price in only the expected paths of policy rates at the time of the Reset Date.

In the financial environment in the past 1 to 2 years in which RFRs have been stable, Option (3) is almost at the same level as Option (1) or Option (2). On the other hand, in the phase of RFR volatility such as in early 2016, Option (3) fluctuates within a certain range as with JPY LIBOR and TIBOR, diverging from Option (1) and Option (2).

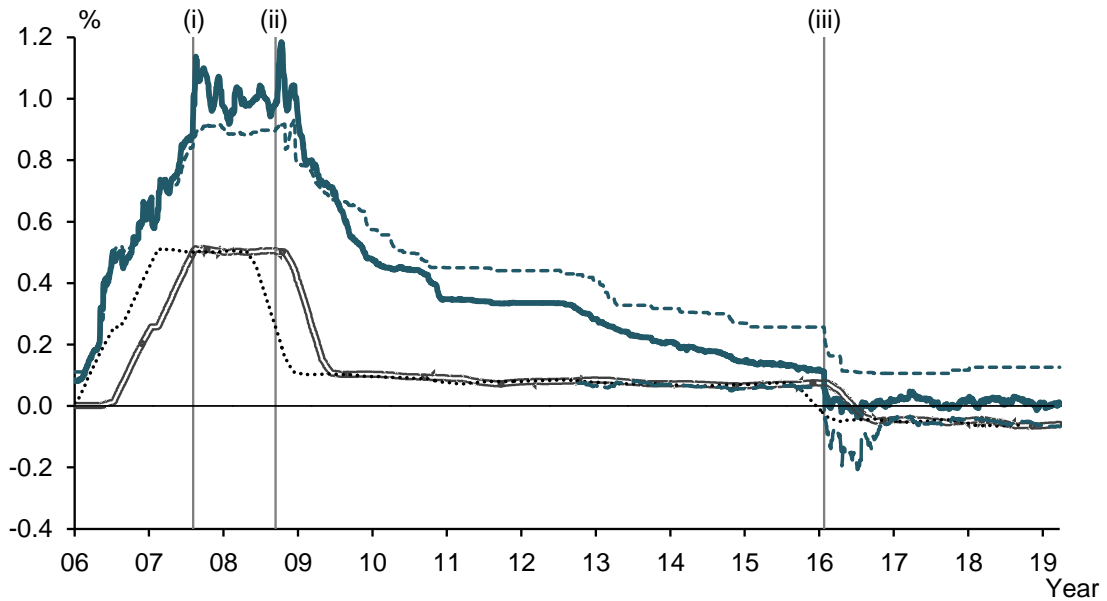
Next, looking at developments around 2007-2008 when there were many stressful events such as the BNP Paribas shock and failure of Lehman Brothers, JPY LIBOR and TIBOR diverged substantially from Option (1) and Option (2), which are RFRs, reflecting the substantial increases in financial institutions' credit premiums and liquidity premiums⁶⁷.

⁶⁶ As figures approximate to Option (3), JPY OIS data published by the Japan Securities Clearing Corporation on every business day are used (from October 2012).

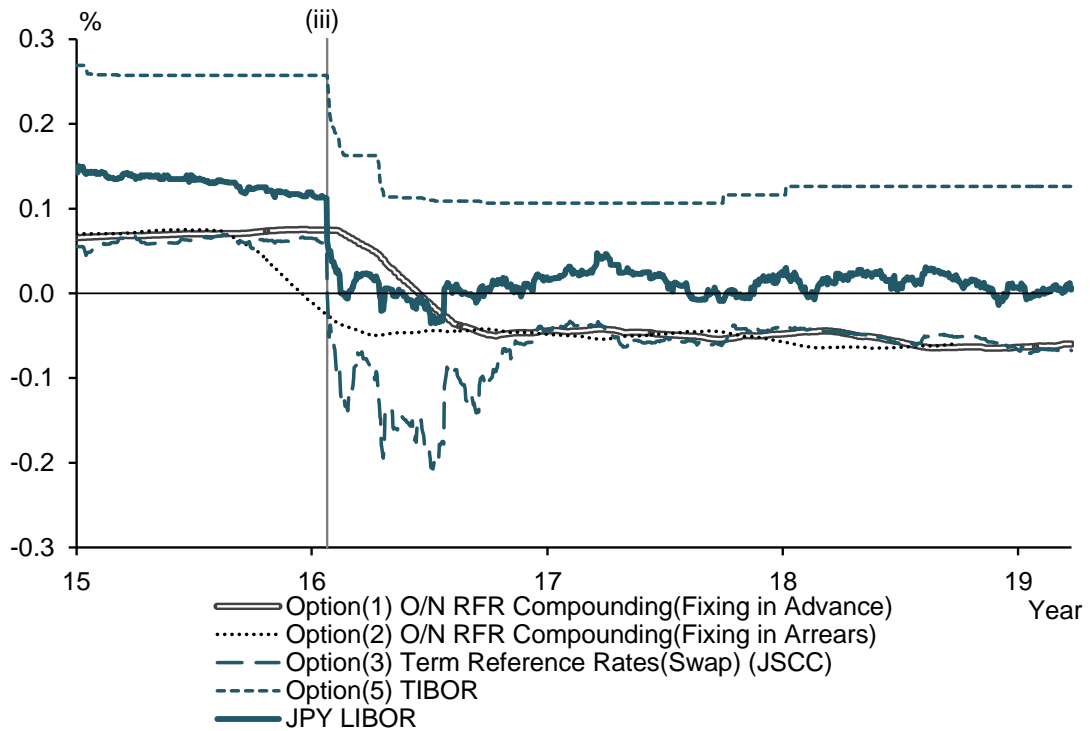
⁶⁷ A graph of JPY OIS is not shown, because the Japan Securities Clearing Corporation was not engaged in the clearing of interest rate swaps before September 2012. However, developments in JPY OIS at the time can be confirmed by using the data published by information vendors. According to them, JPY OIS at the time was at a level close to Option (1) and Option (2), confirming that the JPY LIBOR-JPY OIS spread increased substantially.

Figure B3-1: Trends in 6-months Rates for Option (1)-(3), (5) and JPY LIBOR

Since 2006



Since 2015



- Note: 1. The latest data for Option (2) as at Oct. 1, 2018. The latest data for options other than Option (2) as at Mar. 29, 2019.
 2. See Appendix B3-a for the premise of each line.
 3. (i) BNP Paribas shock (Aug. 2007), (ii) Failure of Lehman Brothers (Sep. 2008), (iii) Decision to introduce QQE with a Negative Interest Rate (Jan. 2016)

Source: Refinitiv

Going forward, it is necessary that each company select alternative benchmarks for JPY LIBOR according to the characteristics of financial instruments and transactions after fully understanding the features of each option stated above.

In this regard, for example, if it is a bank loan which is indirect finance via the balance sheet of the bank, it is deemed to have a certain rationale to select Option (5), which reflects the credit cost of the bank itself, for the lending rate⁶⁸. Conversely, in the case of bonds, since companies obtain funding directly from investors, there is no necessity for the reference rate of the funding rates to reflect bank credit cost. Given this, it is possible to select interest rates calculated based on RFRs such as Option (2) and Option (3)⁶⁹. Furthermore, for the contract of derivatives such as interest rate swaps, if it fulfills the demand to hedge fluctuations of the interest rate itself, there is no need for it to reflect the bank credit cost and it is possible to select Option (2)⁷⁰.

Moreover, if the Historical Mean/Median Approach⁷¹ is employed to calculate the spread adjustment between JPY LIBOR and the replacement benchmark, it is necessary to decide between contracting parties how long a period to look back taking into account the characteristics in Figure B3-1 and in reference to the ISDA public consultation to be implemented going forward.

⁶⁸ “Reforming Major Interest Rate Benchmarks” published by the FSB in July 2014 suggested that existence of various interest rate benchmarks and corresponding market conventions would expand the room for market participants to flexibly select interest rate benchmarks most appropriate for their economic needs, and as an example of such selection, it cited the use of benchmarks including credit risk for bank lending.

⁶⁹ In Japan, it has been pointed out that it is important to have a two-track financial system with which indirect financing and direct financing work in balance (“Report by the Roundtable Committee on Fundamental Issues of the Financial System Council” [December 2009]). Recently, benchmarks which include credit risks of banks such as TIBOR and JPY LIBOR are used for both loans and bonds, but if such a situation changes, for example, loans refer to TIBOR and bonds refer to RFRs, it is considered to be possible to avoid circumstances in which funding rates of bonds and other instruments rise in tandem with the rise in benchmarks such as TIBOR even when the banking sector faces a shock. On the other hand, in the case when the market of a sector other than the banking sector faces a shock due to some reason and direct funding such as for bonds and others faces difficulty, it is expected that indirect funding would play a role to complement the function of the overall financial market, and it is considered to be possible that indirect funding can avoid being easily affected by the shock by using a system of interest rates different from bonds and other instruments.

⁷⁰ See footnote 57 above.

⁷¹ See 2.(3)(i)(Issue 2) in the main text.