



Report on preparations for benchmark rate reforms

1 Introduction

1.1 Purpose of this report

The purpose of this report is to share good practices that the ECB has identified in its horizontal assessment of the preparedness of banks supervised under the Single Supervisory Mechanism (SSM) for the benchmark rate reforms. The ECB encourages banks to consider the examples of good practice presented in this report in their preparations. The list is not exhaustive, however, and banks will need to assess which additional measures they may need to take given the nature of their exposures.

1.2 Context of the report

In the second half of 2019 the ECB conducted a horizontal assessment of SSM banks' preparedness for the benchmark rate reforms.

In general, the assessment found that banks had focused more on the transition from the euro overnight index average (EONIA) to the euro short-term rate (€STR) than on the reform of the euro interbank offered rate (EURIBOR) and the associated risks. EURIBOR is the main benchmark rate in the euro area in terms of number of contracts and is widely used in retail loans and hedging products.

Another key finding was that while banks were aware of the potential risks entailed in the benchmark rate reforms, their action plans and, more specifically, the development and implementation of mitigation actions, were generally behind schedule.

In the light of the above, this report is intended to assist banks by setting out good practices for banks' governance structure, risk identification approaches, action plans and documentation in relation to the benchmark rate transition. These good practices are consistent with practices identified in the documentation that banks submitted to the ECB in 2019. The identification and evaluation of what constitutes good practices for this purpose were performed by ECB Banking Supervision staff. The report is not intended to impose additional requirements on banks, but it does refer to applicable specific requirements of EU law.

1.3 Background to the benchmark rate reforms in the euro area and beyond

In response to attempts to manipulate key global benchmark rates and to declining liquidity in their underlying markets, a global project to reform interest benchmark rates was launched in 2013, which includes the EU Benchmark Rate Regulation (BMR)¹.

In the euro area, these reforms affect the two key interest rate benchmark rates, namely EONIA and EURIBOR.

EONIA will be discontinued on 3 January 2022 and replaced by the €STR, an overnight wholesale funding rate that is published by the ECB. Since 2 October 2019, following a modification of its methodology, EONIA has been calculated as the €STR plus a fixed spread of 8.5 basis points spread – this change conserved the level of the interest rate at the point of transition but pegged it directly to the new rate.

EURIBOR underwent a methodological reform in 2019 to make it compliant with the regulatory requirements laid down in the BMR. It is now determined using a hybrid methodology rather than a purely quote-based method. Under this hybrid methodology, the calculation of EURIBOR is based on transactions, to the extent that these exist, and on expert judgement as derived from related markets if there is no relevant unsecured money market activity (the method uses a “waterfall approach” that defines different levels of transaction observability). Following a testing phase and public consultations, the hybrid methodology became applicable at the end of 2019, and [the provider has received authorisation from the competent authority](#), meaning that the benchmark can continue to be used for new and legacy contracts after 3 January 2022.

Nevertheless, the long-term sustainability of EURIBOR depends on factors such as the continued willingness of the panel of contributing banks to support it, and whether or not there is sufficient activity in its underlying market. Banks therefore need to be prepared for all scenarios, including the possible disappearance of this benchmark.

As euro area banks operate in global financial markets, it is important to be aware that other key financial benchmark rates are also being reformed, notably the London interbank offered rate (LIBOR)², which is being replaced by currency-specific overnight rates (e.g. SONIA³ for the pound sterling, SOFR⁴ for the US dollar). Thus, the approach to the reforms for LIBOR is different to that adopted for EURIBOR.

¹ Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016. See also the [EBA-ESMA principles on benchmarks](#), published in 2013.

² The UK Financial Conduct Authority (FCA) stated on 25 March 2020 that the central assumption that firms cannot rely on LIBOR being published after the end of 2021 has not changed.

³ Sterling overnight index average.

⁴ Secured overnight financing rate.

1.4 Risks and challenges for banks

One good practice observed by several banks is to establish a comprehensive map of risks within their implementation plans. This ideally covers the following considerations, if applicable.

General business risks:

- knowledge gap risk (i.e. banks are unaware of an aspect of the reforms or their implementation, resulting in a lack of preparedness);
- relevant rates or related financial instruments are unavailable owing to market illiquidity;
- business risk stemming from new products and/or a delay in operational readiness and potential loss of market share;
- implications for internal core processes, such as controlling (e.g. budgeting and margin calculation) and steering of interest rate and foreign exchange exposures and related risks;
- reputational risks arising during the transition phase (e.g. as a result of a delay in operational readiness or a gradual deviation from acknowledged good practices or market standards).

Risks relating to counterparties:

- legal risks (particularly with regard to contract law in different jurisdictions, and including consideration of contract continuity);
- communication challenges with counterparties;
- consumer protection considerations (e.g. in relation to conduct during the renegotiation of existing contracts, or to any fund or issue-related prospectus or similar publication);
- changes in customer demand for different products or specific contractual terms.

Risks relating to third parties:

- discontinuation of reformed benchmark rates owing to a lack of contributors;
- risks arising from third-party service providers (especially in relation to outsourcing) or vendors.

Operational risks:

- operational challenges associated with repapering of contracts and the introduction of fallback provisions, which can entail a large operational burden and demand for personnel resources owing to customer enquiries;

- impact on booking infrastructure;
- changes to master data for contracts and accounts;
- adjustments to settlement and payment infrastructures;
- IT-related restrictions with regard to the valuation and booking of new products based on the reformed reference rates and corresponding valuation methodologies (e.g. continuous compounding);
- file transfer protocol (FTP) systems that depend on legacy rates that are going to be discontinued.

Financial risk management:

- risks relating to product adjustment strategies;
- impact on hedging strategies and management of basis risk, including back-to-back hedges;
- impact on internal decision-making (e.g. funds transfer pricing);
- risks from cross-currency products, where the reform path differs for the relevant reference rates;
- changes to the cost of hedging owing to lack of liquidity in relevant products;
- impact of the renegotiation of contracts on pricing and margins.

In addition to risks, banks consider regulatory and accounting implications:

- valuation (including potential cliff effects);
- impact on additional value adjustments (AVA);
- other accounting implications;
- tax implications;
- impacts on discounting in internal calculations;
- impacts on internal models and (historical) input data;
- implications for processes and governance, including documentation on regulatory risk management and modelling;
- impact on other regulatory requirements, as well as regulatory reporting.

1.5 Structure of the report

Chapter 2 on project management provides general observations in the context of the specific challenges in preparing for the benchmark reforms. The next two

chapters identify key risks and good practices for their mitigation. Legal and operational challenges are covered in Chapter 3 and exposure-related risks (with regard to valuation and regulatory treatment) are discussed in Chapter 4.

2 Project management

2.1 General

This chapter outlines some of the project management considerations for the successful implementation of the risk mitigation measures discussed in the next two chapters.

While project management is not in itself a solution, given the complexity of the benchmark rate reforms, it can help banks to accurately identify risks and implement prudent risk mitigation measures. As a general observation, making early preparations for the benchmark rate reforms is key to developing robust action plans and solutions to mitigate the risks associated with the reforms.

Examples of good practice

A bank's internal preparation work covers all critical benchmark rates that it has exposures to or uses in internal processes, notably EURIBOR, EONIA and LIBOR.

Effective preparation work allocates sufficient time and effort to EURIBOR, which, at present, is the most frequently used benchmark for contracts in the euro area.

Project plans are divided into parts dedicated to the relevant areas and scope of any indirect exposures to benchmark rate transition, such as through discounting and modelling.

The bank documents each stage of the internal project to ensure quality and consistency.

2.2 Governance

To mitigate the impacts of the benchmark rate reforms in a proactive and sustainable manner, banks should have a suitable organisational and operational structure in place, including an adequate segregation of duties and clear reporting lines, as set out in paragraph 67 of the [EBA Guidelines on internal governance](#).

Examples of good practice

Banks work on the basis of clearly identified roles to ensure consistency and credibility. These include senior management sponsors, points of contact, project managers for each business line and a support function.

Separate, dedicated working groups for each area of activity.

Banks with a complex structure have an operational framework that facilitates coordinated management across all parts of the bank. A comprehensive approach

across the group ensures consistent implementation at both the entity and the material subsidiary level.

Management bodies support, steer and monitor the development and implementation of the project.

In the follow-up procedures of the bank, senior management:

- approves and regularly reviews the project strategy, including the action plan, taking into account any information on relevant legislation or interpretations from relevant authorities or industry bodies;
- ensures sufficient resources and internal/external visibility (e.g. communication);
- oversees the implementation of the action plan;
- monitors progress vis-à-vis the targets and milestones defined in the action plan;
- approves plans with clearly defined timelines to provide sufficient buffers with regard to relevant legally binding dates, and with sufficient granularity and level of detail with regard to milestones and deliverables;
- evaluates follow-up actions.

Project workstreams are allocated to dedicated steering committees (by the business line or support function), which include members of senior management. There is a clear articulation of the cycle of reporting and cooperation between the working groups, steering committees and significant institutions' executive committees to ensure the smooth functioning of the workstreams.

Once the project plan has been implemented, the new operational process and risk framework are reviewed by the internal audit function, which provides clear feedback to the bank's senior management and to its supervisors.

2.3 Risk identification

Internal risk assessment is a critical step in the project, as it is the starting point for devising the action plan. It is therefore important to allocate the necessary resources and time to this step.

Examples of good practice

A heat map is developed for each risk category, showing the materiality level and related business area or support function.

Detailed information is compiled on the risk(s) stemming from the transition or discontinuation of a benchmark rate, which clearly distinguishes between the material and non-material risks and provides explanations of the material and non-material risks, including justification as to why the latter are classified as not material.

The risk assessment provides detailed information on the interaction between the risks stemming from the benchmark rate reforms and the bank's key risk and capital indicators (e.g. ICAAP), as well as an estimation of the impact (negative or positive) on accounting and regulatory capital such as net interest income, expected value of equity and prudential capital.

Jurisdiction-specific legal risks are analysed, with a focus on both the overall legal framework and the risk of customer litigation.

2.4 Action plan

Including action plans in a dedicated risk assessment means that they can prioritise and hone risk mitigation activities in a targeted manner and thereby ensure granular coverage of all the relevant aspects identified.

Examples of good practice

For each relevant benchmark rate, the action plan covers all aspects along the value chain and across the business that are identified as being relevant during the transition project. At the group level, the key milestones for any specific steps relevant for subsidiaries are included in the project and corresponding risk management.

Reflecting market uncertainty, the action plans include a playbook, setting out worst-case scenarios and dedicated contingency plans for each relevant benchmark, and are updated as and when new information becomes available.

Furthermore, the action plans include:

- different workstreams according to benchmark/counterparty/product;
- a clear link between risks/challenges and the respective mitigation measures;
- an overview of the implementation status of each mitigation measure.

Operational plans developed at the local level are part of the global project and sponsored by banks' senior management. Thus, the global project includes the development of mitigation actions in line with the local challenges and objectives.

2.5 Timeline

As stated in Chapter 1, setting a clear timeline for the project can help in the finding of comprehensive solutions that will provide SSM banks with the time they need to develop, test and implement robust mitigation measures.

Examples of good practice

Project milestones are attached to a road map with clear start and end dates, including buffer periods with regard to the benchmark rate reform deadlines.

The timeline accounts for the different transition paths given by each jurisdiction on the basis of the assessment of their direct and indirect exposures.

The supervised institution can take into account the outcomes of previous projects of comparable complexity when establishing a precise timeline.

2.6 Budget and resources

Examples of good practice

Banks maintain a clear inventory of the resources they have allocated to the project and of the estimated costs involved. Such an inventory (workstreams, FTEs and estimated working hours, etc.) facilitates frequent assessments of whether project resources are commensurate with the complexity and capacity of the bank.

In addition, if the bank deems the use of external consultancy services necessary for the timely implementation of the action plan, it is important to ensure that this arrangement is subject to appropriate governance and that the associated risks are taken into consideration. The [EBA Guidelines on outsourcing arrangements](#) are particularly relevant in that regard.

2.7 Awareness of external developments

The ECB expects the banks to fully comply with the legal requirements. Given the work ongoing in a number of fora, banks face the challenge of ensuring that they are up-to-date with the most recent developments (e.g. actions by central counterparties (CCPs)).

Examples of good practice

Banks closely follow publications by the relevant public sector bodies (e.g. EU institutions, the Financial Stability Board, Basel Committee on Banking Supervision,

International Accounting Standards Board (IASB), International Organization of Securities Commissions) and private sector organisations (e.g. CCPs, Loan Market Association, International Swaps and Derivatives Association).

It may also be useful for banks to cooperate across the banking sector, especially with those banks that have previous experience with benchmark reforms and have developed and implemented tried-and-tested solutions.

3 Legal and operational challenges

As a general principle, the assessment of legal and operational challenges is best performed holistically, taking into consideration both internal systems and external factors such as risks relating to conduct, reputation and litigation.

3.1 Renegotiation and repapering of contracts

A central legal challenge for banks is that all contracts that are not compliant with the BMR are subject to renegotiation and legal repapering.

Examples of good practice

The creation of specialised work units fosters high-quality repapering practices and ensures a smooth renegotiation of contracts. One approach is to split the workstream into legacy and new contracts, and potentially adding sub-levels for each work unit (e.g. type of action or business area).

The management of these work units takes note of the relevant competent authorities' recommendations (e.g. transition forbearance rules) when preparing the process for modifying contractual terms.

Banks accelerate efforts to move away from benchmark rates that will be discontinued in order to mitigate the risk of a substantial repapering burden in the future.

Private sector initiatives could also be useful in the repapering phase: the working group on euro risk-free rates (RFR WG) is expected to deliver an analysis in the course of 2020 on how to amend legacy contracts and existing financial instruments by private, contractual means, across various asset classes. The process for amending legacy contracts could have certain accounting implications.

3.2 Fallback language

With the entry into force of the BMR it became mandatory for all contracts issued after 1 January 2018 linked to a benchmark rate to include fallback provisions.

Examples of good practice

Banks develop and implement fallback provisions for all affected contracts, irrespective of date, in order to be prepared for worst-case scenarios, such as the future unavailability or discontinuation of benchmark rates such as EURIBOR.

The RFR WG is in the process of identifying potential €STR-based fallbacks for EURIBOR, depending on the asset class, with a view to securing market consensus on those fallbacks. The outcome of its analysis is due in the coming months and its proposals will be published for public consultation.

Examples of good practice

The process for identifying risks arising from fallback language should ensure that:

- all contracts which already include fallback provisions are checked for compliance;
- a clear inventory is set up of all contracts requiring either the amendment or inclusion of fallback provisions.

To ensure the mitigation of risks, banks:

- develop and implement robust fallback provisions, taking note of industry best practices where available for each product type;
 - develop and implement bilateral fallback trigger provisions, in order to limit the risk of inconsistency with others market participants;
 - adapt IT systems/applications and internal risk models where necessary to accommodate the use of new fallbacks;
 - define worst-case scenarios to evaluate the impact and develop countermeasures;
 - check the implications of triggering fallback clauses for accounting and systems;
 - closely follow the work of relevant industry working groups on fallbacks.
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3.3 Communication strategy

In the ECB's horizontal assessment of SSM bank' preparedness for the benchmark rate reforms, the banks rated a communication strategy as the most important risk mitigation tool for their business, particular with regard to customers linked to EURIBOR. A disorganised communication strategy could trigger severe risks such as reputational and litigation risk.

Examples of good practice

A communication strategy is developed and implemented as early as possible.

The strategy uses different channels to address different audiences and, among other things, includes the following.

Internal:

- a dedicated working group for internal communication;
- staff training on the benchmark rate reforms and the associated risks for each business line;
- staff training on how to communicate on benchmark-related issues.

External:

- a dedicated working group on external communication;
 - guidance for sophisticated clients (e.g. corporate clients);
 - workshops;
 - informational documentation;
 - informal communication;
 - guidance for non-sophisticated clients (e.g. retail clients);
 - direct communication via mail/email;
 - public communication via different channels (e.g. bank's website, media);
 - a hotline number;
 - a dedicated FAQ webpage;
 - the implementation of public recommendations;
 - information sessions on the communication strategy (held by a sub-group of the RFR WG specialising in communication);
 - a communication toolkit (developed by the RFR WG and published on the ECB's website);
 - a newsletter (developed by the RFR WG and published on the ECB's website).
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3.4 IT and risk infrastructure

The benchmark rate reforms may have an indirect impact on banks' existing internal models and IT infrastructure. For example, the integration of alternative risk-free rates as replacement or fallback benchmark rates in banking systems and internal models can generate operational difficulties and risks.

Examples of good practice

When identifying these risks, banks make efforts to:

- clearly identify all affected systems;
- clearly identify affected exposures and related models, as well as the relevant historical databases that need to be modified as a result of the benchmark rate reforms.

In order to mitigate these risks, banks:

- perform a detailed calibration and validation check on models, and generate relevant input parameters to identify the model-related datasets that need to be adjusted, as well as the models and exposures for which those datasets are used;
 - conduct an assessment of IT support and infrastructure needed in order to amend existing contracts, and enable the issuing of new contracts;
 - coordinate a comprehensive adjustment process for the IT infrastructure;
 - maintain an inventory table of all identified solutions and their stage of implementation;
 - engage with comprehensive quantitative assessments and scenarios to evaluate the impact on expected loss, value at risk, sensitivities and stress testing, profit and loss (P&L), back-testing framework, etc.;
 - follow a timeline with clear start/end dates for each stage of the action plan, which is documented together with a description of the main milestones for that stage;
 - periodically reassess the credibility of the action plan and timeline.
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4 Risks relating to exposures

4.1 Identifying exposures

Given that high exposure to a benchmark rate is an important risk trigger for banks, a thorough inventory of all contracts and instruments linked to a benchmark rate could be useful in ascertaining the total exposure. As an individual bank can have several IT systems and subsidiaries, this can be a time-consuming process.

One key indicator that has been observed as good practice for banks to use when calculating the materiality level of the impact of the benchmark rate reforms is the percentage of the total exposure, in terms of number of contracts and volume (outstanding notional or carrying amounts), that is linked to a benchmark rate. This percentage provides further information on the appropriateness of the risk assessment and action plan for the business and size of the bank.

Examples of good practice

To ensure an organised risk identification process, banks maintain a comprehensive contract inventory, which includes:

- all contracts directly or indirectly linked to a benchmark;
 - all contracts with legal provision issues;
 - a complete overview broken down for each business line/region/subsidiary by benchmark, currency, volume, governing law and jurisdiction, counterparty type, product, number of contracts;
 - a particular focus on maturity date, especially for contracts affected by the discontinuation of a benchmark rate (e.g. EONIA will be discontinued on 3 January 2022);
 - an estimation of the market value impact for each instrument/product where the benchmark rate is replaced (e.g. EONIA by the €STR);
 - off-balance sheet exposures in the risk assessment, especially for custodian banks or services;
 - an estimation of the potential impact (losses) for each business line/region/legal entity;
 - different transition paths for different rates.
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4.2 Basis risk and compensation mechanisms

The euro area's critical benchmarks are strongly linked to banks' hedging strategies, and more specifically to derivatives. Within the next two years several critical benchmarks are due to be discontinued (e.g. EONIA and IBORs), giving rise to basis risk. These benchmarks are used both as a collateral rate (e.g. EONIA for EURIBOR standard contracts) or the main rate (e.g. IBORs). This basis risk will have an impact on the marked-to-market value of derivative products, for example, and may trigger the need for compensation between counterparties.

Examples of good practice

In order to mitigate basis risk, banks implement widely accepted compensation mechanisms to ensure homogeneity where possible (particularly in the case of derivatives) among market participants. They also develop and implement bilateral fallback trigger event in order to limit the risk of inconsistency with other market participants.

This is particularly important for bilateral contracts that are not subject to standard CCP arrangements.⁵

Banks amend their risk frameworks and operational processes to mitigate valuation risk (including the risk of disputes over valuation with counterparties) and adopt a multi-curve framework for valuation purposes.

4.3 Accounting and prudential impacts

While this report does not opine on good practice in relation to the application of accounting standards, it is important from a prudential perspective that banks are aware of potential accounting implications stemming from the benchmark rate reforms and their potential significance. Under International Financial Reporting Standards (IFRS), the discontinuation of a benchmark and its replacement by another and/or the introduction of fallbacks and trigger events may have significant accounting implications. To address these, the IASB made certain amendments to the accounting standards IAS 39 and IFRS 9 in September 2019, and in April 2020 issued its Exposure Draft Interest Rate Benchmark Reform – Stage 2. It is good practice to follow accounting developments closely. Accounting considerations include, but are not limited to, the following:

- valuation of financial instruments at fair value, including valuation adjustments (XVAs);
- impact on hedge accounting;

⁵ Such as in discounting and compensation mechanisms.

- impact on the modification of debt contracts;
- classification of financial instruments as Level 1, 2 or 3 based on the observability of prices or input parameters;
- impact on other parts of the accounting framework where discounting is required, such as lease accounting, employee benefits, impairment of non-financial assets or provisions.

Prudential impacts can include, but are not limited to, the following:

- impact on internal model approaches for market risk, credit and/or counterparty credit risk, including as a result of the forthcoming changes to the prudential framework (e.g. the Fundamental Review of the Trading Book);
- impact on interest rate risk in the banking book;
- impact on other regulatory requirements (e.g. expected losses) and on regulatory reporting;
- risk of operational losses (e.g. through litigation);
- impact on margining requirements.

Examples of good practice

Banks assess the material and potential impact on capital of the reforms.

They engage at an early stage and foster close cooperation with the national or/and supranational competent authorities on operational difficulties, e.g. with regard to internal models (short transition time window, lack of sufficient data times series for calibrating RFRs, etc.).

They also closely follow the dedicated working group on accounting and financial reporting (e.g. IASB project on IBORs reform, sub-group of the RFR WG specialising in accounting issues).

Banks develop compensation solutions in bilateral contracts to offset the gain or loss in marked-to-market movement of derivatives (see Section 4.2).

Finally, banks assess the potential implications of the modification or derecognition of financial instruments.
