EUROPEAN CENTRAL BANK
EUROSYSTEM

23 June 2026

Framework for the euro foreign exchange reference rates

The euro foreign exchange reference rates (also known as the ECB reference rates), the European Central Bank in its capacity as the administrator and the other participants as calculation agents for the rates are not subject to the IOSCO principles on financial benchmarks of July 2013.

The participants have therefore designed the non-binding framework below for the euro foreign exchange reference rates in the belief that transparency in governance and the setting methodology is in the public interest and reinforces the credibility of the relevant reference rates.

In the context of the euro foreign exchange reference rates, the term “reference rate” is taken to mean an exchange rate that is not intended to be used in any market transactions, whether directly or indirectly (as an underlying benchmark). The rates are intended for information purposes only.

1 Governance of the euro foreign exchange reference rates

The European System of Central Banks Market Operations Committee is responsible for establishing guidelines for the euro foreign exchange reference rates, and aims to ensure a robust methodology and an appropriate level of transparency, as well as eliminating conflicts of interest. In particular, it does the following:

- conducts periodic reviews of the definition, scope, purpose, context and the intended, expected or known usage of the euro foreign exchange reference rates;
- conducts periodic reviews of the methodology used by the ECB to set the euro foreign exchange reference rates (the “Methodology”);
- decides whether proposed changes to the Methodology are material, including assessing whether the Methodology continues to appropriately measure the underlying market and overseeing any changes;
- oversees the ECB’s adherence to the Methodology and reviews any exceptions and the underlying reasons for those exceptions;
- oversees the publication of the euro foreign exchange reference rates, as well as reviewing any exceptions and the underlying reasons for those exceptions;
- reviews and approves procedures for the termination or addition of euro foreign exchange reference rates and any communication with stakeholders on such terminations or additions.

2 Methodology for the setting of the euro foreign exchange reference rates

The euro foreign exchange reference rates are determined by the ECB daily around 14:10 CET between the administrator and the calculation agents, and are published by the ECB on its website and via the market information dissemination[1] (MID) at around 16:00 CET.

An active market will normally exist in each currency pair represented by the euro foreign exchange reference rates. However, market liquidity can vary greatly from a liquid major currency to a rather illiquid exotic currency, as well as at different times of the day. Market liquidity is measured by spot market turnover, which is estimated by the BIS in its triennial survey and any other statistical reports with similar coverage.

2.1 Data sourcing

The ECB undertakes a periodic review of the appropriateness of specific data used in the setting and validation of the euro foreign exchange reference rates. This review is intended, among other things, (i) to assist in having the euro foreign exchange reference rates based on reliable and observable market data that reflect the economic reality of a given market, and (ii) to ensure that the euro foreign exchange reference rates themselves are reliable representations of the foreign exchange market.

There is no solicitation process to obtain underlying data, either by a panel or by polling in the euro foreign exchange reference rate-setting procedure. The ECB uses transactional data between buyers and sellers in that market where those data are available and reflect sufficient liquidity. In a market where there is lower liquidity, the euro foreign exchange reference rates may be based predominantly or exclusively on bid and offer rates, or on prior transactions. The degree of liquidity is assessed using expert judgement.

2.2 Validation of data

All the rates captured are subject to a number of tolerance checks, with the intention being to determine the euro foreign exchange reference rates that reflect the underlying market at a given time. The ECB performs tolerance checks at the time the data are sourced, assisted by calculation agents. This may result in some of the data captured being excluded from the determination of the euro foreign exchange reference rates. Currency-specific systematic tolerances are reviewed annually by the Market Operations Committee. Based on these reviews, the Committee may

[1] See https://www.ecb.europa.eu/press/html/mid.en.html.

decide to make some changes in the process in order to reflect underlying market conditions.

Consistency of various data sources: participants should check that different data sources provide consistent information.

Adequacy of prevailing market conditions: participants should check that the exchange rate that was contributed is within the bid/ask range prevailing at the time of the concertation. They should also check that the frequency of the data is high enough to be able to evaluate the prevailing exchange rate in the market. If the latest available quote is from more than 30 seconds ago for a given currency pair, it should not be considered as actively traded unless the exchange rate shows limited volatility.

Consistency of direct exchange rates and rates set using USD-cross: for currencies which generally show more trading activity against the US dollar, the direct euro exchange rate and the USD cross rate should be compared. If the difference is significant, the USD cross rate should be used. This should be the baseline scenario in the case of the currencies that are traded in market hours that do not overlap with the time of the concertation.

The four-eyes principle should be applied for each step. This is ensured by multiple central banks participating in the setting of the euro foreign exchange reference rates. When inconsistencies are found, the staff member(s) who raise(s) it should provide a brief explanation and suggest an alternative rate.

2.3 Expert judgement

- The ECB exercises discretion with respect to the use of data in determining a euro foreign exchange reference rate. The setting of the rates includes a validation process whereby, among other steps, members of ECB staff and calculation agents review data and the proposed euro foreign exchange reference rates pursuant to certain predetermined tolerance checks. When applying these tolerance checks, discretion to include or reject certain data from the determination of the rates can be exercised. Based on the ECB's experience in interpreting market data, ECB staff will use their judgement when necessary in order to ensure the quality and integrity of the euro foreign exchange reference rates. In particular, ECB staff may rely on their own judgement more frequently in an active, albeit low-liquidity, market where transactions may not be consistently available. The ECB has internal guidelines and quality control procedures in place that govern the application of staff judgement and are intended to provide consistency and oversight to this process. Staff members receive training in how to comply with these guidelines and procedures.

2.4 Coverage

- The ECB publishes the euro foreign exchange reference rates for all the official currencies of non-euro area Member States of the European Union. Beyond that, the euro foreign exchange reference rates of the currencies with the most liquid active spot FX markets are set and published. The ECB may, in consultation with the Market Operations Committee, include any other world currency.

2.5 Setting method and data sources

- The euro foreign exchange reference rates for the following currencies (USD, JPY, AUD, NZD, ZAR, PLN, CZK, RON, TRY, HUF, RUB, ISK, ILS, CAD, BRL, KRW, IDR, PHP, SGD, HKD, CNY, MYR, THB, INR, NOK, DKK, SEK, CHF, GBP and MXN) are determined and validated on the basis of transactional order (firm quote) and – where available – trade rates that are sourced from the major FX platforms. In addition, other data sources may also be used in case there is a need to confirm and ensure the correctness of some rates. The primary goal is to set the euro foreign exchange reference rates of each of these currencies based on exchange rates traded directly against the euro. If this is not possible, the rates are determined using trade rates against a major liquid currency, or order (firm quote) rates against the euro or other major liquid currencies. If the exchange rate against a major liquid currency is the only available source, the euro foreign exchange reference rates of that major liquid currency vs. the euro will be used to calculate the euro cross rate.
- The market data that are captured and set are subject to currency-specific systematic tolerance checks, which will identify outlying data. Validation is performed on the outlying data by ECB staff members, who will seek corroboration from other information sources or rely on their own judgement to determine the market level.
- In the case of currencies for which the euro foreign exchange reference rates are determined on the basis of quotes, the rates are set at the mid (arithmetic average) of the bid and ask quotes observed.

2.6 Publication of the euro foreign exchange reference rates on national holidays

- In principle, the euro foreign exchange reference rates will be determined and published on all days on which TARGET2 is operating.

3 Changing the methodology of setting the euro foreign exchange reference rates

- The methodology is reviewed periodically by the Market Operations Committee. The process for making any changes to the methodology is as follows:
    - (1) Any member of the Market Operations Committee may propose changes to the methodology.
    - (2) ECB staff constantly monitor currency markets, collect the views of stakeholders in the euro foreign exchange reference rates, evaluate the necessity of changes to the methodology and seek input as appropriate prior to submitting the changes to the Market Operations Committee.
    - (3) The Market Operations Committee reviews and decides on all the changes to the methodology that have been proposed, taking the assessment of ECB staff into account.
    - (4) Once the Market Operations Committee has assessed that a material change should be made, it puts the change to the Executive Board of the ECB.
    - (5) The ECB will notify the public of any planned material change to the methodology, together with the rationale for the change and any supporting documentation where appropriate. The ECB will also publish a revised version of its methodology document on its website.

4 Cessation of the euro foreign exchange reference rates

- It may be necessary to terminate the setting and publication of a euro foreign exchange reference rate. This could be due to external factors beyond the ECB's control, such as a market structure change or a deterioration in the quality of the data available. Where practicable, taking into account time constraints, any potential cessation will be discussed by the Market Operations Committee and approved by the ECB. The ECB will investigate whether a credible alternative which continues to represent the underlying market conditions is available. If a credible alternative is identified, the ECB will assess its viability. If the cessation of a euro foreign exchange reference rate is unavoidable, the ECB will inform the public as appropriate.
- The process in relation to a potential cessation of a euro foreign exchange reference rate is as follows:
    - (1) Review the circumstances and consider whether there is a viable alternative to ceasing a particular euro foreign exchange reference rate.
    - (2) Where practicable, undertake a consultation with key stakeholders and consider any feedback that may facilitate a viable solution.

  - (3) Where practicable, provide notice to the public of any cessation of a particular euro foreign exchange reference rate.
  - (4) Cease publishing a euro foreign exchange reference rate.
- In these circumstances, the ECB will continue to review the market and the availability of data periodically in order to determine in its discretion whether or not to reinstate the euro foreign exchange reference rate in question.
- The ECB may need to cease a particular euro foreign exchange reference rate urgently in order to protect the integrity and accuracy of the rates. In these circumstances, the decision as to whether to cease a particular euro foreign exchange reference rate is made by the ECB and reviewed post-implementation by the Market Operations Committee.
- The ECB sees merit in all contracts that reference a euro foreign exchange reference rate including robust contingency provisions in the event of material changes to, or the cessation of, the rate referenced.

5 Public feedback procedure

- The ECB aims to ensure that the exchange rates published reflect the market conditions prevailing around 14:10 CET.
- Public feedback is any expression of dissatisfaction by an entity with the publication of, or the failure to publish, the euro foreign exchange reference rates, or a request to verify and confirm the accuracy of a rate that was published. The ECB treats any public feedback seriously and is committed to responding appropriately and consistently. Any decision to investigate public feedback, or the result of such an investigation, does not in any way imply that the ECB holds a particular view as to the accuracy of the rates that are published.
- Requests to include a new exchange rate in the list of euro foreign exchange reference rates or to resume a previously suspended rate are not considered as public feedback, so will be rejected without further investigation.
- The Market Operations Committee may assess the public feedback described above. This right can be delegated to the chair of the Market Operations Committee, who can delegate this right further to ECB staff members on his/her discretion.
- If deemed necessary, the ECB will seek to collaborate with the relevant NCBs to resolve any questions that arise. In the case of public feedback submitted to other participants, these enquiries will immediately be forwarded to the ECB.
- The ECB will log any public feedback, including feedback that it has been informed about by other participants, and will retain records for a minimum of five years.

6 Republication of the euro foreign exchange reference rates

- In certain circumstances, it may be necessary for the ECB to amend and/or republish a particular euro foreign exchange reference rate after it has been published.
- The key circumstances that are likely to lead to the ECB reviewing whether a rate needs to be amended or republished are the result of (i) the ECB's own internal process or (ii) the public feedback procedure.
- The process in relation to a potential republication of a euro foreign exchange reference rate is as follows:
    - ECB staff review and investigate if any amendment or republication that is proposed in a public feedback procedure or otherwise is indeed appropriate.
    - The ECB's Director General of Market Operations will determine in his/her sole discretion if an amendment or republication is appropriate in the circumstances. If it is, the Market Operations Committee will review the amendment or republication after implementation.
    - The ECB may need to amend or republish a particular euro foreign exchange reference rate urgently. The decision as to whether to do so is made by the ECB. Such decisions are reviewed post-implementation by the Market Operations Committee.
    - Where practicable, the ECB will notify the public that a potential error in a euro foreign exchange reference rate is being investigated. This may not always be feasible if it can be determined quickly that an error has occurred.
    - If deemed appropriate, the relevant rate is republished, with the public being notified of the republication and given a brief explanation of the issue.
- Under no circumstances will the ECB amend or republish any euro foreign exchange reference rate after the publication of the rate for the same currency on the following business day. One business day is defined as a day when the TARGET2 system is operating.
- The records relating to any amendment to, or republication of, a euro foreign exchange reference rate will be retained for a minimum of five years.