

Efterm® Benchmark Statement



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v.l.	08 Nov 2022	Initial Document
v.2	10 May 2023	Clarified that Efterm is an interest rate benchmark and removed references to significant and non-significant benchmark
v.3	14 11 2023	Updated with reference to Trading Venus list and updated changes to the methodology.
v.4	01 12 2025	Updated with reference to new EMMI policies, minor format changes, and market volumes



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1. Introduction

This benchmark statement is published by the European Money Markets Institute (EMMI) for the administration of Efterm®.

It fulfils the requirements of Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investments funds and of related Commission Delegated and Implementing Acts (BMR).

It should be read in conjunction with the Efterm® Governance Framework and related policies, which are listed in Annex 2 of the benchmark statement.

Efterm® was initially developed as a fallback rate to Euribor® to provide Euribor® users with an easily accessible option to comply with relevant legal requirements, notably BMR Article 28 (2). It does not meet the requirements to be defined as a critical benchmark as defined in the BMR.

2. General information

Benchmark name	Efterm®
Date of publication RTS 27, 1.1(a)	21 November 2022
Date of last update RTS 27, 1.1(a)	XX XX2025
Review of the Benchmark Statement BMR 27, 1 RTS 27, 6	EMMI will review and update, as necessary, this benchmark statement at least every two years and whenever the information contained in the statement ceases to be correct or sufficiently precise, including in any event in the following cases: (a) whenever there is a change in the type of the benchmark; (b) whenever there is a material change in the methodology used for determining the benchmark.
ISIN (where available) RTS 27, 1.1(b)	N/A
Contributions of input data RTS 27, 1.1(c)	Efterm® does not rely on the contribution of input data.
Type of benchmark RTS 27, 1.1(d)	Efterm® is an interest rate benchmark.
Definition of Key Terms BMR 27, 2(a)	Key Terms are provided in Annex 1 to this statement.



Reflection of environmental, social and governance (ESG) factors in the benchmark

BMR 27, 2(a)

No EU Climate Transition Benchmark or EU Paris-aligned Benchmark is available in EMMI's portfolio nor does EMMI have benchmarks that pursue ESG objectives or take into account ESG factors.

3. Market or economic reality

Market or economic reality measured by the benchmark

BMR 27, 1

RTS 27, 1.2(a)

Efterm® measures the expected (i.e., forward-looking) average evolution of wholesale euro unsecured overnight borrowing costs of euro area banks over defined tenor periods. Efterm® is calculated for five separate tenors: 1 week, 1 month, 3 months, 6 months, and 12 months.

Geographical boundaries of the economic reality measured by the benchmark

RTS 27, 1.2(b)

Efterm® measures the expectation of euro unsecured overnight borrowing costs of euro area banks by market participants in the interest-rate derivatives markets globally.

Actual or potential participants in the market

Size of the market or economic reality

RTS 27, 1.2(c)

The actual and potential participants in the underlying market for Efterm® consist of the actors in the €STR-based derivatives markets (primarily the Overnight Index Swaps market); mainly dealers in €STR-based interest rate derivatives submitting prices and volumes to electronic trading venues globally.

The list of trading venues contributing input data to Efterm can be found published on EMMI's website.

According to the International Swaps and Derivatives Association (ISDA)¹ the traded notional of €STR-linked OIS transactions in 2024 in the EU, UK, and US was respectively37.6, 45.4, and 61.1 US\$ trillions.

https://www.isda.org/a/4ojgE/Interest-Rate-Derivatives-Trading-in-the-US-EU-and-UK-Growth-Structural-Shifts-and-the-Rise-of-OIS.pdf, pp. 11-13.



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4. Input data and methodology

Rationale for adopting the benchmark methodology BMR 27, 2(b) The BMR requires that supervised entities other than benchmark administrators produce and maintain robust written plans in the event that a benchmark they use changes materially or ceases to be provided. Where feasible and appropriate, these plans should include one or more alternative benchmarks (BMR Article 28 (2)), regularly referred to as "fallback rates".

The Efterm® has been developed based on the Euro Risk Free Rate Working Group (RFR WG) recommendations. The group has discussed and consulted on appropriate fallbacks for Euribor®. Early on, the RFR WG acknowledged that developing term structures required a successful transfer of liquidity from EONIA to €STR OIS markets, a transparent and regulated underlying derivatives market and sufficient data sources to capture the majority of market activity² - and it has upheld this caveat. The RFR WG also found that an OIS transaction-based methodology was unviable in the absence of sufficient transactions and volumes to support it. Instead, it favoured a methodology that combined tradeable bid and ask prices in €STR OIS swaps markets in multiple Central Limit Order Books into a "theoretical" order book to capture the highest possible liquidity. The RFR WG's final recommendation was to use forward-looking term structures based on quotes and transactions in the derivatives markets, referencing the €STR exclusively or in combination with backward-looking term structures as fallback rates for Euribor®, for a variety of asset classes3.

The methodology was set following the successful publication of beta rates and a public consultation in the summer of 2022. It was approved by EMMI's Governing Bodies in September 2022.

Criteria and procedures used to determine the benchmark:

- description of the input data
- priority given to different types of input data

To ensure robustness in the Underlying Interest, the <u>Benchmark Determination Methodology</u> (BDM) for Efterm® follows a hierarchical approach consisting of three levels. These levels should be employed progressively, by defined tenor, and in the order specified below:

 Level 1 consists of €STR-based Overnight Index Swaps ("OIS") tradeable bid and offer prices and volumes collected for the defined tenors as available on the central limit order books ("CLOB") of electronic trading venues over a predefined window preceding the Efterm® calculation.

³ https://www.ecb.europa.eu/pub/pdf/other/ecb.recommendationsEuriborfallbacktriggereventsandESTR.2021 05~9e859b5aa7.en.pdf



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² https://www.ecb.europa.eu/paym/pdf/cons/euro_risk-free_rates/ecb.consultation_details_201812.en.pdf

- minimum data needed to determine a benchmark
- use of any models or methods of extrapolation
- any procedure for rebalancing the constituents of a benchmark's index

BMR 27, 2(c)

- Level 2 consists of €STR-based OIS dealer-to-client bid and offer prices and volumes collected for the defined tenors as displayed by electronic trading venues over a predefined window preceding the Efterm® calculation.
- Level 3 consists of a step function model using €STR-linked futures' settlement prices, €STR rates, and the ECB reserve maintenance periods calendar using a Spot Starting convention. When there are 7 or fewer calendar days remaining in the month, futures prices are not used to calculate a rate change for the current month. The latest published €STR rate will continue until the rate change date in the following calendar month. When new ECB rates are announced before an upcoming rate change date, the benchmark will use the change in the ECB Deposit Facility Rate instead of futures prices to calculate a new projected €STR.

Procedures for the review and approval of the methodology

BMR 27, 2(b)

EMMI prepares a regular report on the Underlying Market of Efterm®. In addition to regular reporting, EMMI performs an annual assessment of the Efterm® methodology that builds on this analysis. In conjunction with the annual assessment of EMMI, the Efterm® Oversight Committee performs a review of the benchmark's definition and methodology at least annually, and makes recommendations to EMMI's Governing Bodies.

Procedures for dealing with errors in input data or in the determination of the benchmark, including when a re-determination of the benchmark is required BMR 27, 2 (f)

EMMI has in place a robust control framework to detect potential errors in the input data before the publication of Efterm®.

Errors in the input data, calculation, or publication processes are reported to EMMI as soon as operationally feasible upon discovery.

For errors discovered prior to 12:30 p.m. (CET) that affect a published Efterm® tenor by more than 2 basis points, the corresponding Efterm® tenor will be revised and republished on the same day, no later than 1:30 p.m. (CET). Any republished rate will be identified as such by EMMI.

How users will be informed of any delay in the publication of the benchmark or of any redetermination of the benchmark, and indicating the (expected) duration of measures to be inserted

EMMI relies on the authorised data vendors to disseminate the notifications of a delayed publication of Efterm® or a republication to the end users of the benchmark.

The authorised data vendors receive the notice of a delayed publication or re-publication directly from EMMI.

RTS 27, 1.4



5. Exercise of judgement or discretion by the administrator or contributors

Elements of the benchmark in relation to which discretion may be exercised and criteria applicable to the exercise of such discretion BMR 27,1 (b)	There is no exercise of discretion in the determination of Efterm®.
Position of the persons that can exercise discretion BMR 27, 1 (b)	N/A
Controls and rules that govern any exercise of judgement or discretion by the administrator or any contributors BMR 27, 2 (d)	N/A
Outline of each step of the process for any ex post evaluation of the use of discretion and position of any person(s) responsible for carrying out the evaluations RTS 27, 1.4	N/A

6. Cessation and change of the methodology

Notice of the possibility that factors, including external factors beyond the control of the administrator, may In the event of a change, the complete discontinuation of Efterm®, or the cessation of one or more of the Efterm® benchmark tenors, consideration are given to these key elements of the change or cessation plan implementation:



necessitate changes to, or the cessation of, the benchmark

BMR 27, 1(c)

adequate advance notice; materiality of the change; interim arrangements; legal, regulatory, accounting and tax implications; infrastructure requirements; and role of the official sector and relevant stakeholders.

EMMI engages stakeholders and end-users as early as possible in the form of a public consultation, in the event a change or the cessation of a Efterm® tenor or the Efterm® benchmark appears likely.

The Oversight Committee oversees, monitors and approves the implementation of proposed changes to Efterm®. The final decision is taken by the EMMI governing bodies upon recommendation from the Oversight Committee.

For more information on procedures for public consultations or changes to the methodology, please refer to the Benchmarks Changes, Cessation & Consultation Policy, available on EMMI's website.

Procedures for public consultation on any material changes to the methodology

RTS 27, 1.4

The determination of the materiality of a change rests with the Efterm® Oversight Committee. A public consultation is undertaken for all material changes to Efterm®. EMMI notifies identified stakeholders directly, and publishes notice of the consultation on its website inviting all impacted parties to provide feedback to the consultation. EMMI gives stakeholders adequate advance notice of the proposed change, and time period during which to provide feedback to the consultation.

EMMI addresses feedback received from stakeholders in a published summary of responses. EMMI provides its rationale for the acceptance, modification or rejection of recommendations made by respondents to the consultation as part of this summary.

For more information on procedures for public consultations or changes to the methodology, please refer to the Benchmarks Changes, Cessation & Consultation Policy, available on EMMI's website.

Advice to the users that changes to, or the cessation of, the benchmark may have an impact upon the financial contracts and financial instruments that reference the benchmark or the measurement of the performance of investment funds.

BMR 27, 1(d)

In the event of a change, the complete discontinuation of Efterm®, or the cessation of one or more of the Efterm® benchmark tenors, considerations are given to these key elements of the change or cessation plan implementation: adequate advance notice; materiality of the change; interim arrangements; legal, regulatory, accounting and tax implications; infrastructure requirements; and role of the official sector and relevant stakeholders.

EMMI engages stakeholders and end-users as early as possible in the form of a public consultation, in the event a change or the cessation of a Efterm® tenor or the Efterm® benchmark appears likely.



For more information on procedures for public consultations or changes to the methodology, please refer to the Benchmarks Changes, Cessation & Consultation Policy, available on EMMI's website.

EMMI advises users of Efterm® to regularly assess that the benchmark used is appropriate, suitable and relevant for the targeted market and to put in place their own contingency provisions in the event any of the benchmarks are not available or in case of benchmark discontinuation.

7. Potential limitations of the benchmark

Identification of potential limitations of the benchmark, including its operation in illiquid or fragmented markets and the possible concentration of inputs

BMR 27, 2(g)

To date, EMMI could not source €STR-based OIS tradeable bid and offer prices and volumes (i.e., the input data for level 1 of the methodology) from eligible level 1 trading venues. However, EMMI has successfully secured the daily provision of €STR-based OIS dealer-to-client bid and offer prices and volumes (i.e., the input data for level 2 of the methodology).

EMMI constantly monitors the situation and consults with additional third-party data providers so as to be able to include level 1 input data in the calculation process when eligible prices and volumes are available and sufficiently tested. While level 1 rates cannot be calculated at the moment due to the unavailability of the input data, EMMI is confident that level 2 of the waterfall methodology determines a robust benchmark that relies on quality data with (i) dealer-to-client quotes that can be executed by clients to whom the quote is shown, subject to the dealer accepting the trade, and (ii) selected standard market sizes large enough to ensure that calculations are based on reliable input data.

Definition of circumstances in which the market or economic reality measured by the benchmark may become unreliable

RTS 27, 1.3

A contraction of liquidity in the Overnight Index Swap and Futures markets referenced to €STR during a market stress event could make the underlying interest harder to measure.

Furthermore, the economic reality measured by Efterm® may become unreliable in situations where the €STR benchmark, the asset underlying €STR-based OIS and Futures markets, becomes unavailable for a prolonged period.

Description of the circumstances in which the administrator would lack sufficient input data to determine the benchmark in

Where it is not possible to calculate Efterm® for a defined tenor at level 1, 2 or 3 of the waterfall methodology, Efterm® of the previous TARGET day for the corresponding tenor will be republished and used as the Efterm® rate for that day.



accordance with the methodology

RTS 27, 1.3(a)

In such an event, the Efterm® Oversight Committee shall be convened in a special session as soon as practicable to devise a resolution strategy preserving the continuity of Efterm®. This strategy should be implemented within a period no longer than 3 TARGET days of the prior publication established under the regular process. Pending the implementation of this strategy, the prior rates may continue to be republished as the Efterm® rates for the days in this period.

Description of instances when the accuracy and reliability of the methodology used for determining the benchmark can no longer be ensured (such as when the administrator deems the liquidity in the underlying market as insufficient)

A considerable tightening of liquidity in the €STR-based derivatives market could result in market participants facing temporary difficulties in reliably providing bid and offer prices and volumes. Through the concepts of "minimum number of snapshots" and the "standard market size" defined in the BDM, the waterfall methodology defines the minimum requirements under which liquidity in the underlying market becomes insufficient for the methodology to remain accurate and reliable.

RTS 27, 1.3(b)

Other information for users regarding the circumstances in which the measurement of the market or economic reality may become unreliable, including a description of what might constitute an exceptional market event

An exceptional market event is an infrequent and unexpected occurrence, which has a significant impact on the broader market. Due to an exceptional market event, all activity in the underlying market could cease for instance. Such an event could result in unreliable Efterm®.

RTS 27, 1.3(c)

Procedures which govern the determination of the benchmark in periods of stress or periods where transaction data sources may be insufficient, inaccurate or unreliable and the potential limitations of the benchmark in such periods

In a period of stress or a period where data sources may become unreliable, circumstances may lead to Efterm® being calculated under the contingency method, whereby the Efterm® rates from the previous TARGET day are published. The contingency method may only be used for 3 consecutive fixing days, during which the Euribor Oversight Committee must devise a resolution strategy for preserving the continuity of Efterm®.

BMR 27, 2(e)



8. Specific disclosures for interest rate benchmarks

Efterm® is an interest rate benchmark that is subject to the regulatory regime under BMR Annex I.

Arrangements that have been put in place to comply with BMR Annex I RTS 27, 3	
Accurate and sufficient data Priority of use of input data	Developing a fully transaction-based methodology for Efterm® is unviable in the absence of sufficient transactions and volumes to support it. It first requires a successful transfer of liquidity from EONIA to €STR OIS markets, a transparent and regulated underlying derivatives market, and sufficient data sources to capture most of the market activity. Consequently, to capture the highest possible liquidity, EMMI has favoured a waterfall methodology that (i) first relies on tradeable bid and offer prices, then (ii) dealer-to-client bid and offer prices and volumes, in the €STR OIS swaps markets, and finally (iii) €STR-based futures' settlement prices and ECB Deposit Facility Rates in specific circumstance outlined above.
Adjustment of input data	None.
Oversight function	EMMI has established and maintains a permanent and effective oversight function – the Efterm® Oversight Committee – that exercises an independent oversight of all aspects of the provision of the Efterm® including governance and methodological aspects. The procedures and governance arrangements related to the composition, duties and functioning of the Oversight Committee are established in the Efterm® Oversight Committee Terms of Reference. Details of the membership of the Committee along with their biographies and declarations of interest, as well as minutes of the Committee meetings are available on EMMI's website.
Auditing	EMMI has in place internal reviews and audit arrangements to provide assurance on the effectiveness of the controls in place, taking into consideration EMMI's responsibility as benchmark administrator and its core processes and procedures. EMMI has appointed an independent external auditor to review and report on EMMI's compliance with Efterm®'s methodology and with BMR at least every two years.



	Upon request of its competent authorities or any benchmark user, EMMI will publish the external audit reports.
Contributor systems and controls	N/A

Annex 1: Key terms

Term	Definition
BDM	Benchmark Determination Methodology for Efterm®.
BMR	Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds and related Commission Delegated and Implementing Acts.
Data Vendors	Authorised companies or other organisations that receive the published Efterm® rates directly from EMMI and distribute them to subscribers.
ECB	European Central Bank
Efterm®	The rate which reflects the expected (i.e., forward-looking) average evolution of wholesale euro unsecured overnight borrowing costs of euro area banks over defined tenor periods.
€STR	The euro short-term rate (€STR) is a rate which reflects the wholesale euro unsecured overnight borrowing costs of euro area banks. It is calculated and published by the European Central Bank.
Efterm®	(a) the Efterm® Governance Code of Conduct;
Governance	(b) the Efterm® Code of Obligations of the Calculation Agent;
Framework	(c) the Efterm® Benchmark Determination Methodology; (d) the Efterm® Oversight Committee Terms of Reference.
Efterm® Oversight Committee	The independent oversight body charged with the oversight of all aspects of the provision of Efterm®, including those concerning its governance and methodology.
GCC	Efterm® Governance Code of Conduct. The document specifying the governance and control arrangements of EMMI, as the administrator of Efterm to ensure the integrity and reliability of Efterm.
Input Data	The data in respect of the value of one or more underlying assets, or prices, including estimated prices, quotes, committed quotes or other values, used by an administrator to determine a benchmark (BMR).
TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system. Throughout the Efterm® Governance Framework, references to "TARGET" should be read with respect to the euro system's TARGET2 real-time gross settlement system.
TARGET Day	Any day on which the TARGET system is open.



Annex 2: Reference documents

The Efterm® Benchmark Statement should be read in conjunction with the Efterm® <u>Governance</u> <u>Framework</u>, <u>Methodology</u> and <u>Policy</u> documents which are available on EMMI's website and listed below:

Efterm® Governance Code of Conduct

Efterm® Code of Obligations of the Calculation Agent

Efterm® Oversight Committee Terms of Reference

Efterm® Benchmark Determination Methodology

Benchmarks Changes, Cessation & Consultation Policy

Record-keeping Policy and Procedure for EMMI Benchmarks

EMMI Conflict of Interests Policy

Complaints Policy

Whistleblowing Policy

