What is the transition from EONIA to €STR (Euro Short-Term Rate)

<table>
<thead>
<tr>
<th>What is the problem with EONIA?</th>
<th>What is the EONIA - €STR transition?</th>
<th>What is €STR?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- EONIA in its current form will not become BMR compliant, given the lack of underlying transactions and high concentration of volumes by only a few contributors. Therefore, EONIA usage should be restricted and its administrator EMMI announced that it will stop publishing it on 3 January 2022.</td>
<td>- In order to maintain EONIA for a transitional period and until its discontinuation in 2022, its methodology will be changed. Some modification has been done.</td>
<td>€STR is a rate which reflects the wholesale euro unsecured overnight borrowing costs of euro area banks.</td>
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<tr>
<td>- As a consequence, the working group on euro risk-free rates recommended €STR for its replacement after a public consultation.</td>
<td>- Since 2 October 2019, the current EONIA methodology has been modified to become €STR plus a fixed spread of 8.5 basis points. This spread is based on a simple average of the EONIA(pre-€STR spread between 17 April, 2018 and 16 April, 2019, with a 15% trimming mechanism).</td>
<td>The rate is published (first date of publication: 2 October 2019 at 8:00 am) for each TARGET2 business day based on transactions conducted and settled on the previous day (reporting date T) with a maturity date of T+1.</td>
</tr>
<tr>
<td></td>
<td>- The recalibration of the EONIA methodology has taken place on the first day of the daily publication of €STR, on 2 October 2019. The publication of EONIA moved from the current timing every evening at “T” (by 7pm) to “T+1” (9.15 am), to be aligned with €STR publication (T+1 at 8am).</td>
<td>€STR is exclusively based on borrowing transactions in euro conducted with financial counterparties that banks report to the ECB in accordance with the MMSR Regulation. €STR is calculated using overnight unsecured fixed rate deposit transactions over €1 million.</td>
</tr>
<tr>
<td></td>
<td>- NB: This methodology was suggested by the working group on euro risk-free rates to EMMI after a public consultation.</td>
<td>The ECB is publishing €STR data at the end of every maintenance period under this link: <a href="https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/euro_short-term_rate/html/index.en.html">https://www.ecb.europa.eu/paym/initiatives/interest_rate_benchmarks/euro_short-term_rate/html/index.en.html</a></td>
</tr>
</tbody>
</table>
The transition from EONIA to €STR

Key Milestones

- **Sep 30 2019**: Last publication date for EONIA based on current methodology with publication on day T.
- **Oct 2 2019**: First publication date €STR and EONIA based on the changed methodology €STR+8.5bps, with publication on T+1.
- **€STR Disc/PAI switch window**: March 31 2020 to June 30 2020. Recommended discounting switch date period for CCP’s.
- **Mar 31 2020 to June 30 2020**: Recommended discounting switch date period for CCP’s.
- **Dec 31 2021**: EONIA publishing discontinues.

**EONIA to €STR Transition phases**

**Phase 1: change EONIA methodology**

- Initial transition from EONIA to the €STR + 8.5bps in light of the planned change in EONIA-calculation methodology.

**Phase 2: From EONIA recalibrated to €STR transition**

- Transition from EONIA (being €STR + 8.5bps) to the €STR between 2 October 2019 and 3 January 2022, when EONIA’s publication will be discontinued.

**WG euro RFR Recommendations**

WG euro RFR is publishing recommendations for market participants to understand the EONIA to €STR transition issues from a legal, products, accounting and risk management perspective.
How to navigate EONIA to €STR transition
Publication time change

Market participants should be prepared extensively for adaptation to a new publication time as of 2nd October 2019.

The transition should not be underestimated, EONIA is widely used both as a reference rate and as a collateral remuneration and cash flow discounting rate for financial products across a variety of markets.

EONIA to €STR transition is impacting many functions along the value chain of a financial institution:

- Internal Governance
- Legal (contract robustness)
- Business products
- Accounting & Reporting
- Risk management
- Financial
- IT & Operations
- Communication & Education

Impacts are expected in the fields of financial instruments and contracts, trading and banking book systems, front-end and back-end systems, valuation and pricing models, financial and risk reporting, review of current documentation, processes and procedures…

Are you ready for the EONIA publication time change?
How to navigate EONIA to €STR transition

**Recommended actions**

1. **Consider WORKING GROUP RECOMMENDATIONS AS A GUIDANCE** for managing the EONIA to €STR transition issues (see useful links section).

2. **Screen inventory of AFFECTED TRANSACTIONS AND SYSTEM ENVIRONMENTS** to assess the modifications needed to cope with the change in EONIA’s publication time from 7pm CET on T (until 30 September 2019) to 09:15 am CET on T+1 (from 2 October 2019).

3. **Align your involved processes with the 08:00 am CET PUBLICATION TIME** for the €STR, and 09:15 am CET for EONIA, respectively, and maintain exceptional procedures for €STR re-publication events.

4. **Consider and adjust:**
   1. the **DEFAULT SETTLEMENT TIME** of the cash & derivatives products
   2. the gradual impact in **VALUATION MODELS** (funds transfer **PRICING & DISCOUNTING CASH FLOW**)
   3. The necessary modifications in order to be able to issue, buy, trade and manage new papers indexed to €STR and avoid issuing new papers indexed to EONIA with maturities going beyond the transition period.

5. **From RISK MANAGEMENT PERSPECTIVE,**
   - Assess the financial and non-financial risks of transition as part of your internal and ongoing risk assessment process.
   - Consider potential effects on **SHORT-TERM LIQUIDITY RISK AND ON SETTLEMENT** risks from changes of the publication schedule and its impact on fixing and payment processes and corresponding systems.
   - Conduct an appropriate quantitative impact assessment on key market risk figures including 1) an impact test on VaR and sensitivity limits and 2) impact test on internal models for regulatory capital charges for market risk.

6. **From LEGAL PERSPECTIVE,** whenever feasible and appropriate, no longer entering into new contracts referencing EONIA as from 2 October 2019. In existing contracts referencing EONIA and maturing after December 2021, to replace EONIA as a primary rate as soon as possible or embed robust fallback clauses. For **new contracts** that still reference EONIA and mature after December 2021, or fall under the EU Benchmarks Regulation (BMR), robust fallback provisions should be included. **Legacy contracts** with EONIA as the underlying/reference rate that mature before December 2021 will be covered by the ongoing publication of EONIA until the end of 2021.

7. **From ACCOUNTING PERSPECTIVE,** to consider the implications in the valuation of financial assets and liabilities.
   - The transition from EONIA to €STR may therefore impact cash flows and net present values which could lead to undesired accounting volatility and not provide useful and relevant information on the performance of the institutions. In addition to hedge accounting implications (IFRS 9/IAS 39), potential non-hedge related implications, which should be considered as part of the transition. Implications and possible solutions are being discussed with IASB.

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WG recommendations include Product specific analysis regarding settlement defaults including derivatives, money market transactions, cleared derivatives, securities, cash products (mainly floating rate repos) unsecured cash products (these include current accounts, corporate and retail, overdrafts and swingline facilities) and investment funds.
# How to navigate EONIA to €STR transition

**Checklist for EONIA publication time change**

- **Manage EONIA T+1 publication time**
  
  Screen inventory of affected transactions & system environments to assess the needed modifications
  
  Prepare relevant teams during the cutover period to ensure that the transition does not trigger process failures
  
  Align the main processes with the 08:00 CET publication time for €STR and 09:15 CET for EONIA and maintain exceptional procedures for €STR re-publication events.

- **Process and IT impact assessment of the chain (Front-to-back to accounting chain), would include:**
  
  Referential - ensure the EONIA fixing in your referential is the correct one
  
  Valuation - ensure the valuation process is not affected by a change of EONIA publication
  
  Settlement
  
  Pricing/Modeling / Ops Margining readiness
  
  Accounting (hedging)
  
  Collateral management / Review clearing calculation
  
  Calculation & Reporting systems
  
  Include €STR in Internal Systems

- **Define a legal strategy**

  Determine the most appropriate way of achieving the amendment of legacy contracts, new contracts design and amendments through the transition (i.e. check how methodology, publication time or calculation agent, etc are included within your contracts)

  Identify and develop a renegotiation plan for contracts liked to EONIA, in particular maturing after 2021

- **Define a communication strategy for counterparties of EONIA contracts**

- **Identify and manage ACCOUNTING AND CAPITAL IMPACT**

  - Risk assessment and management (models, liquidity, Identify risks affected and define an adjustment and calibration planning)
  
  - Identify and manage basis risk and expected impacts on pricing systems

- **Ensure awareness within your organization**

  Develop internal governance processes that allow properly overseeing changes to policies, systems, processes and controls

  Ensure involved employees are prepared and well educated on the implications of the transition

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*Non exhaustive*
# How to navigate EONIA to €STR transition

Checklist for EONIA publication time change - PRODUCTS

<table>
<thead>
<tr>
<th>Products</th>
<th>Default settlement time</th>
<th>Moving from T to T+1 publication</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Derivatives</td>
<td>settlement T+1</td>
<td>settlement T+2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(to accommodate international market participants)</td>
</tr>
<tr>
<td>▪ Cleared Derivatives</td>
<td>settlement T+1</td>
<td>settlement T+1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(use last available fixing rate for PAI calculation)</td>
</tr>
<tr>
<td>▪ Money market</td>
<td>settlement T+1</td>
<td>settlement T+2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(nominal vs. interest one-day difference)</td>
</tr>
<tr>
<td>▪ Securities</td>
<td>coupon payments T-1</td>
<td>T-1, no changes expected</td>
</tr>
<tr>
<td></td>
<td>(coupon payments calculated using T-1)</td>
<td>(adapt settlement, valuation &amp; accounting procedures)</td>
</tr>
<tr>
<td>▪ Secured cash products (2)</td>
<td>same day settlement (T)</td>
<td>same day settlement (T)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(using las available fixing)</td>
</tr>
<tr>
<td>▪ Unsecured cash products (3)</td>
<td>settlement T+1</td>
<td>Market participants should find bilateral solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(adapt settlement, valuation &amp; accounting procedures)</td>
</tr>
<tr>
<td>▪ Investment funds</td>
<td>NAV(1) uses same day rate (T)</td>
<td>NAV calculation affected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(use last available fixing, assess NAV related processes)</td>
</tr>
<tr>
<td>▪ Fund transfer pricing models (FTP)</td>
<td>FTP uses same day rate (T)</td>
<td>on T apply rate published on T+1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(if not, use last available fixing T-1 published on T)</td>
</tr>
</tbody>
</table>

(1) NAV: net asset value
(2) Secured cash products, main types of product affected are floating rate repos and reverse repos
(3) Unsecured cash products, main types of product affected are current accounts, savings accounts, overdraft facilities, time deposits, call accounts and swingline, bilateral or intracompany loans
### How to navigate EONIA to €STR transition

**Checklist for EONIA publication time change - MODELS**

<table>
<thead>
<tr>
<th>Models</th>
<th>Key Recommendations</th>
</tr>
</thead>
</table>
| **Funds transfer pricing models** | - If market participants use EONIA as the base rate in the FTP framework, they should consider replacing EONIA with the €STR. €STR is a bid rate while EONIA is an offered rate, therefore liquidity premium calculations need to be corrected accordingly.  
- Market participants using EONIA in their FTP models should create a transition plan, covering all relevant FTP-related systems and policies. |
| **Interest rate curve construction** | - It is recommended to use a single curve for valuation purposes per counterparty for all types of contract (i.e. new and legacy contracts).  
- During the transition period, market participants may use different applicable interest rate curves:  
  - an EONIA curve constructed from (sufficiently liquid) EONIA-based instruments  
  - a “shifted EONIA curve” derived from the existing EONIA curve through a parallel shift by -8.5 basis points  
  - a €STR curve constructed from (sufficiently liquid) €STR instruments  
  - a “shifted €STR curve” derived from the existing €STR curve through a parallel shift of +8.5 basis points |
## How to navigate EONIA to €STR transition

Checklist for EONIA publication time change - MODELS

<table>
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<th>Models</th>
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<tr>
<td>Interest rate term structure models</td>
<td>- Market participants are encouraged to identify how their term structure models (e.g. input data, assumptions) will be affected by the transition from EONIA to the €STR and to monitor market developments to adjust the models in a timely and appropriate fashion.</td>
</tr>
</tbody>
</table>
| Discounted cash flow, derivatives pricing and derivatives value adjustment models | - No structural and conceptual changes in DCF models expected.  
- €STR-linked derivatives prices expected to become progressively available. They will have to be consistent with the no-arbitrage condition.  
- Until the €STR swap curve becomes directly observable, the fixed spread relation between EONIA and €STR fixings can be applied to derive a full term structure for the €STR from EONIA-linked overnight index swaps (OISs).  
- Market makers, inter-dealer brokers & vendors encouraged to publish stand-alone €STR OIS prices alongside EONIA asap after the recalibration date.  
- EURIBOR par swap rates and the EURIBOR par rates would be affected by the transition, and may affect accounting and valuation models.  
- Assess both model valuation and compensation scheme impacts on their derivatives under bilateral CSAs.  
- Switching the PAI rate from EONIA flat to €STR flat will have an impact on non-linear interest derivatives such as caps/floors and swaptions.  
- Review options on derivatives with physical settlement, valuation could be affected (i.e. option traded before the transition date but exercise date falls after the migration of the CCPs/bilateral to €STR remuneration/discounting)  
- Valuation adjustment (xVa) models will need to be recalibrated to new market data.  
- Monitor derivatives market and its transition from EONIA-linked derivatives to the new €STR-based derivatives (fair value calculation)  
- Assess the impact on valuation models of switching from the EONIA OIS discounting curve to €STR OIS discounting (fair value calculation) |
Useful links

EONIA to €STR LEGAL action plan Recommendations Working Group on Euro Risk-Free Rates EONIA

A. Recommendations of the working group on euro risk-free rates on the EONIA to €STR legal action plan

B. Press release

EONIA to the €STR Transition impact from on cash and derivatives products

A. Recommendations of the working group on euro risk-free rates on the impact of the transition from EONIA TO THE €STR ON CASH AND DERIVATIVES PRODUCTS

B. Press release