

## Hybrid Conference of the Working Group on Euro Risk-Free Rates

Friday, 17 June 2022 (15:00-17:00 CEST)

### Summary

#### **1. Introductory remarks, approval of the agenda and obligations of the working group members under competition law**

Mr James von Moltke (Chair) opened the call. He welcomed all the members of the Working Group (WG) to the second WG meeting of 2022 and the first hybrid meeting (with both in-person attendees and attendees connecting virtually) under his chairmanship.

Mr von Moltke invited Ms Iliana Lani (ESMA) to inform the WG members about some organisational aspects of the meeting. Ms Lani explained to WG members that ESMA, in its capacity as Secretariat, had decided that market infrastructure members<sup>1</sup> should not attend the discussion taking place under agenda item 2. The affected market infrastructure members were previously bilaterally informed of such decision and no objections were raised. Ms Dominique Le Masson (BNP Paribas) informed the members of the WG that she will also recuse herself from the discussion taking place under agenda item 2.

Mr von Moltke then mentioned that the €STR Taskforce has been active since the last WG meeting (on 2 March 2022) with a number of conference calls, the outcome of which will be presented under agenda item 3. Mr von Moltke thanked all of the WG members who contributed to the work of the €STR Taskforce. Mr von Moltke also made reference to the recent meeting of the Alternative Reference Rates Committee that highlighted that in the US the transition from USD LIBOR to SOFR use has become well established with the strong progress made in Q1 2022. Mr von Moltke noted that ISDA will present updated data on the transition to risk-free rates in the EU under agenda item 5.

Mr von Moltke informed WG members that the minutes of the previous WG meeting (on 2 March 2022) had been already approved and published<sup>2</sup>. He reminded WG members of the agenda scheduled for today's meeting:

1. *Introductory remarks, approval of the agenda and obligations of the working group members under competition law*
2. *Update by potential administrators of €STR-based forward-looking term structures*
3. *Update by the €STR Task Force*
4. *Update by the European Commission on the possible GBP LIBOR + JPY LIBOR designation*
5. *ISDA market data presentation on the transition to RFR/€STR*
6. *AOB*

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<sup>1</sup> List of members excluded by ESMA from Item 2: BME Clearing, Eurex Clearing, ICE Futures Europe, LCH Group, EMMI.

<sup>2</sup> [https://www.esma.europa.eu/sites/default/files/library/esma81-459-57\\_-\\_eurwgrfr\\_-\\_2\\_march\\_meeting\\_minutes.pdf](https://www.esma.europa.eu/sites/default/files/library/esma81-459-57_-_eurwgrfr_-_2_march_meeting_minutes.pdf)

Finally, Mr von Moltke reminded the members of the WG of their obligations under EU competition law, as described in the guidelines on compliance with EU competition law published on the ESMA's website<sup>3</sup>.

## **2. Update by potential administrators of €STR-based forward-looking term structures**

Mr von Moltke gave the floor to Mr Jacob Rank-Broadley, Mr Robert Walton and Ms Shirley Barrow of Refinitiv to provide an update on the development of term €STR by Refinitiv. The slides presented by Refinitiv representatives are included in Annex 1 of this document. After the presentation, Mr von Moltke opened the floor to questions. A member asked Refinitiv representatives what Refinitiv status vis-à-vis the EU Benchmarks Regulation was. Ms Shirley Barrow replied that before Brexit, Refinitiv was authorised under the EU Benchmarks Regulation due to the authorisation granted by the UK FCA. Refinitiv is now building up its presence in the EU and considering the best option to be registered under the EU Benchmarks Regulation before the end of the applicable transitional period (on 31 December 2023).

Mr von Moltke thanked Refinitiv representatives for their presentation, invited them to leave the meeting, and handed over to Mr Jean-Louis Schirmann of EMMI and Mr Timothy Bowler of IBA to deliver the joint EMMI-IBA presentation on the development of term €STR. The slide presented by the EMMI and IBA representatives are included in Annex 2 of this document. After the presentation, Mr von Moltke opened the floor for questions. A member asked the presenters which entity owns the methodology of term €STR, to which Mr Jean-Louis Schirmann explained that EMMI is the administrator of term €STR, since it is the owner of the methodology of term €STR and has the control over the provision of the benchmark, whereas IBA is the calculation agent of this rate. Mr Jean-Louis Schirmann added that since EMMI is a benchmark administrator authorised in the EU, term €STR will be a benchmark provided under the EU Benchmarks Regulation. Mr von Moltke thanked both Mr Jean-Louis Schirmann of EMMI and Mr Timothy Bowler of IBA and invited them to leave the meeting.

## **3. Update by the €STR Task Force**

Mr von Moltke handed over to Mr Alex Wilson (Chairs Office and Chair of the €STR Task Force) to update WG members on the outcome of the work of the €STR Task Force so far.

Mr Wilson started by reminding WG members that – in line with the WG ToR – the WG should aim to foster the use of €STR in a diverse range of financial products. Mr Wilson also highlighted the importance of increased adoption of EURIBOR fallback provisions for both contracts inside and outside the scope of the EU Benchmarks Regulation.

Mr Wilson shared with the WG the outcome of the activity performed and discussions held by the Task Force since its set up following the previous WG meeting in March 2022. In particular, the focus has been on the adoption of EURIBOR fallbacks by market participants and on assessing issues related to the use of €STR as part of a multi rate environment for Euro. The work of the Task Force is still ongoing and the WG discussion was intended to take stock of the WG's preliminary view on the opportunity to issue future recommendations on these matters, including possible statements from EU authorities supporting the WG recommendations.

Whilst noting that the Task Force is still exploring in which form and content the WG could issue further recommendations in the future, Ms Lani noted that the Task Force's call for a joint statement by EU public authorities confirming support on specific topics or delivering particular messages may not find the desired support within the public institutions. She said that there would not be added value in a public statement just reminding of the recommendations published in 2021 without any additional material content. Additionally, Ms Lani mentioned that ESMA encourages the €STR Task Force to focus its efforts also on a document

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<sup>3</sup> [https://www.esma.europa.eu/sites/default/files/library/eu\\_competition\\_law\\_guidelines\\_for\\_the\\_working\\_group\\_on\\_euro\\_risk-free\\_rates.pdf](https://www.esma.europa.eu/sites/default/files/library/eu_competition_law_guidelines_for_the_working_group_on_euro_risk-free_rates.pdf)

exploring how €STR can be used in new product(s) and providing practical guidance to market participants. Mr Thomas Vlassopoulos (ECB) echoed the views of Ms Lani, confirming that, at this stage, the ECB did not see merit in a public statement by the public authorities reiterating their support for the EURIBOR fallback recommendations of 2021. A member of the WG mentioned that, even a simple reminder, when issued by public authorities, can be effective in influencing the behavior of market participants. Ms Lani replied that the public sector already expressed full support for the WG recommendations on EURIBOR fallbacks which were published in May 2021 and will continue to do so via public speeches and participation in conferences.

#### **4. Update by the European Commission on the GBP & JPY LIBORs designation**

Mr von Moltke handed over to Mr Rik Hansen (European Commission) for him to provide the latest update on the European Commission's proposed way forward with regards to a possible designation of a statutory replacement rate for both GBP & JPY LIBORs.

Mr Hansen told WG members that the European Commission is working on developing a complete and exhaustive picture on the usage of these rates while awaiting the consultation from the UK FCA. Mr Hansen explained that, despite the various data collection exercises finalised by the WG or by the Expert Group of the European Securities Committee (EGESC), developing a clear and comprehensive picture of the market's exposures to GBP & JPY LIBORs in the EU still proved difficult. He mentioned that the UK FCA already confirmed that the synthetic JPY LIBOR will be discontinued at the end of 2022, while the future of the existing settings of synthetic GBP LIBOR will depend on the consultation that the UK FCA is about to publish. Therefore, Mr Hansen explained that the European Commission would not go ahead with an urgent designation but will keep monitoring the market developments, recalling WG members that every decision by the Commission regarding the designation of a statutory replacement rate will have to be subject to a public consultation.

Mr von Moltke thanked Mr Hansen for the details he provided and the WG members that have provided input to the WG data collection exercises.

#### **5. Presentation by ISDA on the market transition to RFR/€STR**

Mr von Moltke handed over to Ms Olga Roman (ISDA) to present a variety of datasets aiming at providing members with the latest trends regarding the use and adoption of €STR and other risk-free rates. Ms Roman walked members through the presentation that is included in Annex 3 of this document. Ms Roman explained that ISDA had analysed three data sets covering: transactions reported in the EU, transactions reported in the UK, and transactions reported in the US. All data sets include both cleared and non-cleared transactions. She explained that in the EU, the percentage of trading activity in €STR reached 22.6% of total euro-denominated IRD traded notional in March 2022 compared to 7.3% in May 2021. In the UK, €STR-linked traded notional increased to 28.1% from 0.4% over the same period. In the US, the percentage of trading activity in €STR increased to 35.9% of total euro-denominated IRD traded notional in March 2022 compared to 0.3% in March 2021. Ms Roman also provided the same type of data in relation to trading activity in derivatives referencing SOFR in the EU, the UK and the US.

Mr von Moltke thanked Ms Roman for the presentation, highlighting the encouraging signals of €STR adoption, and opened the floor for questions. A member asked whether ISDA would be able to further break-down the maturities of the derivatives in the presentation, to better understand whether there is more liquidity in short- or long-term products. Ms Roman explained that there had been a trend towards longer maturities in the US market and mentioned that ISDA will consider including related metrics in next dataset.

## 6. AOB:

### **i) Raise awareness to upcoming USD LIBOR usage survey**

Mr von Moltke informed the WG that the Secretariat and the Chair's office are working on a survey on USD LIBOR. The survey, to be shared with WG members during the summer, is intended to assess exposures to USD LIBOR as well as identify possible issues and areas of WG's intervention ahead of the USD LIBOR cessation in June 2023. The outcome could also be useful for the European Commission in the context of statutory replacement decisions.

### **ii) Consultation by EU Commission on BMR third country regime**

Mr von Moltke asked participants if there was any other AOB. Mr Rik Hansen mentioned that the European Commission recently published *a targeted consultation on the regime applicable to the use of benchmarks administered in a third country*<sup>4</sup>. He mentioned that the consultation will be open until the 12 August 2022 and that the views of benchmarks users are particularly welcomed.

Mr von Moltke thanked all the participants and said that the next WG meeting would be held on 14 September 2022.

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<sup>4</sup> [https://ec.europa.eu/info/sites/default/files/business\\_economy\\_euro/banking\\_and\\_finance/documents/2022-benchmarks-third-country-consultation-document\\_en.pdf](https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/2022-benchmarks-third-country-consultation-document_en.pdf)



## List of participants

### Participant's organisation

#### **Chairperson**

Deutsche Bank

#### **Chair's office**

Deutsche Bank

Deutsche Bank

Deutsche Bank

#### **Voting members**

Banco Sabadell

Bank of Ireland

Bank of Ireland

Barclays

Barclays

BBVA

BBVA

BNP Paribas

BNP Paribas

BNP Paribas

BPCE/Natixis

BPCE/Natixis

CaixaBank, S.A.

Crédit Agricole

Crédit Agricole

Deutsche Bank

DZ Bank

DZ Bank

Erste Group

Erste Group

Eurobank SA

Eurobank SA

European Investment Bank

ICE Futures Europe

ICE Futures Europe

ING Bank

Intesa Sanpaolo

KfW Bankengruppe

Santander

Santander

Société Générale

Société Générale

### Name of participant

Mr James von Moltke

Mr Simon Goodwin

Ms Queenie Choong

Mr Alex Wilson

Ms Marta Riveira Cazorla

Mr Barry Moran

Mr David Tilson

Mr Joseph McQuade

Mr Michael Taylor

Ms Ana Rubio

Mr Ignacio Ollero

Ms Dominique Le Masson

Mr David Gorans

Mr Xavier Aublin

Mr Olivier Hubert

Mr Grégoire de Clarens

Mr Francesc Xavier Combis

Ms Florence Mariotti

Mr Yann Marhic

Mr Juergen Sklarczyk

Mr Michael Schneider

Mr Philipp Nordloh

Mr Rene Brunner

Mr Neil Mcleod

Mr Dimitris Psychogios

Mr Theodoros Stamatou

Mr Nikolaos Tzoldos

Mr Steven Hamilton

Mr Matthew Horton

Ms Stephanie Broks

Ms Maria Cristina Lege

Mr Markus Schmidtchen

Mr Santiago Lobato Piñana

Mr Javier Pareja Marta

Mr Stephane Cuny

Mrs Maryam Aazane

**Non-voting members**

European Money Markets Institute  
European Money Markets Institute  
International Capital Market Association  
International Swaps and Derivatives Association  
International Swaps and Derivatives Association  
Loan Market Association  
Loan Market Association

Mr Jakobus Feldkamp  
Mr. Petra de Deyne  
Ms Katie Kelly  
Mr Rick Sandilands  
Ms Olga Roman  
Mr Keith Taylor

**Observers**

European Central Bank  
European Central Bank  
European Commission  
European Securities and Markets Authority

Mr Thomas Vlassopoulos  
Ms Anne-Lise Nguyen  
Mr Rik Hansen  
Ms Iliana Lani

**Secretariat**

European Securities and Markets Authority  
European Securities and Markets Authority  
European Securities and Markets Authority  
European Securities and Markets Authority

Mr Lelio Lapresa  
Mr Michele Mazzoni  
Mr Cristian Weststeijn  
Mr Enos Barkas

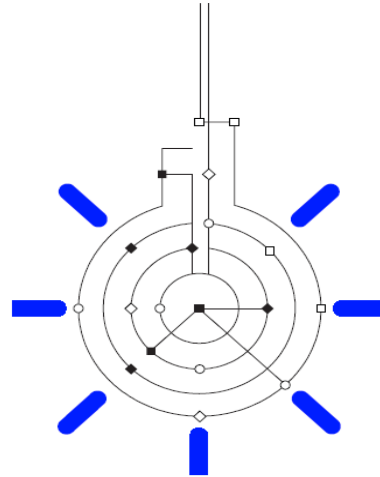
**Invited Institutions**

European Money Markets Institute  
ICE Benchmarks Administration  
Refinitiv  
Refinitiv  
Refinitiv

Mr Jean-Louis Schirmann  
Mr Timothy Bowler  
Ms Shirley Barrow  
Mr Robert Walton  
Mr Jacob Rank-Broadley

# Term €STR

17 June 2022



## Introduction

### Overview of Refinitiv



Part of LSEG, a **leading global financial market infrastructure** and data business



**Deep institutional knowledge of interest rate markets** through the provision of analytics, calculators, market data, reference data and derived data



**Major data vendor with extensive distribution capabilities** through desktops and feeds to over 400,000 users at 40,000 customers in 190 countries



**Stable business with strong financials** (£6.8BN 2021 revenue) ensures the long run provision of the rates

### Overview of Benchmarks & Indices



**Established regulated global benchmarks and indices business** responsible for some of the industry's most widely used benchmarks including WM/R, SAIBOR and CDOR



Introduced new benchmarks (Refinitiv Term SONIA, Refinitiv USD IBOR Cash Fallbacks) and enhanced existing benchmarks (Tokyo Swap Rate) to **support the industry with the LIBOR transition**

**Introduction of a Term €STR benchmark is aligned with Refinitiv's existing business**

## Market structure

### €STR futures

### €STR OIS (Overnight Index Swap)

		Current market structure	Forecast market structure <sup>1</sup>	Implications for methodology
No trading activity	Higher priority	Executed trades <ul style="list-style-type: none"> <li>• Trades are large in size and relatively infrequent</li> <li>• Individual tenors have no trades on select days, particularly acute at shorter tenors</li> </ul>	<ul style="list-style-type: none"> <li>• Do not anticipate material growth in trade count or volume</li> </ul>	✗ Insufficient trade frequency for use as main benchmark input
		Executable quotes (no last look) <ul style="list-style-type: none"> <li>• €STR OIS interdealer electronic CLOBs (Central Limit Order Book) available</li> <li>• Extremely low to no liquidity</li> </ul>	<ul style="list-style-type: none"> <li>• New dealers to be onboarded to €STR OIS interdealer electronic CLOBs</li> <li>• Timeline for significant improvements in liquidity is unclear</li> </ul>	? Subject to development of sufficient liquidity potentially suitable data source
		Executable quotes (last look) <ul style="list-style-type: none"> <li>• Typically 10-19 unique liquidity providers<sup>2</sup> on a major institutional electronic trading platform</li> <li>• Liquidity provision persists during periods of stress</li> </ul>	<ul style="list-style-type: none"> <li>• Do not anticipate material change in trade count or volume</li> </ul>	✓ Suitable data source
	Lower priority	Indicative quotes <ul style="list-style-type: none"> <li>• Major IDBs provide indicative €STR OIS rates from the interdealer voice brokered market</li> <li>• Composite rates from a major institutional electronic trading platform</li> </ul>	<ul style="list-style-type: none"> <li>• Do not anticipate material change</li> </ul>	✓ Suitable data source; subject to appropriate use and sufficient risk mitigants

1. Over the next 6-12 months; 2. Number of dealers depends on day, tenor and CCP; 10<sup>th</sup> and 90<sup>th</sup> percentile number of dealers for a given day, tenor and CCP from 3-January to 6-May 2022

4 Term €STR

## Methodology

Methodology is subject to refinement based on evolution of market structure and industry requirements

### Target Term €STR methodology overview

- L1 data not yet available
- 1 | Centrally cleared spot starting €STR OIS
  - 2 | Mid rates from executable quotes on **interdealer electronic CLOBs**<sup>1</sup>
  - 3 | Any available level 1 data, plus
    - Centrally cleared spot starting €STR OIS
    - Mid rates from individual streaming dealer quotes on a **major institutional electronic trading platform**<sup>1</sup>
  - 4 | Any available level 1 and 2 data, plus
    - Centrally cleared spot starting €STR OIS
    - Indicative quotes from the **interdealer voice brokered market** and composite rates from a **major institutional electronic trading platform**
  - 4 | Integrated fallback: Spread between the Refinitiv Term €STR and compounded €STR on the previous business day is applied to today's compound €STR

1. Subject to maximum bid-ask spread and minimum volume checks; 2. Subject to data availability.

5 Term €STR

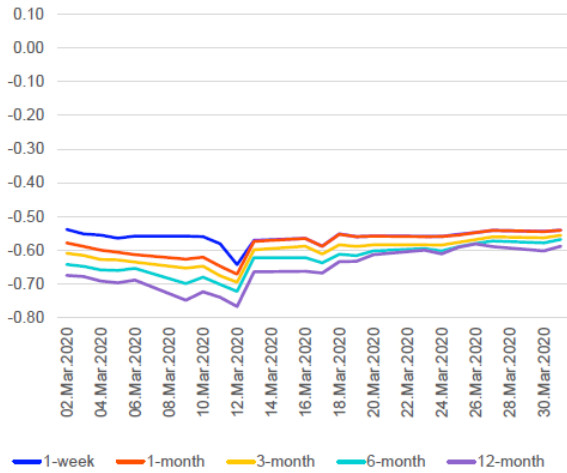
### Surveillance and monitoring

- Comparison to other rates available in the market
  - Check for divergence between different levels of the waterfall
  - Comparison of current vs. historic market volatility during the collection window
  - Abnormal inter-day movements in the benchmark
- Published daily in the following tenors<sup>2</sup>:
- 1W
  - 1M
  - 3M
  - 6M
  - 12M

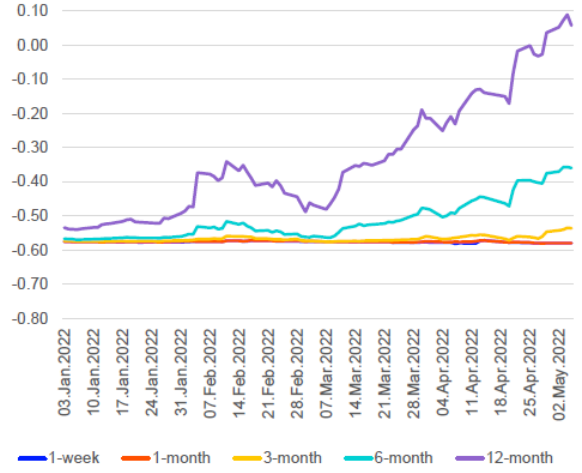


## Indicative performance of Term €STR prototype

Rate (%), 2-Mar to 31-Mar 2020



Rate (%), 3-Jan to 5-May 2022

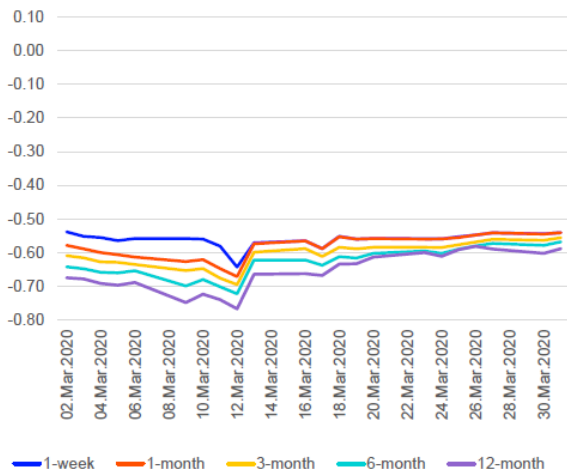


Note: Calculation based solely on mid rates from individual streaming dealer quotes on a major institutional electronic trading platform; other sources not used; does not fully reflect target methodology

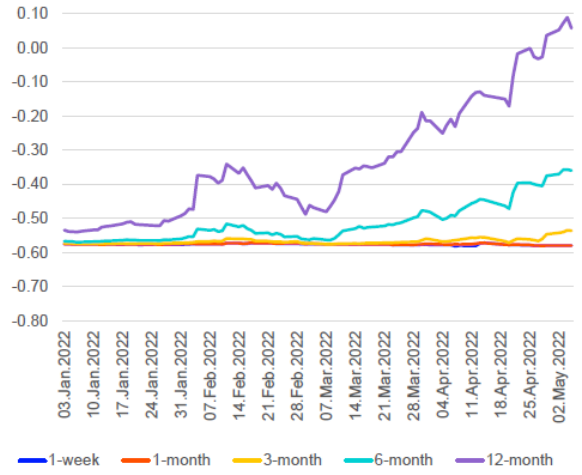
6 Term €STR

## Indicative performance of Term €STR prototype

Rate (%), 2-Mar to 31-Mar 2020



Rate (%), 3-Jan to 5-May 2022



Note: Calculation based solely on mid rates from individual streaming dealer quotes on a major institutional electronic trading platform; other sources not used; does not fully reflect target methodology

6 Term €STR

## Implementation approach and timeline

### Project approach and status

Topic	Approach	Status / next steps
Data licensing	<ul style="list-style-type: none"> <li>Extend existing license agreements with input data providers for use of €STR OIS rates in Term €STR benchmark</li> </ul>	<ul style="list-style-type: none"> <li>Where data is available               <ul style="list-style-type: none"> <li>Satisfactory completion of sample data review</li> <li>Contract negotiations in progress; leverage existing agreements as precedent</li> </ul> </li> <li>Where data is not available: Awaiting liquidity development</li> </ul>
Data integration	<ul style="list-style-type: none"> <li>Extend existing technical connectivity from data providers to Refinitiv benchmark calculation engine</li> </ul>	<ul style="list-style-type: none"> <li>Integrated fallback data already connected</li> <li>Validate existing connectivity is suitable by reconfirming data model and technical interface</li> <li>Implement levels 1-3 input data integration</li> </ul>
Technology and product	<ul style="list-style-type: none"> <li>Leverage existing term rate solution</li> </ul>	<ul style="list-style-type: none"> <li>Implement methodology rules into calculation engine</li> <li>Implement surveillance and monitoring rules into surveillance tool</li> <li>Enable Term €STR on terminals, feeds &amp; website</li> <li>Distribute Term €STR via outbound partners</li> </ul>
Operations	<ul style="list-style-type: none"> <li>Leverage established content operations team</li> </ul>	<ul style="list-style-type: none"> <li>Test calculation engine output behaviour</li> <li>Document processes</li> <li>Complete content operations training</li> </ul>

### Forecast timeline

- Provision of Term €STR benchmark is contingent on data availability
- Development timeline for sufficient liquidity on interdealer electronic CLOBs is unclear and likely to benefit from official sector support
- Creation of freely available prototype rate: Approx. 3 months
- Industry testing of prototype, refinement of methodology and Approx. 6 months

# Thank you

# Developing a forward- looking term rate for €STR

Update to the Euro RFR WG on 17 June 2022

Jean-Louis Schirmann, CEO, The European Money Markets Institute

Timothy J. Bowler, President, ICE Benchmark Administration

## The EMMI/IBA approach

- The European Money Market Institute (EMMI), as administrator of the €STR Forward-Looking Term Rate (EFTERM), has appointed ICE Benchmark Administration (IBA) as calculation agent.
- EFTERM benefits from each party's unique position and experience:
  - EMMI's well-established position as the authorised administrator of critical benchmarks in the eurozone and broad experience in governance and oversight
  - IBA's extensive experience in administrating and calculating critical benchmarks and forward-looking term rates for SONIA and SOFR

## EFTERM Methodology

- 3-Level “Waterfall” Methodology (similar to Term SONIA and Term SOFR):
  - Level 1: snapshots of executable b/o prices and volumes of eligible €STR-linked OIS (as recommended by the Euro RFR WG) with standard market size are used to build synthetic order book
  - Level 2: same as Level 1, but built on eligible €STR-linked OIS dealer-to-client b/o prices and volumes
  - Level 3: eligible €STR-linked futures settlement prices and historical €STR settings are used to determine the rate, taking into account ECB rate change dates.



## EFTERM Input Data

- Level 1: *potential* sources BGC Partners’ BGC Trader, TP/ICAP i-Swap, Tradition Trad-X (in development)
- Level 2: current source Tradeweb (continuously available since Q4/2021)
- Level 3: ICE €STR 1M futures contracts (continuously available since Q1/2022)



## EFTERM Publication

- EFTERM will be published daily (Target 2) for all current EURIBOR® tenors (1 week, 1 month, 3 months, 6 months, 12 months).
- EMMI will distribute EFTERM as a potential fallback rate to EURIBOR® to all its subscribers through the established vendor distribution channels.



## Developments so far

- Input Data:
  - €STR Inter-dealer swaps market is still developing. Once deep in liquidity, EMMI and IBA expect to receive level 1 data.
  - Dealer-to-client OIS prices and volumes have been available since Q4/2021.
- Rate calculation:
  - IBA has been calculating daily rates based on available input data on a production-ready platform since start of 2022.
  - EMMI has concluded input data verification and back-testing on available data.
  - EMMI started publishing EFTERM indicative "beta" rates for testing and feedback purposes in early June 2022.

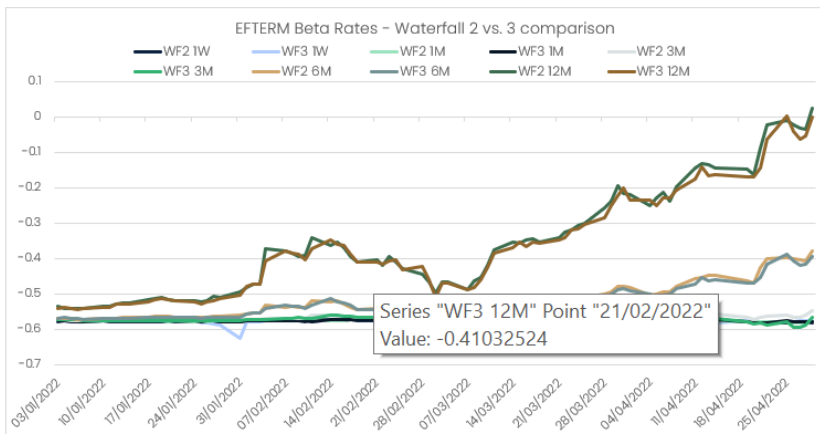


## EFTERM Beta Rates

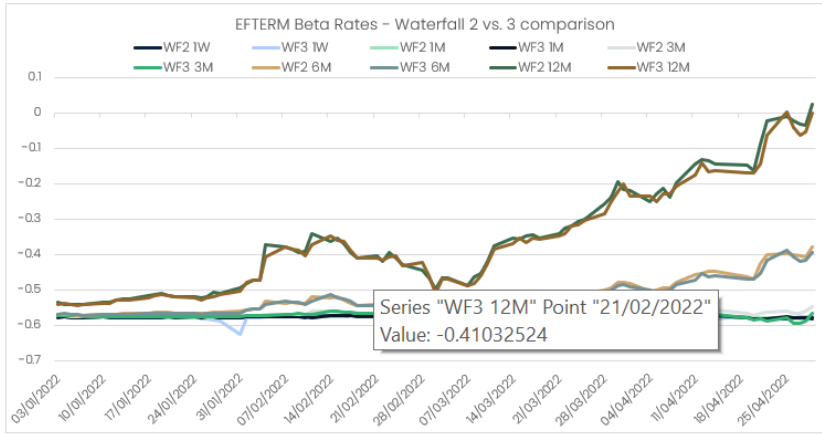
- IBA is able to calculate EFTERM beta rates using available input data for at Waterfall Levels 2 and 3. Tradeable quotes for the first Level of the Waterfall are not yet sufficiently available. EMMI and IBA propose to include Level 1 input data in the calculation process when eligible prices and volumes are available and sufficiently tested.
- EFTERM beta rates calculated over the testing period Q1/2022 have shown close alignment of the available Waterfall Levels, including when rate hike expectations started to influence the longer tenors more notably (next slides):



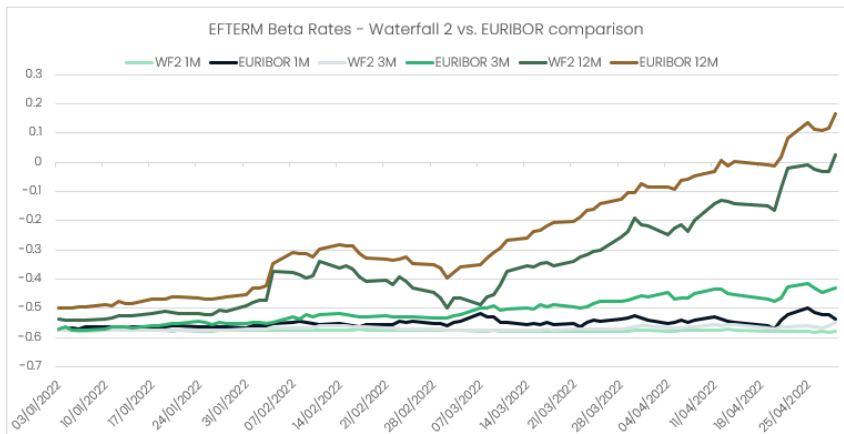
## EFTERM Beta Rates



## EFTERM Beta Rates



## EFTERM Beta Rates



## EFTERM Beta Rates

- EFTERM beta rates are published for information and feedback purposes every Monday for the preceding week, available on:

[www.emmi-benchmarks.eu](http://www.emmi-benchmarks.eu)



## Next steps

- EMMI will continue to publish EFTERM beta rates.
- Go-live as a benchmark for use in financial contracts is aimed for October 2022.
- EMMI expects to launch a two-month public consultation in early July. A feedback statement is expected to be published end-September and the final methodology will be made available.
- In the meantime: surveillance will be finetuned, and governance documentation and procedures will be finalised for the benchmark launch date.





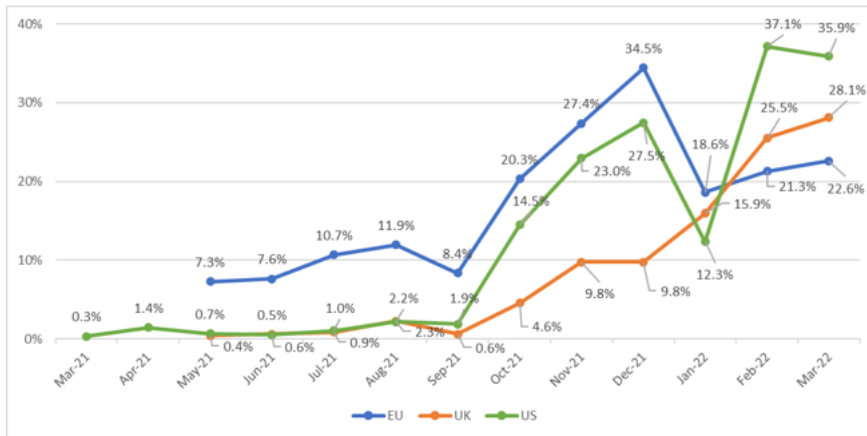
June 2022

## **Analysis of IRD Trading Activity by Underlying Reference Rates and Tenors**

### **Executive Summary**

- ISDA has conducted the analysis of euro- and US dollar-denominated IRD by underlying reference rates to show the adoption of €STR and SOFR in different regions from March 2021 to March 2022.
- ISDA has analyzed three IRD data sets: transactions reported in the EU, transactions reported in the UK, and transactions reported in the US. All data sets include both cleared and non-cleared transactions.
- In the EU, the percentage of trading activity in €STR reached 22.6% of total euro-denominated IRD traded notional in March 2022 compared to 7.3% in May 2021. In the UK, €STR-linked traded notional increased to 28.1% from 0.4% over the same period. In the US, the percentage of trading activity in €STR increased to 35.9% of total euro-denominated IRD traded notional in March 2022 compared to 0.3% in March 2021.
- In the EU, the percentage of trading activity in SOFR reached 29.9% of total US dollar-denominated IRD traded notional in March 2022 compared to 7.0% in May 2021. In the UK, SOFR-linked traded notional increased to 20.0% from 1.1% over the same period. In the US, the percentage of trading activity in SOFR increased to 35.4% of total US dollar-denominated IRD traded notional in March 2022 compared to 2.1% in March 2021.

## €STR Traded Notional as % of EUR-denominated IRD Traded Notional by Region



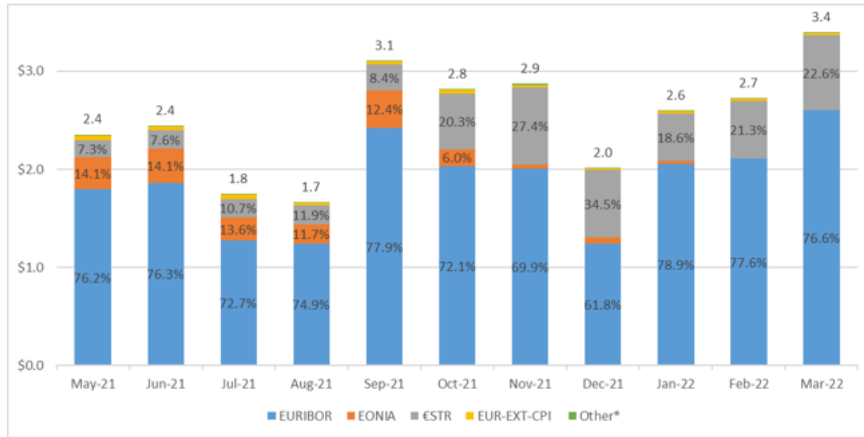
Source: DTCC SDR, European APAs and TVs  
EU and UK data is available only starting in May 2021

## €STR, EONIA and EURIBOR Traded Notional as % of EUR-denominated IRD Traded Notional

	EU			UK			US		
	€STR	EONIA	EURIBOR	€STR	EONIA	EURIBOR	€STR	EONIA	EURIBOR
Mar-21							0.3%	14.3%	83.0%
Apr-21							1.4%	11.1%	83.6%
May-21	7.3%	14.1%	76.2%	0.4%	17.6%	73.6%	0.7%	14.5%	81.8%
Jun-21	7.6%	14.1%	76.3%	0.6%	17.2%	72.0%	0.5%	9.1%	87.5%
Jul-21	10.7%	13.6%	72.7%	0.9%	11.9%	77.3%	1.0%	11.3%	84.2%
Aug-21	11.9%	11.7%	74.9%	2.3%	13.1%	78.4%	2.2%	14.2%	80.9%
Sep-21	8.4%	12.4%	77.9%	0.6%	17.5%	76.0%	1.9%	14.9%	81.1%
Oct-21	20.3%	6.0%	72.1%	4.6%	11.8%	75.0%	14.5%	12.6%	70.8%
Nov-21	27.4%	1.4%	69.9%	9.8%	0.4%	80.8%	23.0%	0.0%	75.6%
Dec-21	34.5%	3.0%	61.8%	9.8%	0.5%	79.4%	27.5%	0.0%	67.9%
Jan-22	18.6%	1.2%	78.9%	15.9%	0.5%	76.6%	12.3%	0.0%	65.4%
Feb-22	21.3%	0.0%	77.6%	25.5%	0.0%	67.2%	37.1%	0.0%	61.2%
Mar-22	22.6%	0.0%	76.6%	28.1%	0.0%	65.8%	35.9%	0.0%	62.8%

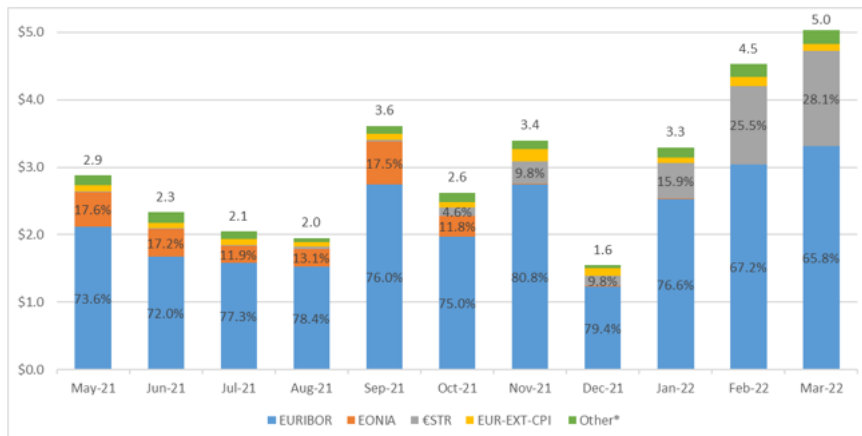
Source: DTCC SDR, European APAs and TVs  
EU and UK data is available only starting in May 2021

## Euro-denominated IRD Transactions Reported in the EU Traded Notional (US\$ trillions)



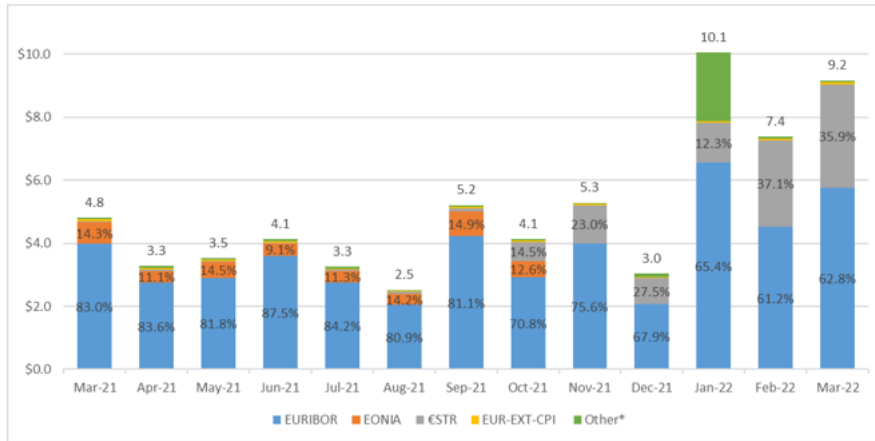
\*Other includes EURIBOR/€STR, EURIBOR/EONIA and other underlying reference rates  
Source: European APAs and TVs

## Euro-denominated IRD Transactions Reported in the UK Traded Notional (US\$ trillions)



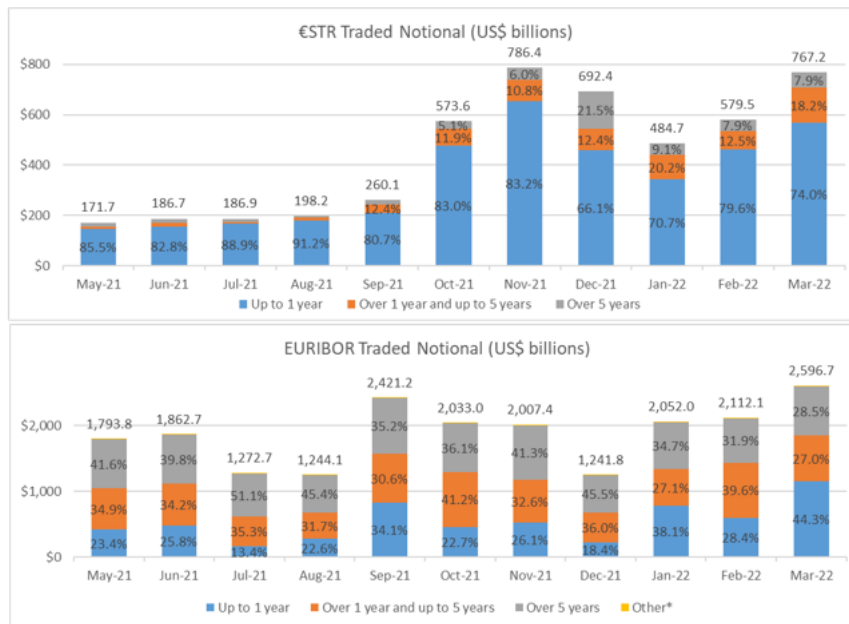
\*Other includes EURIBOR/€STR, EURIBOR/EONIA and other underlying reference rates  
Source: European APAs and TVs

## Euro-denominated IRD Transactions Reported in the US Traded Notional (US\$ trillions)



\*Other includes EURIBOR/€STR, EURIBOR/EONIA, EURIBOR/EUR-EXT-CPI and other underlying reference rates  
Source: DTCC SDR

## €STR and EURIBOR Traded Notional Reported in the EU by Tenors



\*Other includes transactions that don't have terms specified in the database  
Source: European APAs and TVs

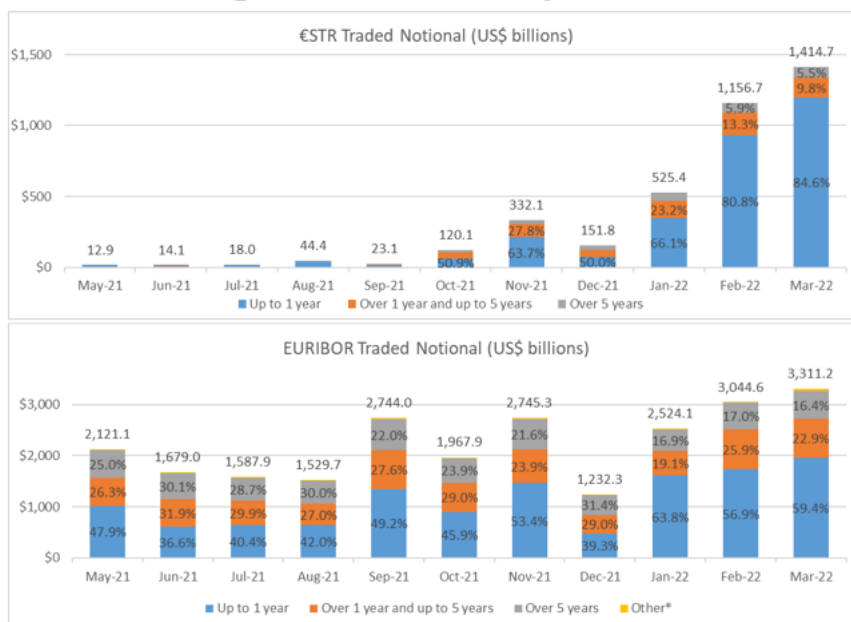
## Percentage of €STR and EURIBOR Traded Notional Reported in the EU by Tenors

	€STR			EURIBOR			
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Other*
May-21	85.5%	5.3%	9.1%	23.4%	34.9%	41.6%	0.1%
Jun-21	82.8%	8.7%	8.4%	25.8%	34.2%	39.8%	0.2%
Jul-21	88.9%	4.2%	6.9%	13.4%	35.3%	51.1%	0.2%
Aug-21	91.2%	5.0%	3.8%	22.6%	31.7%	45.4%	0.2%
Sep-21	80.7%	12.4%	6.9%	34.1%	30.6%	35.2%	0.0%
Oct-21	83.0%	11.9%	5.1%	22.7%	41.2%	36.1%	0.1%
Nov-21	83.2%	10.8%	6.0%	26.1%	32.6%	41.3%	0.1%
Dec-21	66.1%	12.4%	21.5%	18.4%	36.0%	45.5%	0.0%
Jan-22	70.7%	20.2%	9.1%	38.1%	27.1%	34.7%	0.1%
Feb-22	79.6%	12.5%	7.9%	28.4%	39.6%	31.9%	0.1%
Mar-22	74.0%	18.2%	7.9%	44.3%	27.0%	28.5%	0.2%

\*Other includes transactions that don't have terms specified in the database  
Source: European APAs and TVs

Tenor is calculated based on ISIN Term of Contract data

## €STR and EURIBOR Traded Notional Reported in the UK by Tenors



\*Other includes transactions that don't have terms specified in the database  
Source: European APAs and TVs

## Percentage of €STR and EURIBOR Traded Notional Reported in the UK by Tenors

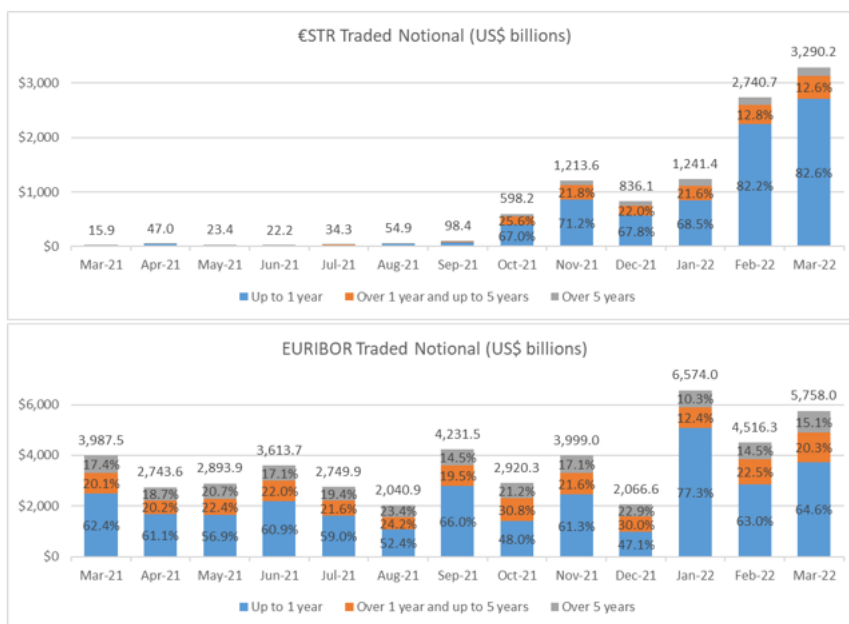
	€STR			EURIBOR			
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Other*
May-21	91.0%	2.8%	6.2%	47.9%	26.3%	25.0%	0.7%
Jun-21	70.7%	24.7%	4.6%	36.6%	31.9%	30.1%	1.4%
Jul-21	72.7%	16.6%	10.7%	40.4%	29.9%	28.7%	1.0%
Aug-21	94.0%	2.4%	3.6%	42.0%	27.0%	30.0%	1.0%
Sep-21	69.5%	18.7%	11.8%	49.2%	27.6%	22.0%	1.2%
Oct-21	50.9%	36.7%	12.4%	45.9%	29.0%	23.9%	1.2%
Nov-21	63.7%	27.8%	8.5%	53.4%	23.9%	21.6%	1.2%
Dec-21	50.0%	28.5%	21.5%	39.3%	29.0%	31.4%	0.3%
Jan-22	66.1%	23.2%	10.8%	63.8%	19.1%	16.9%	0.2%
Feb-22	80.8%	13.3%	5.9%	56.9%	25.9%	17.0%	0.2%
Mar-22	84.6%	9.8%	5.5%	59.4%	22.9%	16.4%	1.3%

\*Other includes transactions that don't have terms specified in the database

Source: European APAs and TVs

Tenor is calculated based on ISIN Term of Contract data

## €STR and EURIBOR Traded Notional Reported in the US by Tenors



Source: DTCC SDR

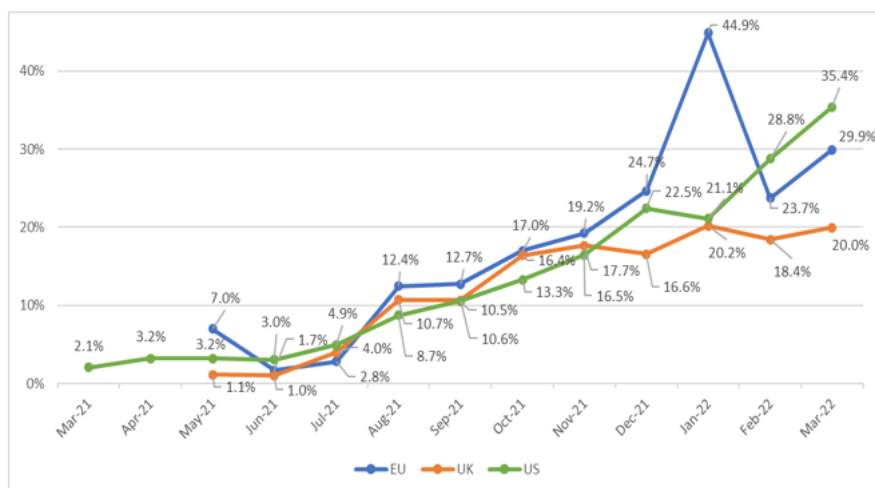
## Percentage of €STR and EURIBOR Traded Notional Reported in the US by Tenors

	€STR			EURIBOR		
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years
Mar-21	61.2%	26.6%	12.1%	62.4%	20.1%	17.4%
Apr-21	90.9%	6.9%	2.1%	61.1%	20.2%	18.7%
May-21	81.0%	8.4%	10.5%	56.9%	22.4%	20.7%
Jun-21	62.6%	23.2%	14.2%	60.9%	22.0%	17.1%
Jul-21	71.2%	18.8%	10.0%	59.0%	21.6%	19.4%
Aug-21	83.4%	9.9%	6.7%	52.4%	24.2%	23.4%
Sep-21	80.3%	14.2%	5.6%	66.0%	19.5%	14.5%
Oct-21	67.0%	25.6%	7.3%	48.0%	30.8%	21.2%
Nov-21	71.2%	21.8%	7.0%	61.3%	21.6%	17.1%
Dec-21	67.8%	22.0%	10.2%	47.1%	30.0%	22.9%
Jan-22	68.5%	21.6%	9.9%	77.3%	12.4%	10.3%
Feb-22	82.2%	12.8%	5.0%	63.0%	22.5%	14.5%
Mar-22	82.6%	12.6%	4.9%	64.6%	20.3%	15.1%

Source: DTCC SDR

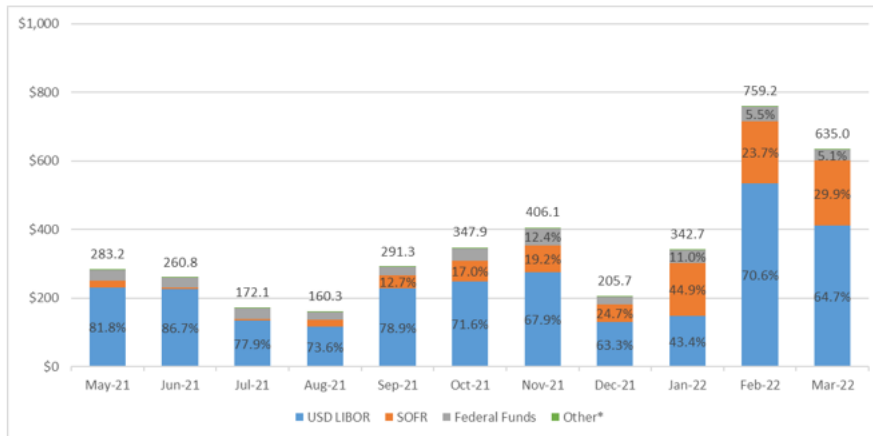
Tenor is calculated as the difference between the effective date and the maturity date

## SOFR Traded Notional as % of USD-denominated IRD Traded Notional by Region



Source: DTCC SDR, European APAs and TVs  
EU and UK data is available only starting in May 2021

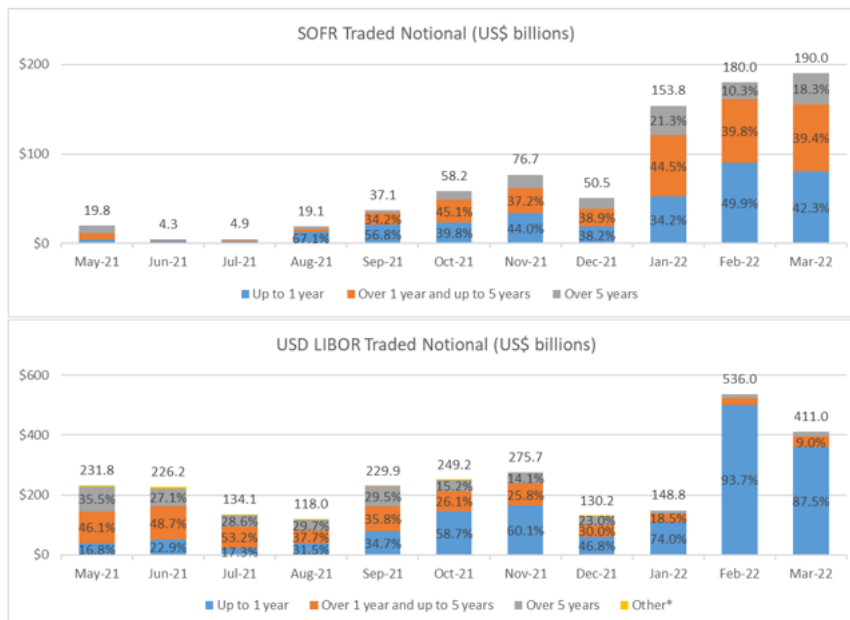
## USD-denominated IRD Transactions Reported in the EU Traded Notional (US\$ billions)



\*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR.

Source: European APAs and TVs

## SOFR and USD LIBOR Traded Notional Reported in the EU by Tenors



\*Other includes transactions that don't have terms specified in the database  
Source: European APAs and TVs



## Percentage of SOFR and USD LIBOR Traded Notional Reported in the EU by Tenors

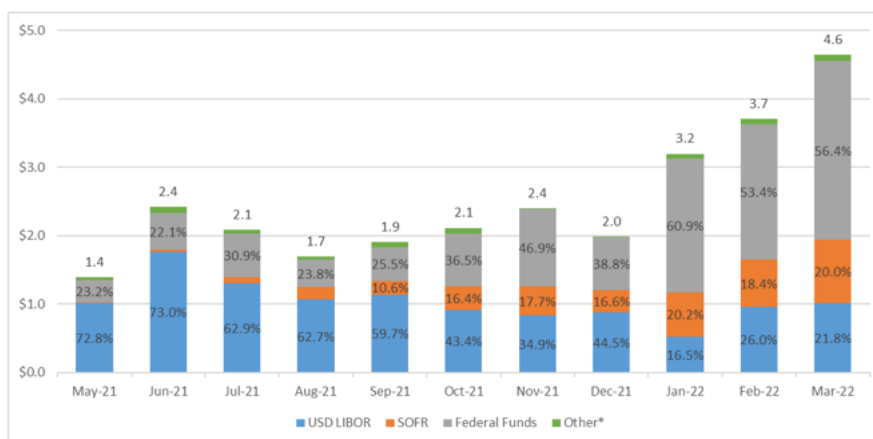
	SOFR			USD LIBOR			
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Other*
May-21	25.2%	32.1%	42.7%	16.8%	46.1%	35.5%	1.7%
Jun-21	68.4%	24.1%	7.5%	22.9%	48.7%	27.1%	1.3%
Jul-21	43.3%	38.8%	17.9%	17.3%	53.2%	28.6%	0.9%
Aug-21	67.1%	17.4%	15.5%	31.5%	37.7%	29.7%	1.1%
Sep-21	56.8%	34.2%	9.0%	34.7%	35.8%	29.5%	0.0%
Oct-21	39.8%	45.1%	15.1%	58.7%	26.1%	15.2%	0.0%
Nov-21	44.0%	37.2%	18.8%	60.1%	25.8%	14.1%	0.0%
Dec-21	38.2%	38.9%	23.0%	46.8%	30.0%	23.0%	0.1%
Jan-22	34.2%	44.5%	21.3%	74.0%	18.5%	7.4%	0.0%
Feb-22	49.9%	39.8%	10.3%	93.7%	4.2%	2.1%	0.0%
Mar-22	42.3%	39.4%	18.3%	87.5%	9.0%	3.6%	0.0%

\*Other includes transactions that don't have terms specified in the database

Source: European APAs and TV's

Tenor is calculated based on ISIN Term of Contract data

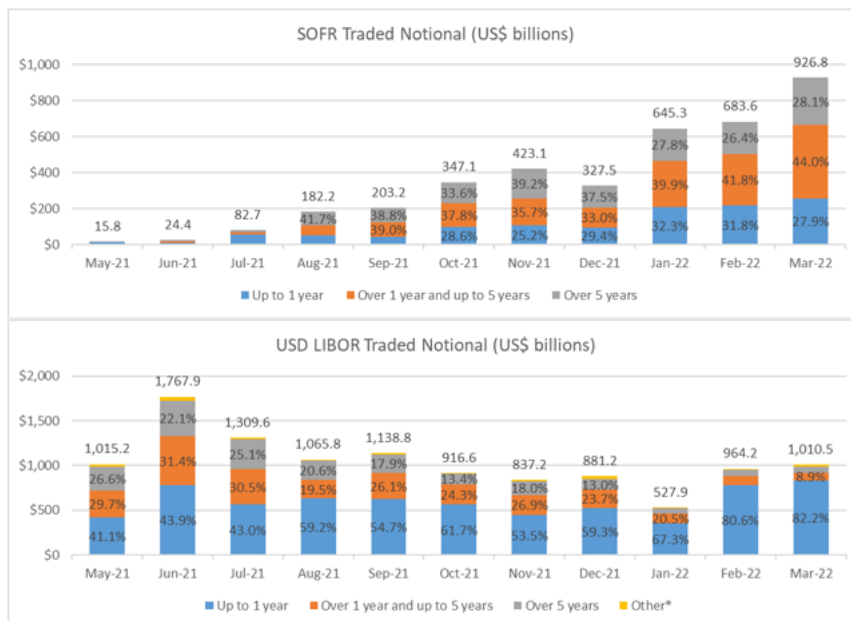
## USD-denominated IRD Transactions Reported in the UK Traded Notional (US\$ trillions)



\*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR

Source: European APAs and TV's

## SOFR and USD LIBOR Traded Notional Reported in the UK by Tenors



\*Other includes transactions that don't have terms specified in the database  
 Source: European APAs and TVs

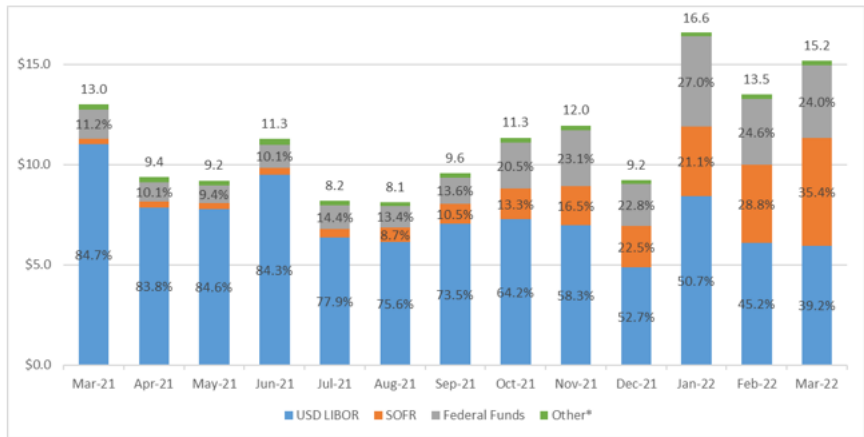
## Percentage of SOFR and USD LIBOR Traded Notional Reported in the UK by Tenors

	SOFR			USD LIBOR			
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Other*
May-21	77.8%	13.9%	8.4%	41.1%	29.7%	26.6%	2.6%
Jun-21	44.3%	33.5%	22.3%	43.9%	31.4%	22.1%	2.6%
Jul-21	70.2%	11.0%	18.8%	43.0%	30.5%	25.1%	1.4%
Aug-21	28.4%	29.8%	41.7%	59.2%	19.5%	20.6%	0.8%
Sep-21	22.1%	39.0%	38.8%	54.7%	26.1%	17.9%	1.2%
Oct-21	28.6%	37.8%	33.6%	61.7%	24.3%	13.4%	0.6%
Nov-21	25.2%	35.7%	39.2%	53.5%	26.9%	18.0%	1.6%
Dec-21	29.4%	33.0%	37.5%	59.3%	23.7%	13.0%	4.1%
Jan-22	32.3%	39.9%	27.8%	67.3%	20.5%	11.9%	0.4%
Feb-22	31.8%	41.8%	26.4%	80.6%	11.3%	7.0%	1.1%
Mar-22	27.9%	44.0%	28.1%	82.2%	8.9%	6.3%	2.6%

\*Other includes transactions that don't have terms specified in the database  
 Source: European APAs and TVs

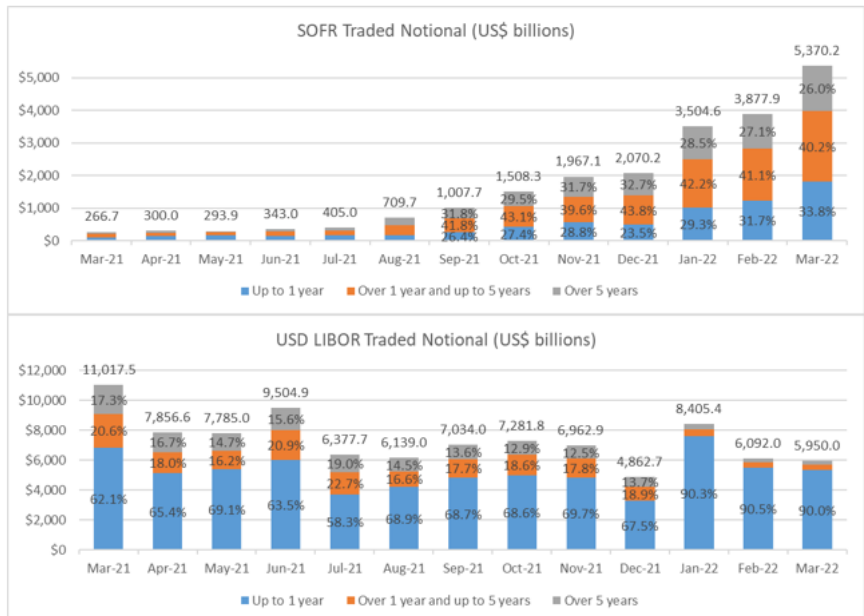
Tenor is calculated based on ISIN Term of Contract data

## USD-denominated IRD Transactions Reported in the US Traded Notional (US\$ trillions)



\*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR  
 Source: DTCC SDR

## SOFR and USD LIBOR Traded Notional Reported in the US by Tenors



Source: DTCC SDR

## Percentage of SOFR and USD LIBOR Traded Notional Reported in the US by Tenors

	SOFR			USD LIBOR		
	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years	Tenor ≤ 1 Year	1 Year < Tenor ≤ 5 Years	Tenor > 5 Years
Mar-21	38.4%	43.2%	18.3%	62.1%	20.6%	17.3%
Apr-21	43.6%	38.7%	17.7%	65.4%	18.0%	16.7%
May-21	52.3%	32.1%	15.6%	69.1%	16.2%	14.7%
Jun-21	43.0%	37.7%	19.3%	63.5%	20.9%	15.6%
Jul-21	41.7%	36.6%	21.6%	58.3%	22.7%	19.0%
Aug-21	22.8%	44.2%	33.1%	68.9%	16.6%	14.5%
Sep-21	26.4%	41.8%	31.8%	68.7%	17.7%	13.6%
Oct-21	27.4%	43.1%	29.5%	68.6%	18.6%	12.9%
Nov-21	28.8%	39.6%	31.7%	69.7%	17.8%	12.5%
Dec-21	23.5%	43.8%	32.7%	67.5%	18.9%	13.7%
Jan-22	29.3%	42.2%	28.5%	90.3%	5.9%	3.8%
Feb-22	31.7%	41.1%	27.1%	90.5%	6.0%	3.5%
Mar-22	33.8%	40.2%	26.0%	90.0%	6.2%	3.7%

Source: DTCC SDR

Tenor is calculated as the difference between the effective date and the maturity date

## European Data

- EU and UK IRD trading data is based on transactions publicly reported by 30 European approved publication arrangements (APAs) and trading venues (TVs).
- EU IRD trading activity is measured by IRD traded notional reported by APAs and TVs located in the EU, while UK IRD trading activity is measured by IRD traded notional reported by APAs and TVs located in the UK.
- Data set includes only new transactions. All cancelled transactions are removed and amended trades are updated using the dissemination ID field. Transactions reported with a four-week aggregation flag and volume omission flag are also removed from the data set.
- Reported notional is converted to US dollars based on daily FX rates.
- All reported transactions are aggregated on a daily basis. Monthly traded notional referenced in this report represents the sum of converted traded notional of all transactions executed during the month.

## US Data

- Analysis of US IRD is based on data from the Depository Trust & Clearing Corporation (DTCC) swap data repository (SDR) that only covers transactions required to be disclosed under Commodity Futures Trading Commission regulations.
- Data set includes only new transactions. All cancelled transactions are removed and amended trades are updated using the dissemination ID field.
- Reported notional is converted to US dollars based on daily FX rates.
- All reported transactions are aggregated on a daily basis. Monthly traded notional referenced in this report represents the sum of converted traded notional of all transactions executed during the month.

## Data Limitations

- While ISDA believes this data covers the majority of OTC IRD transactions in Europe, it doesn't capture 100% of the market.
- In Europe, transparency reporting requirements apply to instruments that are admitted to trading on regulated markets (RMs), as well as those that are traded on other TVs, including MTFs and OTFs. The transparency requirements also apply to investment firms not trading on TVs if the underlying financial instrument is 'traded on a trading venue' (TOTV) or is an index or basket composed of financial instruments that are traded on a TV. Financial instruments that are solely traded outside of TVs are not subject to the requirements and, therefore, are not included in this analysis.
- When European counterparties face US entities on a swap execution facility (SEF), ESMA does not require EU firms to systematically republish information in the EU about transactions executed on TVs outside the EU that are subject to transparency provisions similar to those applicable to EU TVs. Under US rules, SEFs are required to send relevant trade details to an SDR for real-time public dissemination. Therefore, these trades will be captured in US trading activity only, resulting in a potential understatement of European traded notional.
- Trades executed on MTFs and OTFs between EU and US counterparties may be disseminated to the public twice. Since EU and US reporting rules have not been determined equivalent, trades executed on MTFs and OTFs are viewed as off-facility transactions for US real-time reporting purposes and are subject to the CFTC reporting rules. At the same time, MTFs and OTFs have an obligation to send trade details for public dissemination. Therefore, these trades may be double counted in European and US combined trading activity analysis.

**For questions on this analysis, please contact:**

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