

Virtual Conference of the Working Group on Euro Risk-Free Rates

Thursday, 13 July 2023 (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 2023 and 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. *Exchange of views on discontinuation of panel-based USD LIBOR*
3. *Update by the €STR Task Force:*
 - i. *Exchange of views on a possible final public statement*
 - ii. *Discussion on Spread Adjustment (Bloomberg/ISDA, ESMA)*
4. *Presentation of the EURIBOR Fallback Survey*
5. *ISDA market data presentation on the transition to RFR/€STR*
6. *AOB*

Mr von Moltke expressed his gratitude to the WG members participating in the €STR Task Force for their contributions, including a proposed final public statement, and to the Bloomberg / ISDA team for their availability in participating in this meeting to discuss the spread adjustment of the EURIBOR fallback provisions (agenda item 3).

The Chair also thanked ESMA for having developed the EURIBOR Fallback Survey that will be presented under agenda item 4 and ISDA staff for providing an updated presentation on market data regarding the transition to risk-free rates (agenda item 5).

Mr von Moltke then 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 website¹.

Finally, the Chair mentioned that some members commenced the recording of this virtual meeting to fulfil legal obligations to which they are subject, and no participant objected. It was confirmed that the recording of the meeting will not be disseminated or published.

2. Exchange of views on discontinuation of panel-based USD LIBOR

Mr von Moltke emphasised the importance of the historical milestone represented by the discontinuation of panel-based USD LIBOR on 30 June 2023. He expressed his gratitude to all

¹https://www.esma.europa.eu/sites/default/files/library/eu_competition_law_guidelines_for_the_working_group_on_euro_risk-free_rates.pdf

stakeholders involved in this smooth transition, which culminated in a remarkable achievement for all market participants. He opened the floor to all members to share further considerations or issues experienced in relation to the LIBORs cessation, if any. No comments were raised on this matter.

3. Update by the €STR Task Force

i. Exchange of views on a possible final public statement

Mr von Moltke handed over to Mr Alex Wilson (Chair's Office and Secretariat of the €STR Task Force) to present to the WG members the updates on the latest activities of the €STR Task Force.

Mr Wilson explained that the €STR Task Force met twice in Q2 2023 to discuss three main topics 1) the availability for cash products of the spread adjustment embedded in the EURIBOR fallback provisions recommended by WG in May 2021 – this topic to be covered in detail through the subsequent agenda item with interventions by Bloomberg and ISDA staff, and a presentation provided by ESMA staff (see next section); 2) the structure of the EURIBOR fallbacks Survey to be submitted to EUR RFR WG members, that will be presented by ESMA staff under agenda item 4; and 3) the publication of a final statement by the WG to be prepared by the €STR Task Force for approval at the next meeting of the EUR RFR WG, planned in Q4 2023.

On this last topic, Mr Wilson clarified that the members of the Task Force discussed the possibility of preparing a WG recommendation concerning the use of €STR in new cash products. However, members of the €STR Task Force expressed their preference for the publication of a broader WG final statement to be published after the last WG meeting in Q4 2023. The aim of such final statement would be to cover a variety of topics, including a summary of the milestones achieved by the WG. Examples of the topics that the final statement could cover and draft publication would be prepared over the coming months ahead of the final working group later in the year. After this introduction, Mr von Moltke opened the floor for comments.

Mr Helmut Wacket (ECB) expressed his support for the publication of a final WG's statement summarizing the work that has been done by the WG and asked whether it is appropriate in that context to opine on the viability and future of EURIBOR. Mr Wilson took note of this observation and clarified that the final statement is intended to be very factual on the things achieved by the WG and the state-of-play in Europe, with no intention to introduce new recommendations or revise previous WG's recommendations; Furthermore, he reminded that any draft proposal would need to be discussed and approved by the WG. Mr Wilson also offered to discuss this point with Mr Wacket further, following this WG meeting to ensure any pending concerns are well understood and addressed. A member asked for more details including the topic on "Clarifications on use of term €STR" in the final statement. Mr Wilson clarified that this should be seen as a reminder to market participants of the May 2021 WG recommendations in which term €STR was identified as EURIBOR fallback rates for some asset classes, without the intention to recommend any specific term-rate or administrator. Another member suggested that the final statement should focus also on standardizing the terms of use of €STR in specific contracts, since this is a new market and standardisation is still under development. Mr Wilson agreed that this proposal will be considered when preparing the draft statement. No additional comments were shared by WG members.

Mr von Moltke solicited support for the €STR Task Force's work and noted that the Task Force will work in the next weeks and months to draft the proposed final statement covering the discussed topics.

ii. Discussion on Spread Adjustment (Bloomberg/ISDA, ESMA)

Mr von Moltke handed over to Mr Jonathan Seymour (Bloomberg Index Services Limited) and Ms Ann Battle (ISDA) to discuss the characteristics of the spread adjustment (SA) for EURIBOR fallbacks published by Bloomberg and to address some questions that they received ahead of the meeting.

Ms Battle introduced the “*five-year historical median spread adjustment (SA) methodology*” that was selected by ISDA to calculate the SA for all -IBOR fallbacks (including EURIBOR fallbacks) in derivatives contracts. ISDA selected Bloomberg Index Services Limited to calculate and publish the SA (one for each tenor) to be used in fallback provisions for derivatives referencing -IBORs. Following the introduction by Ms Battle, Mr Seymour addressed the questions shared by the WG secretariat ahead of the meeting, focusing on the SA calculated by Bloomberg Index Services Limited with reference to EURIBOR contracts. To the question “*can the SA be used in cash products?*” Mr Seymour explained that there is no limitation to the SA’s use in derivative or cash products as a component of the fallback provisions, therefore the EURIBOR SA can be used in the fallbacks of EURIBOR cash products with no restrictions. Mr Seymour specified that the EURIBOR SA should not be used in contracts as the main reference rate but only in fallback provisions. This is because the EURIBOR SA is an indicative SA since no trigger event for EURIBOR has materialised (*as opposed to SA for LIBORs*). To the question “*how can market participants obtain the data?*” Mr Seymour explained that the EURIBOR SA are published on a daily basis by Bloomberg, and they are accessible by Bloomberg’s clients via the Bloomberg FBAK page on the Bloomberg Terminal² and data feed solutions. For non-clients, SA data is published freely with a 24-hour delay. The same data could be obtained through platforms of other third-party data providers. Mr Seymour added that there is an annual usage fee for the fallback calculations provided by Bloomberg (including the single components of the fallback provisions, such as the SA) that applies only when the fallback provision is activated by a trigger event (e.g. cessation of the contract’s main reference rate and conversion to Bloomberg’s fallback rate) whereas no fee is charged for the mere inclusion of Bloomberg’s fallback rates (including SA) in the contracts’ fallback provisions. Finally, Mr Seymour confirmed that Bloomberg intends to continue publishing the SA as long as there is a market need for them.

Mr von Moltke thanked Ms Battle and Mr Seymour and opened the floor for additional questions. A member asked if Bloomberg intends to publish the SA based on (forward-looking) term €STR as well, given currently the computation is solely based on the (backward-looking) compounded €STR (as envisaged by the formula indicated by ISDA and recommended by the WG in its May 2021 recommendations on EURIBOR fallbacks). Mr Seymour clarified that Bloomberg offers tools for this calculation, but it does not aim at providing a different methodology to the fallbacks that are being calculated. Another member recalled that the May 2021 WG Recommendations on EURIBOR fallback provisions recommend that irrespective of the term-structure chosen, either forward-looking or backward-looking, the same SA should be used (i.e. calculated on the basis of compounded €STR, see also slides included in Annex I for an overview of the availability of the elements of the WG recommended EURIBOR fallback provisions).

A different member asked whether Bloomberg would be able to publish an additional EURIBOR SA in case it is required as a consequence of the widespread use of a non-standard reference in a particular geography or in relation to a specific product. For instance, the only EURIBORs identified in Spain as “official interest rate” to be used in retail mortgage loans are the monthly averages published by EMMI for the different tenors. Having credit adjustment spreads between those EURIBORs monthly averages and (i) the backward looking compounded €STR and (ii) term €STR would be necessary for Spanish entities to include robust fallbacks linked to €STR in retail mortgage loans. Mr Seymour stated these specificities would be further analysed.

²More information at: <https://www.bloomberg.com/professional/solution/libor-transition/>

Mr von Moltke thanked Ms Battle and Mr Seymour for their availability in participating in the WG meeting.

4. Presentation of the EURIBOR Fallback Survey

Mr von Moltke handed over to Mr Michele Mazzoni (ESMA) to deliver the presentation on the EURIBOR fallback survey. Mr Mazzoni started with the presentations of slides summarising the elements of the WG recommended EURIBOR fallback provisions: trigger events, fallback rates and spread adjustment. In the slide the availability of each of these elements was indicated (*the full presentation is included in Annex I to this document*). He mentioned that all elements of the EURIBOR fallback provisions are now available and ready for use. Mr Mazzoni also clarified that ESMA is not aware of EURIBOR fallbacks' spread adjustment providers other than Bloomberg, but in case other spread adjustment providers are identified, they will be invited to participate in the next WG meeting and/or referred to in the WG materials.

Mr Mazzoni then introduced the EURIBOR fallback survey. He started by thanking Mr Wilson and the €STR Task Force for the feedback already provided on the structure of the survey. He then explained that, in the context of the WG, similar surveys have been successfully used to gather relevant information and data on use of GBP and USD LIBORs and tough legacy contracts referencing these interest rates. Mr Mazzoni noted that, in preparation of the conclusion of the WG activities in Q4 2023, gathering market intelligence and insight in relation to the use of EURIBOR and implementation EURIBOR fallbacks would be very valuable from the point of view of the public sector. Mr Mazzoni further stated that the survey will allow collection of WG members' views and any suggestions on possible actions that the public sector could consider for facilitating the implementation of EURIBOR fallbacks.

Mr von Moltke thanked Mr Mazzoni for his presentation and opened the floor for comments. One member explained that sufficient time should be given to the WG members to reply to the survey considering the need for WG members to involve different department/business units of their organisations and asked if the survey would be made public. Mr Mazzoni clarified that all replies received by the WG secretariat will be treated as confidential. The WG secretariat will combine the data received to produce aggregated, anonymised results of the survey, as it was done for the previous surveys on LIBORs. The aggregated, anonymised results will be presented by the WG secretariat at the last meeting of the WG in Q4 2023. These results will not be published but kept confidential and as with previous surveys on LIBORs, only aggregated anonymised results could be shared with other interested public authorities, following explicit agreement by the WG Chair and the WG members. The EURIBOR fallbacks survey will be launched soon after the WG meeting of today to provide WG members with sufficient time to respond.

Mr von Moltke thanked Mr Mazzoni for his answers to the WG members' questions. Mr von Moltke reinforced the importance of providing the public sector with precise data and insightful answers to the questions and encouraged the participation of all WG members.

5. ISDA market data presentation on the transition to RFR/€STR

Mr von Moltke handed over to Mrs Olga Roman (ISDA) to present the ISDA slides on Analysis of Interest Rates Derivatives (IRD) Trading Activity by Underlying Reference Rates and Tenors (*the full presentation is included in Annex II to this document*). Mrs Roman explained that ISDA has conducted the analysis of euro- and US dollar-denominated interest rate derivatives by underlying reference rates to show the adoption of €STR and SOFR in different regions. The data included in the presentation reflected reported transactions in the EU, the UK, and the US, and covered both cleared and non-cleared trades.

Mrs Roman noted the percentage of trading activity in €STR as total euro-denominated interest rate derivatives traded notional: a) In the EU, the percentage of trading activity in €STR reached 41.6% of total euro-denominated IRD traded notional in March 2023 compared to 23.1% in March 2022; b) In the UK, €STR-linked traded notional increased to 53.2% from 28.3% over the same period; c) In the US, the percentage of trading activity in €STR increased to 53.5% of total euro-denominated IRD traded notional in March 2023 compared to 36.0% in March 2022. Most transactions referencing €STR were short-term. In March 2023, 90.6% of €STR-linked IRD traded notional in the EU, 92.8% in the UK and 85.8% in the US had a tenor up to and including one year. She also provided the same type of data in relation to the trading activity in US dollar denominated IRD referencing SOFR in the EU, the UK and the US.

Mr von Moltke thanked Mrs Roman and opened the floor for comments. A member pointed out to the spike on the use of €STR in derivatives that can be noticed in March 2023 (*slide 3 in Annex I*), referring to the banking crises that unfolded in the same period. Another member added that the spread between the EURIBOR and the Term €STR also widened in March 2023.

6. AOB and closing remarks

No AOB was raised by WG members. Mr von Moltke thanked everyone for their time and commitment to the work of the WG. The Chair also suggested to members to reach out to Secretariat and Chair's Office if they see a need to raise topics for the next meeting's agenda. He reminded that the next meeting of the WG will take place in Paris in Q4 2023.

List of participants

Participant's organisation

Name of participant

Chairperson

Deutsche Bank

Mr James von Moltke

Chair's office

Deutsche Bank

Ms Queenie Choong

Deutsche Bank

Mr Alex Wilson

Voting members

AXA

Mr Alexandre Papadacci

Banco Sabadell

Ms Marta Riveira Cazorla

Bank of Ireland

Mr Barry Moran

Bank of Ireland

Mr David Tilson

Barclays

Mr Joseph Mcquade

Barclays

Mr Michael Taylor

BBVA

Ms Ana Rubio

BBVA

Mr Ignacio Ollero

BME Clearing

Mr Emilio Gamarra Mompeán

BME Clearing

Ms Monica Blanco Vieito

BNP Paribas

Mr Jean Christophe Reocreux

BNP Paribas

Mr Xavier Aublin

BPCE/Natixis

Mr Olivier Hubert

BPCE/Natixis

Mr Grégoire de Clarens

CaixaBank, S.A.

Mr Francesc Xavier Combis

Crédit Agricole

Ms Florence Mariotti

Deutsche Bank

Mr Christian Gau

Deutsche Bank

Mr Juergen Sklarczyk

DZ Bank

Mr Christoph Block

DZ Bank

Mr Philipp Nordloh

Erste Group

Mr Rene Brunner

Erste Group

Mr Neil Mcleod

Eurobank SA

Mr Dimitris Psychogios

Eurobank SA

Mr Theodoros Stamatou

European Investment Bank

Mr Nikolaos Tzoldos

HSBC

Mr Geoffroy Bertran

ICE

Mr Uriel Amitai

ING Bank

Ms Stephanie Broks

Intesa Sanpaolo

Ms Maria Cristina Lege

KfW Bankengruppe

Mr Markus Schmidtchen

LCH Group
Santander
Société Générale
Société Générale
Unicredit

Mr Davide Tortora
Mr Javier Pareja Marta
Mr Stephane Cuny
Mr Mathieu Casadevall
Mr Umberto Crespi

Non-voting members

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

Ms Petra de Deyne
Mr Rick Sandilands
Ms Keith Taylor
Ms Kam Hessling

Observers

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

Mr Helmut Wacket
Mr Vladimir Tsonchev
Mr Pascal Nicoloso
Mr Antoine Picot
Mr Mehtap Olger
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
European Securities and Markets Authority

Mr Michele Mazzoni
Mr Cristian Weststeijn
Mr Lelio Lapresa
Mr Artur Pinzari
Ms Benedita Costa

Invited Institutions

Bloomberg Index Services Limited
International Swaps and Derivatives Association
International Swaps and Derivatives Association

Mr Jonathan Seymour
Ms Ann Battle
Ms Olga Roman

Annex I – ESMA presentation under item 4 of the agenda



ESMA
European Securities and Markets Authority

EURIBOR FALLBACK PROVISIONS

EUR RFR WG MEETING: 13 July 2023

Availability of Elements of the EURIBOR Fallback Provisions



Fallback Elements	Definition	Availability
Fallback Triggers	Defined by the WG in 2021, section 3.2	Included in the May 2021 WG Recommendation
Fallback Rates	Compounded €STR	Published by the ECB since April 2021 (1w, 1m, 3m, 6m, 12m)
	Term €STR	Two rates available: <ul style="list-style-type: none"> • EFTERM by EMMI (November 2022) • Beta Refinitiv Term €STR by Refinitiv* (October 2022)
Spread Adjustment	Defined by the WG in 2021, section 4.3: <i>five-year historical median spread adjustment</i> . (Same spread adjustment for both fallback rates)	Published by Bloomberg since July 2020 (not aware of other providers, but if identified, they could be invited to the next WG meeting)

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Links to relevant webpages: [May 2021 WG Recommendation](#); [ECB Compounded €STR](#); [EFTERM by EMMI](#); (Beta) [Refinitiv Term €STR](#); [Bloomberg](#).

* Currently only the beta version of Refinitiv Term €STR is available. A [public consultation](#) on the methodology of Refinitiv Term €STR is ongoing.



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 [European Securities and Markets Authority \(ESMA\)](https://www.linkedin.com/company/european-securities-and-markets-authority)

Analysis of IRD Trading Activity by Underlying Reference Rates and Tenors

Executive Summary

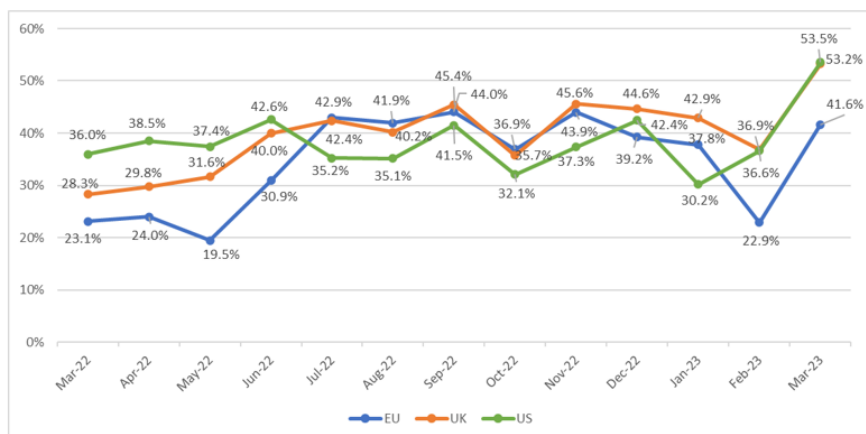
€STR Adoption

- In the EU, the percentage of trading activity in €STR reached 41.6% of total euro-denominated IRD traded notional in March 2023 compared to 23.1% in March 2022.
- In the UK, €STR-linked traded notional increased to 53.2% from 28.3% over the same period.
- In the US, the percentage of trading activity in €STR increased to 53.5% of total euro-denominated IRD traded notional in March 2023 compared to 36.0% in March 2022.
- Most transactions referencing €STR were short-term. In March 2023, 90.6% of €STR-linked IRD traded notional in the EU, 92.8% in the UK and 85.8% in the US had a tenor up to and including one year.

SOFR Adoption

- In the EU, the percentage of trading activity in SOFR reached 77.4% of total US dollar-denominated IRD traded notional in March 2023 compared to 30.6% in March 2022.
- In the UK, SOFR-linked traded notional increased to 39.4% from 19.9% over the same period.
- In the US, the percentage of trading activity in SOFR increased to 50.9% of total US dollar-denominated IRD traded notional in March 2023 compared to 35.4% in March 2022.
- In March 2023, 60.4% of SOFR-linked IRD traded notional in the EU, 46.5% in the UK and 42.8% in the US had a tenor up to and including one year.

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



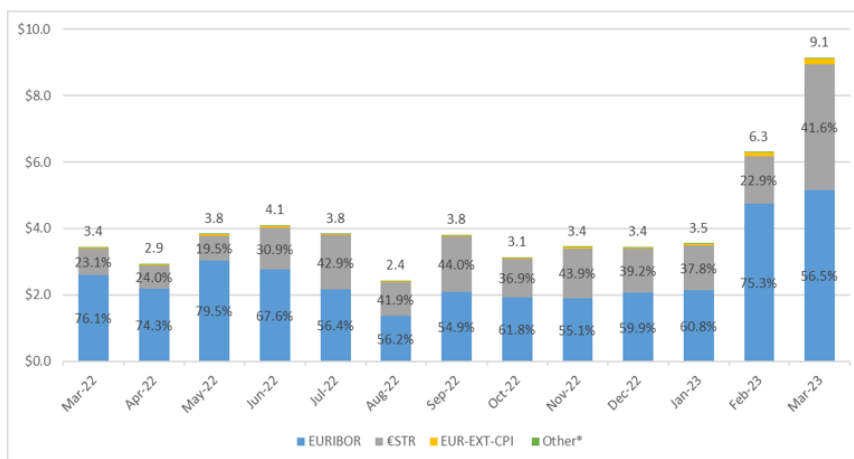
Source: DTCC SDR, European APAs and TV's

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

	EU		UK		US	
	€STR	EURIBOR	€STR	EURIBOR	€STR	EURIBOR
Mar-22	23.1%	76.1%	28.3%	65.7%	36.0%	62.7%
Apr-22	24.0%	74.3%	29.8%	64.2%	38.5%	60.1%
May-22	19.5%	79.5%	31.6%	61.9%	37.4%	61.1%
Jun-22	30.9%	67.6%	40.0%	55.0%	42.6%	55.7%
Jul-22	42.9%	56.4%	42.4%	52.1%	35.2%	63.1%
Aug-22	41.9%	56.2%	40.2%	53.9%	35.1%	63.3%
Sep-22	44.0%	54.9%	45.4%	49.5%	41.5%	57.2%
Oct-22	36.9%	61.8%	35.7%	58.0%	32.1%	66.1%
Nov-22	43.9%	55.1%	45.6%	48.7%	37.3%	61.0%
Dec-22	39.2%	59.9%	44.6%	49.5%	42.4%	52.5%
Jan-23	37.8%	60.8%	42.9%	49.2%	30.2%	66.0%
Feb-23	22.9%	75.3%	36.9%	50.0%	36.6%	58.9%
Mar-23	41.6%	56.5%	53.2%	37.5%	53.5%	44.5%

Source: DTCC SDR, European APAs and TV's

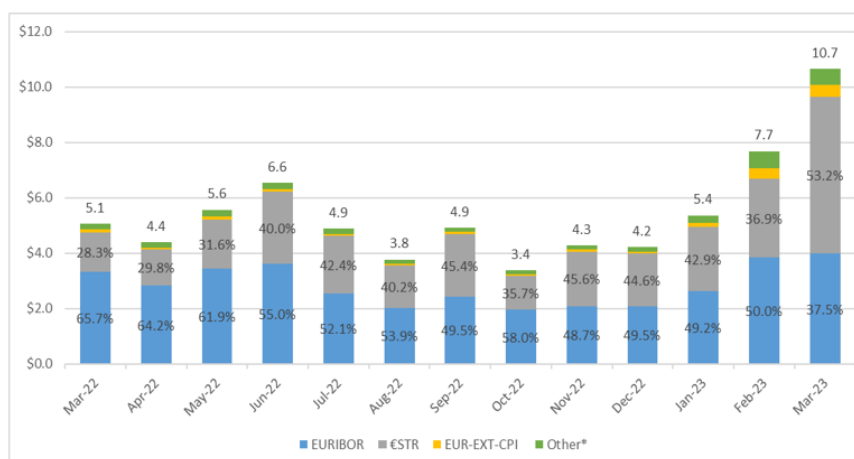
Euro-denominated IRD Traded Notional Reported in the EU (US\$ trillions)



Source: European APAs and TV's

*Other includes EURIBOR/€STR, EURIBOR/EONIA and other underlying reference rates

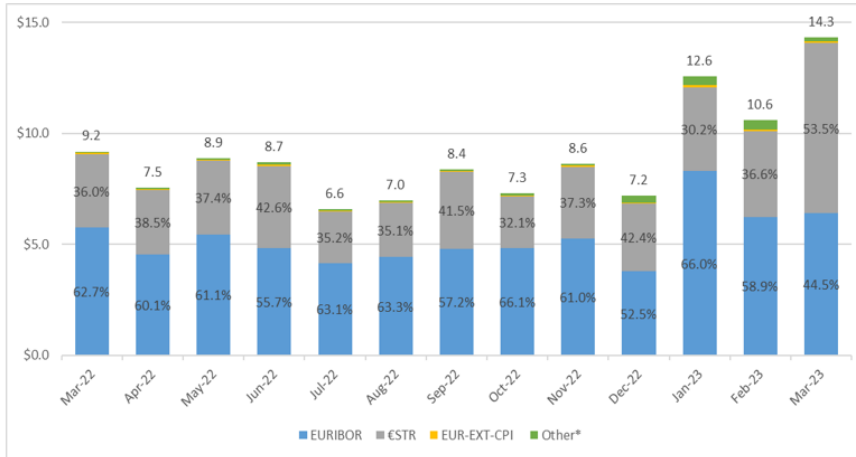
Euro-denominated IRD Traded Notional Reported in the UK (US\$ trillions)



Source: European APAs and TV's

*Other includes EURIBOR/€STR, EURIBOR/EONIA and other underlying reference rates

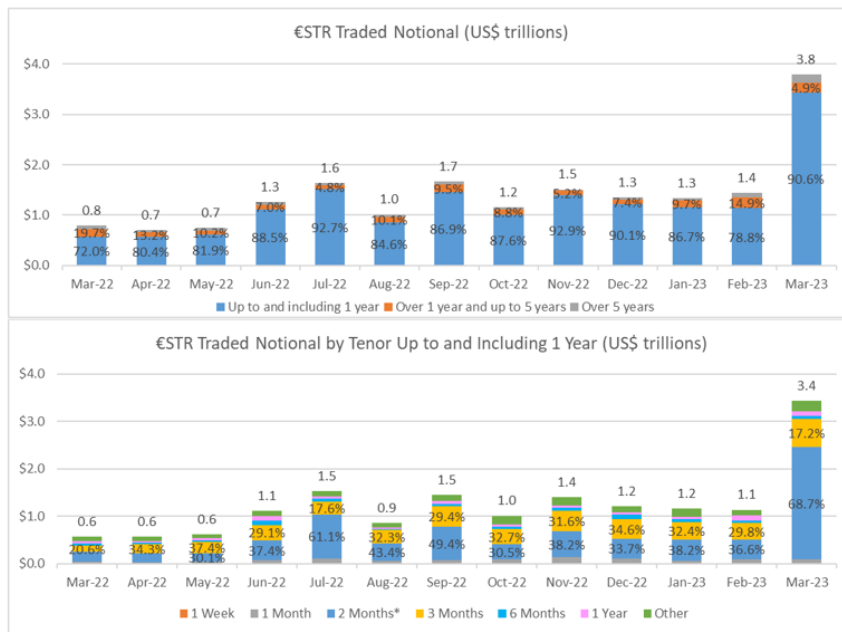
Euro-denominated IRD Traded Notional Reported in the US (US\$ trillions)



Source: DTCC SDR

*Other includes EURIBOR/€STR, EURIBOR/EONIA, EURIBOR/EUR-EXT-CPI and other underlying reference rates

€STR Traded Notional Reported in the EU by Tenors



Source: European APAs and TVs

*2 months tenor also includes 6 weeks and 7 weeks tenors

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

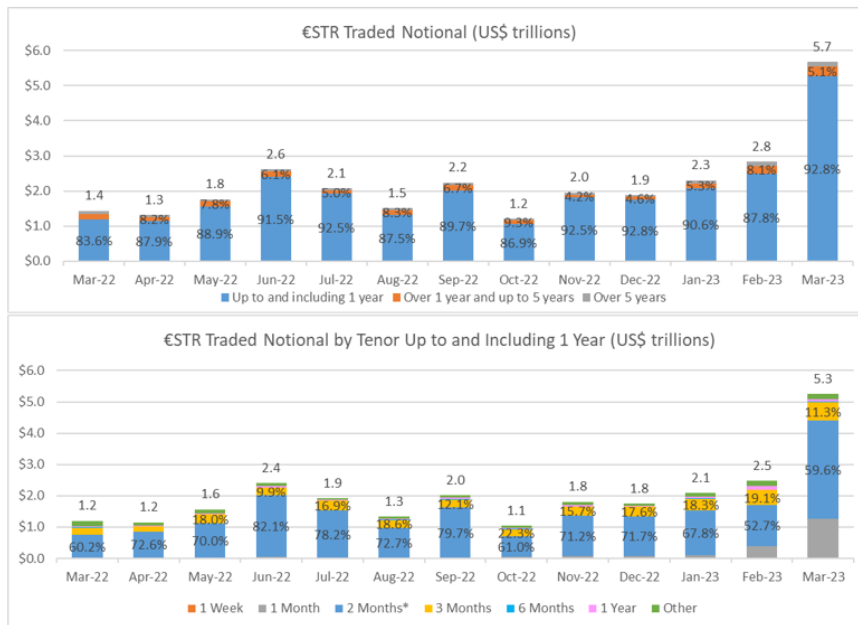
	€STR								
	Tenor ≤ 1 Year							1 Year < Tenor ≤ 5 Years	Tenor > 5 Years
	1 Week	1 Month	2 Months*	3 Months	6 Months	1 Year	Other		
Mar-22	0.0%	5.1%	26.7%	14.8%	6.9%	6.7%	11.8%	19.7%	8.3%
Apr-22	0.0%	4.3%	25.5%	27.6%	5.0%	4.9%	13.1%	13.2%	6.4%
May-22	0.0%	5.4%	24.7%	30.7%	4.2%	6.2%	10.8%	10.2%	7.9%
Jun-22	0.0%	5.9%	33.1%	25.7%	6.6%	7.9%	9.3%	7.0%	4.5%
Jul-22	0.0%	6.6%	56.7%	16.3%	3.6%	2.8%	6.7%	4.8%	2.5%
Aug-22	0.0%	5.6%	36.8%	27.3%	2.9%	2.3%	9.7%	10.1%	5.3%
Sep-22	0.1%	3.8%	43.0%	25.6%	3.2%	3.8%	7.4%	9.5%	3.6%
Oct-22	0.3%	8.1%	26.7%	28.6%	3.7%	4.3%	15.9%	8.8%	3.6%
Nov-22	0.1%	9.4%	35.5%	29.4%	3.2%	3.5%	11.9%	5.2%	1.9%
Dec-22	0.1%	8.1%	30.3%	31.1%	7.2%	3.8%	9.3%	7.4%	2.6%
Jan-23	0.8%	4.0%	33.1%	28.1%	4.1%	4.3%	12.3%	9.7%	3.6%
Feb-23	0.0%	6.7%	28.9%	23.4%	4.0%	7.4%	8.3%	14.9%	6.3%
Mar-23	0.0%	2.4%	62.3%	15.6%	1.8%	2.3%	6.1%	4.9%	4.6%

Source: European APAs and TVs

*2 months tenor also includes 6 weeks and 7 weeks tenors

Tenor is calculated based on ISIN Term of contract data

€STR Traded Notional Reported in the UK by Tenors



Source: European APAs and TVs

*2 months tenor also includes 6 weeks and 7 weeks tenors

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

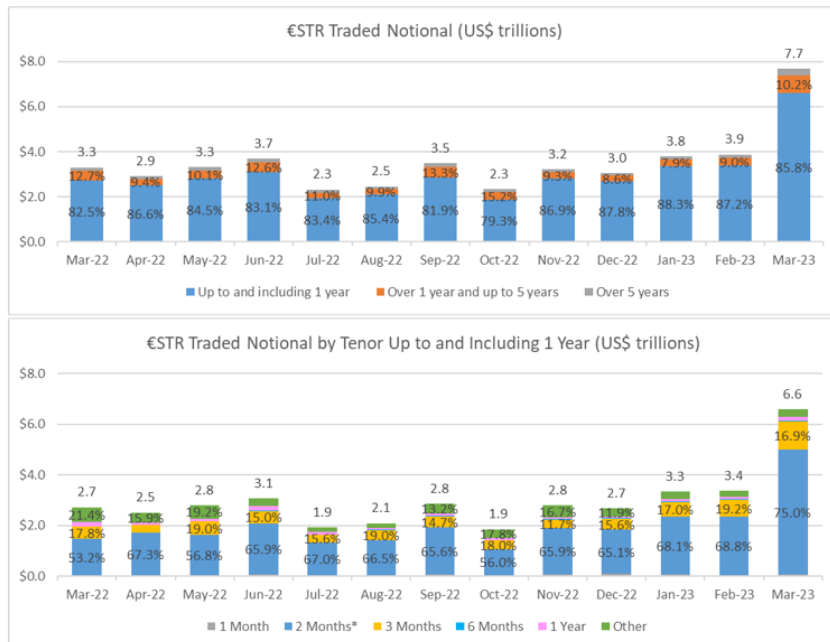
	€STR								
	Tenor ≤ 1 Year							1 Year < Tenor ≤ 5 Years	Tenor > 5 Years
	1 Week	1 Month	2 Months*	3 Months	6 Months	1 Year	Other		
Mar-22	0.0%	2.1%	50.3%	14.9%	1.8%	2.3%	12.4%	10.4%	6.0%
Apr-22	0.0%	1.9%	63.8%	11.5%	0.1%	3.3%	7.3%	8.2%	3.9%
May-22	0.0%	1.5%	62.3%	16.0%	0.8%	1.1%	7.1%	7.8%	3.3%
Jun-22	0.0%	2.1%	75.1%	9.1%	0.3%	1.5%	3.4%	6.1%	2.5%
Jul-22	0.0%	1.3%	72.4%	15.6%	0.5%	1.0%	1.7%	5.0%	2.5%
Aug-22	0.0%	1.1%	63.6%	16.3%	0.3%	1.6%	4.7%	8.3%	4.2%
Sep-22	0.0%	1.0%	71.5%	10.8%	1.5%	1.8%	3.1%	6.7%	3.6%
Oct-22	0.0%	4.3%	53.0%	19.4%	0.7%	2.9%	6.6%	9.3%	3.8%
Nov-22	0.0%	4.2%	65.9%	14.5%	0.5%	1.4%	6.0%	4.2%	3.3%
Dec-22	0.0%	4.4%	66.5%	16.4%	0.8%	1.1%	3.6%	4.6%	2.6%
Jan-23	0.0%	4.6%	61.4%	16.6%	0.8%	1.6%	5.5%	5.3%	4.1%
Feb-23	0.0%	14.1%	46.2%	16.8%	0.4%	3.7%	6.5%	8.1%	4.0%
Mar-23	0.0%	22.3%	55.3%	10.5%	0.4%	1.3%	3.0%	5.1%	2.1%

Source: European APAs and TV's

*2 months tenor also includes 6 weeks and 7 weeks tenors

Tenor is calculated based on ISIN term of contract data

€STR Traded Notional Reported in the US by Tenors



Source: DTCC SDR

*2 months tenor also includes 6 weeks and 7 weeks tenors

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

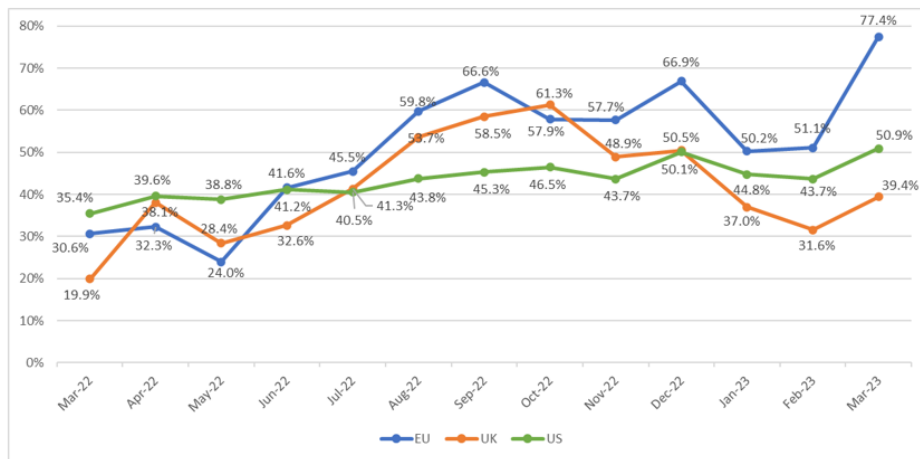
	€STR							
	Tenor ≤ 1 Year						1 Year < Tenor ≤ 5 Years	Tenor > 5 Years
	1 Month	2 Months*	3 Months	6 Months	1 Year	Other		
Mar-22	0.6%	43.9%	14.7%	0.6%	5.1%	17.7%	12.7%	4.9%
Apr-22	0.9%	58.2%	10.0%	0.9%	2.8%	13.8%	9.4%	4.0%
May-22	1.1%	48.0%	16.0%	0.4%	2.7%	16.3%	10.1%	5.3%
Jun-22	1.9%	54.8%	12.5%	0.9%	4.6%	8.5%	12.6%	4.2%
Jul-22	1.8%	55.8%	13.0%	0.3%	4.8%	7.6%	11.0%	5.6%
Aug-22	0.8%	56.8%	16.3%	1.1%	2.6%	7.8%	9.9%	4.6%
Sep-22	1.9%	53.7%	12.0%	0.9%	2.6%	10.8%	13.3%	4.8%
Oct-22	1.4%	44.4%	14.3%	1.3%	3.8%	14.1%	15.2%	5.5%
Nov-22	2.1%	57.2%	10.1%	0.6%	2.3%	14.5%	9.3%	3.8%
Dec-22	3.1%	57.1%	13.7%	1.0%	2.5%	10.4%	8.6%	3.6%
Jan-23	1.6%	60.1%	15.0%	1.4%	2.4%	7.7%	7.9%	3.8%
Feb-23	0.9%	59.9%	16.8%	0.7%	2.2%	6.7%	9.0%	3.8%
Mar-23	0.9%	64.3%	14.5%	0.2%	2.0%	4.0%	10.2%	4.0%

Source: DTCC SDR

*2 months tenor also includes 6 weeks and 7 weeks tenors

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



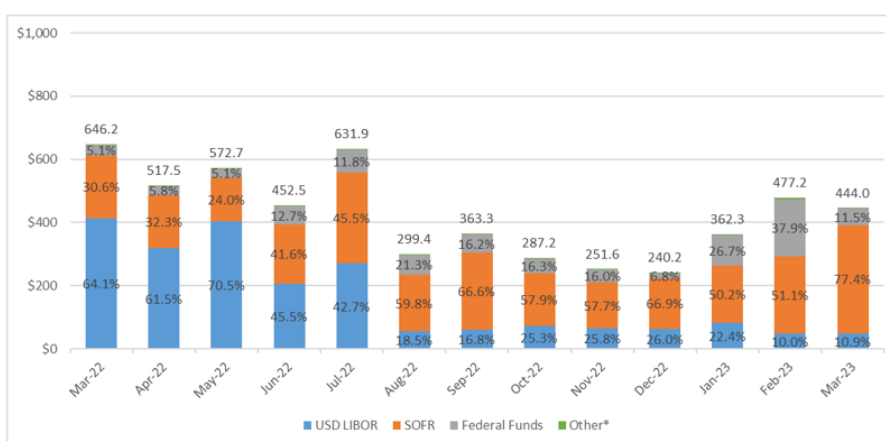
Source: DTCC SDR, European APAs and TVs

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

	EU			UK			US		
	SOFR	USD LIBOR	Fed Funds	SOFR	USD LIBOR	Fed Funds	SOFR	USD LIBOR	Fed Funds
Mar-22	30.6%	64.1%	5.1%	19.9%	21.4%	56.9%	35.4%	38.9%	24.0%
Apr-22	32.3%	61.5%	5.8%	38.1%	19.2%	39.9%	39.6%	40.1%	18.6%
May-22	24.0%	70.5%	5.1%	28.4%	27.3%	41.8%	38.8%	40.8%	18.9%
Jun-22	41.6%	45.5%	12.7%	32.6%	16.1%	49.4%	41.2%	35.2%	22.2%
Jul-22	45.5%	42.7%	11.8%	41.3%	24.4%	31.2%	40.5%	37.4%	20.4%
Aug-22	59.8%	18.5%	21.3%	53.7%	15.3%	27.2%	43.8%	37.3%	17.5%
Sep-22	66.6%	16.8%	16.2%	58.5%	10.5%	26.9%	45.3%	25.7%	27.3%
Oct-22	57.9%	25.3%	16.3%	61.3%	5.1%	29.1%	46.5%	35.0%	16.7%
Nov-22	57.7%	25.8%	16.0%	48.9%	11.9%	36.1%	43.7%	31.1%	23.8%
Dec-22	66.9%	26.0%	6.8%	50.5%	4.0%	40.5%	50.1%	21.3%	26.3%
Jan-23	50.2%	22.4%	26.7%	37.0%	3.2%	57.1%	44.8%	25.4%	27.5%
Feb-23	51.1%	10.0%	37.9%	31.6%	1.4%	64.9%	43.7%	12.2%	42.6%
Mar-23	77.4%	10.9%	11.5%	39.4%	2.8%	52.7%	50.9%	9.4%	38.0%

Source: DTCC SDR, European APAs and TV's

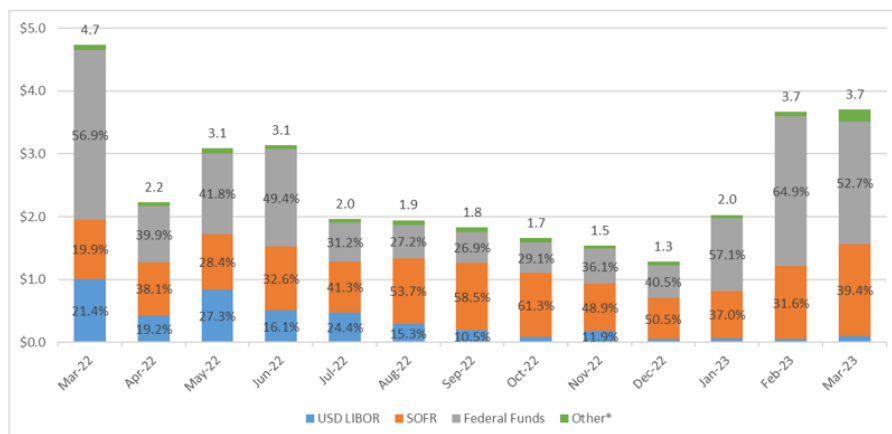
USD-denominated IRD Traded Notional Reported in the EU (US\$ billions)



Source: European APAs and TV's

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

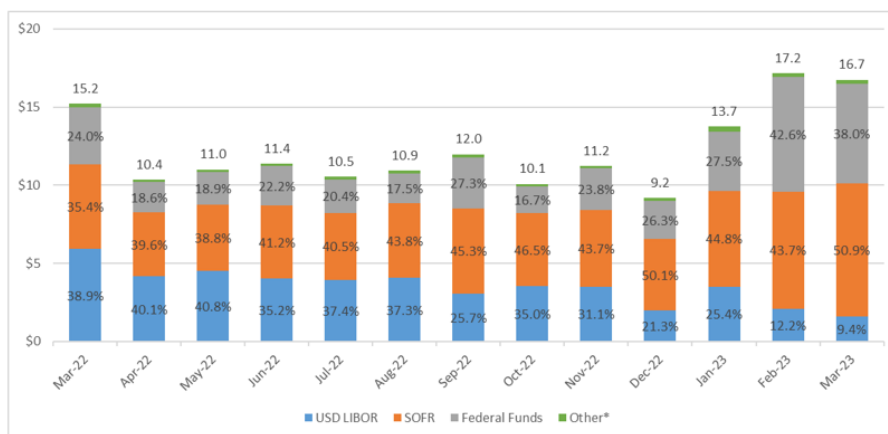
USD-denominated IRD Traded Notional Reported in the UK (US\$ trillions)



Source: European APAs and TV's

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

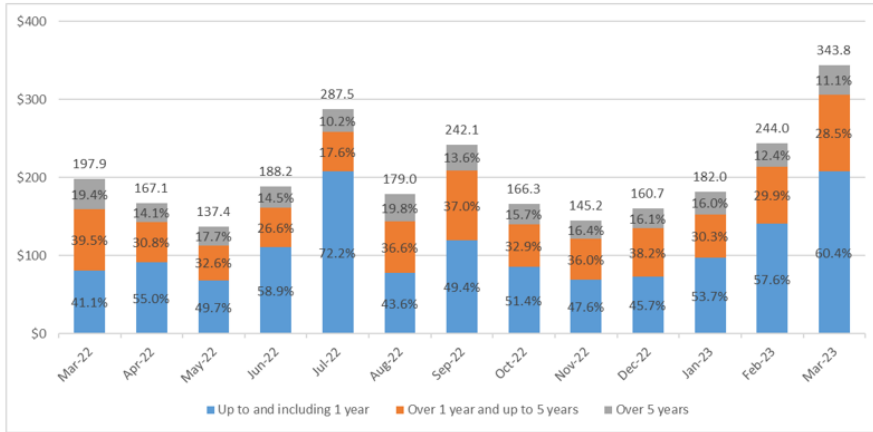
USD-denominated IRD Traded Notional Reported in the US (US\$ trillions)



Source: DTCC SDR

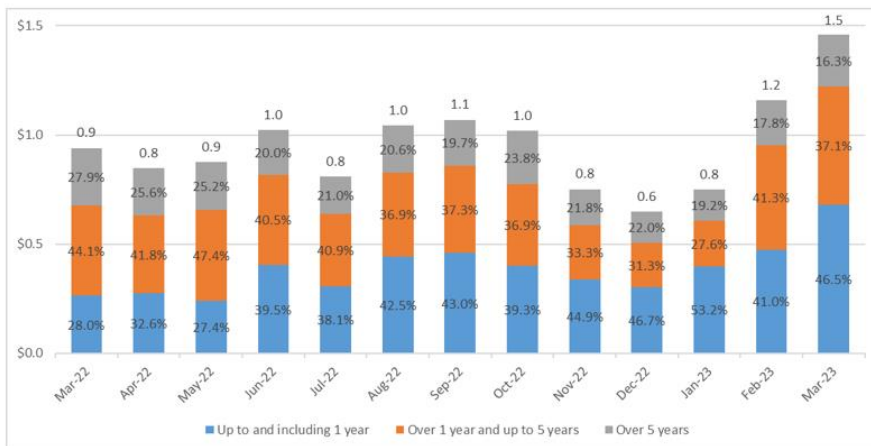
*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR

SOFR Traded Notional Reported in the EU by Tenors (US\$ billions)



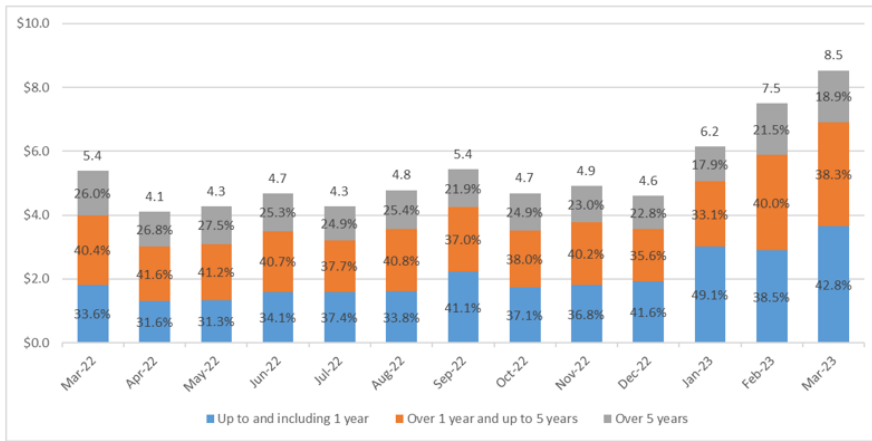
Source: European APAs and TVs

SOFR Traded Notional Reported in the UK by Tenors (US\$ trillions)



Source: European APAs and TVs

SOFR Traded Notional Reported in the US by Tenors (US\$ trillions)



Source: DTCC SDR

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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