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

Monday, 3 April 2023 (13:00-15:00 CET)

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 first 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. *Update by the €STR Task Force*
3. *Update on USD LIBOR survey*
4. *ISDA market data presentation on the transition to RFR/€STR*
5. *Future of the WG*
6. *AOB*

Mr von Moltke expressed his gratitude to the WG members participating in the €STR Task Force for the preparation of a draft guidance on the implementation of EURIBOR fallback provisions in corporate lending products (agenda item 2).

He thanked all the WG members who replied to the USD LIBOR survey that was circulated by the WG secretariat in December 2022 (agenda item 3), mentioning that the financial industry must continue to focus on the transition away from the USD LIBOR as we quickly approach the 30 June 2023 deadline. Mr von Moltke also thanked ISDA for providing an updated presentation on market data regarding the transition to risk-free rates (agenda item 4).

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[1].

2. Update by the €STR Task Force

Mr von Moltke handed over to Mr Simon Goodwin (Chair's Office and Secretariat of the €STR Task Force) and Ms Kam Hessling (Loan Market Association) to present to the WG members the draft

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

guidance by the €STR Task Force focusing on the adoption of EURIBOR fallback provisions for corporate lending products.

Mr Goodwin explained that the €STR Task Force has produced draft guidance that clarifies the May 2021 *Recommendations on EURIBOR fallback trigger events and €STR-based EURIBOR fallback rates*[2] (the May 2021 Recommendations) in relation to corporate lending products with the intention of increasing adoption by market participants. He added that the purpose of the draft guidance is not to revise the May 2021 Recommendations previously published by the WG, rather to promote consistent minimum standards in the market and increase fallback adoption, also acknowledging market developments that took place since May 2021, such as the publication of term €STR rates.

Mr Goodwin gave the floor to Ms Hessling who introduced the content of the draft guidance (circulated to WG members ahead of the meeting). Ms Hessling highlighted the fact that the implementation of EURIBOR fallback provisions in corporate lending products has been slow so far due to the fact that EURIBOR is not scheduled to be discontinued and the previous lack of term €STR rates, which are now available. She also noted that other currency working groups have produced recommendations for conventions specific to the loan market and it would therefore be helpful to have targeted guidance for corporate lending products to enable loan market participants to follow the May 2021 Recommendations. This guidance should facilitate the development of market standards for EURIBOR-referencing corporate lending products, reflecting the best practice which has developed in the international syndicated lending markets.

Mr von Moltke thanked Ms Hessling and Mr Goodwin and opened the floor to comments. Mr Helmut Wacket (ECB) made a comment on the observation shift and lag approach, asking whether the guidance intends to amend or diverge from the May 2021 Recommendations in respect to this matter, also reminding that the May 2021 Recommendations were subject to a public consultation, which in fact had already considered the issues and international developments that the Task Force raised now. Ms Hessling explained that the intention is to highlight the flexibility already embedded in the May 2021 Recommendations, without diverging from them. She noted that, while the May 2021 Recommendations recommend that market participants use the observation shift methodology, they also recognise the use of the lag approach as a robust alternative to the observation shift approach. She added such reminder on the flexibility provided by the May 2021 Recommendations would be helpful in light of the developments in other jurisdictions that are moving towards the lag approach on corporate lending products and would contribute to international consistency.

Mr Wacket also commented on the section of the draft guidance focusing on currently available term €STR rates, suggesting that the wording of this section should reflect the possibility of additional term €STR rates to be published in the future. Ms Hessling confirmed that the WG Secretariat already shared the same comment, and that the intention is to clearly acknowledge the fact that additional term €STR rates may be published in the future. Ms Hessling confirmed that the €STR Task Force will review the draft guidance to ensure that both comments by Mr Wacket are reflected in the text. One member of the WG asked Ms Hessling whether the spread adjustment should be the same for compounded €STR and term €STR rates. She confirmed that this is the approach already defined in the May 2021 Recommendations.

In the absence of further comments, Mr von Moltke asked the WG members whether they were in favour to approve in principle the publication of the guidance, subject to a revision of the text in light of

[2] https://www.ecb.europa.eu/pub/pdf/other/ecb.recommendationsEURIBORfallbacktriggereventsandESTR.202105~9e859b5aa7.en.pdf

the discussion. No objections were raised. Mr von Moltke announced that a period of written comments on the draft guidance will start after the meeting, with the aim of publishing it after such period.

3. Update on USD LIBOR Survey

Mr von Moltke handed over to Mr Michele Mazzoni (ESMA) to deliver the presentation on the USD LIBOR survey. Before starting Mr Mazzoni reminded everyone that the slides to be presented are confidential and should not be further published or distributed. Mr Mazzoni commenced by providing some background on the survey. A similar survey had been produced last year covering both open-ended questions and a data-gathering exercise[3]. The latest edition of the USD LIBOR survey was circulated to the WG members in December 2022 and included a data-gathering exercise with the deadline for replies being end of January 2023.

Similar to the previous survey, the focus of the quantitative questions was only on contracts under the law of EU jurisdictions. The survey included breakdowns by: i) USD LIBOR tenors, ii) type of products (reflecting the classification used by the UK FCA in its consultation papers on LIBOR cessation), and iii) maturity of contracts. Compared to the previous survey from last year the maturity buckets of the contracts were adjusted to reflect the FCA's decision to mandate the publication of 1m, 3m and 6m synthetic USD LIBOR settings until 30 September 2024[4].

Mr Mazzoni mentioned that, similar to the previous survey, the objective of this USD LIBOR survey was to gather market intelligence on the stock of USD LIBOR exposures in the EU. He added that the anonymised, aggregated results of this survey have been shared with the European Commission (which is an observer of the WG). Mr Mazzoni highlighted that under the BMR framework the EU Commission has statutory replacement powers that can be used in case of discontinuation of relevant benchmarks and the results of the USD LIBOR survey can help the Commission to decide any potential action.

This last edition of the survey received 16 answers from WG members, i.e. 2 additional respondents compared to 14 respondents to the previous survey. The comparison between the results of the two surveys showed a material decline of the total number of tough legacy contracts and of the total exposures corresponding to such tough legacy contracts, both for derivatives and cash products. Similar to the previous survey, bilateral and syndicated loans are the asset class with the largest tough legacy exposure, followed by derivatives and bonds. 3m and 6m USD LIBOR settings are still by far the most used tenors in the tough legacy contracts, representing around 90% of tough legacy exposures. Finally, it was noted that around 19% of the aggregated tough legacy exposure is represented by contracts that will reach maturity before 30 September 2024 (cessation date for 1m, 3m and 6m USD LIBOR synthetic settings).

Following the presentation, Mr von Moltke thanked Mr Mazzoni and opened the floor to comments or questions. Mr Rik Hansen (European Commission) took the floor to thank all WG members who participated in this USD LIBOR survey and commented that the findings of the survey were positive and in line with the expectation of the European Commission. He added that, as anticipated in the WG meeting of September 2022[5], the European Commission does not intend to consider the use of the statutory replacement power because of the decision of the UK FCA to compel the publication of the synthetic USD LIBOR settings until 30 September 2024.

[3] See minutes of the WG meeting of September 2022: https://www.esma.europa.eu/sites/default/files/library/esma81-459-72_eur_rfr_wg_-_15_september_2022_meeting_minutes.pdf

[4] https://www.fca.org.uk/news/news-stories/fca-announces-decision-synthetic-us-dollar-libor

[5] See section 2 of the minutes of the WG meeting of September 2022: https://www.esma.europa.eu/sites/default/files/library/esma81-459-72_eur_rfr_wg_-_15_september_2022_meeting_minutes.pdf

As a reply to a question by a WG member, Mr Hansen confirmed that the intention to not exercise the statutory replacement powers also concerned the 12m USD LIBOR, considering that the survey results display a very marginal tough legacy exposure to contracts referencing 12m USD LIBOR.

Before moving to the next agenda item, Mr Mazzoni noted the possibility that other public authorities, including for instance the ECB SSM or UK FCA, might reach out to ESMA should they be interested in the outcome of the USD LIBOR survey; he then asked WG members if they had any objection to share, in case of request by other authorities, the anonymised and aggregated results of the survey as shown in the presentation provided to the WG. The WG members did not object to this proposal.

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

Mr von Moltke (Chair) 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 I 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 from December 2021 to December 2022. 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 that 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 39.2% of total euro-denominated interest rate derivatives (IRD) traded notional in December 2022 compared to 34.4% in December 2021; b) in the UK, €STR-linked traded notional increased to 44.6% from 9.8% over the same period; c) in the US, the percentage of trading activity in €STR increased to 42.4% of total euro-denominated IRD traded notional in December 2022 compared to 27.5% in December 2021. 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 questions. No comments or questions were made by the participants.

5. Future agenda of the WG

Mr von Moltke handed over to Mr Michele Mazzoni (ESMA) to deliver the presentation on the future of the WG. Mr Mazzoni recalled the WG meeting of December 2022, during which the WG achievements were presented and the WG members agreed to finalise the WG work-programme in the course of 2023 focusing on a small number or remaining tasks[6].

Against this background, Mr Mazzoni mentioned that the WG Secretariat is proposing to have two additional meetings, after the discontinuation of panel-based USD LIBOR on 30 June 2023 and before the end of the year, to complete the outstanding deliverables of the WG work programme. Moreover, Mr Mazzoni mentioned that following the end of the WG, ESMA sees benefit in maintaining access to expert market participants and market intelligence. Considering this, it was proposed to keep the network and contact lists of stakeholders for ad-hoc activities related to benchmarks. Examples of these activities could be ad-hoc surveys on topical issues (e.g. end of synthetic LIBOR settings, adoption of EURIBOR fallbacks), as well as roundtables organised by ESMA focusing on interest rates and other benchmarks related matters, such as the evolving regulatory environment in the EU.

[6] See section 3 of the minutes of the WG meeting of December 2022: https://www.esma.europa.eu/sites/default/files/library/EUR_RFR_WG_-_13_December_2022_Meeting_minutes.pdf

Mr von Moltke thanked Mr Mazzoni and opened the floor for questions. One member expressed the concern about the message delivered to the market in relation to WG being wound up. Mr von Moltke confirmed that this aspect is noted and careful consideration will be given to communicate how the WG has fulfilled its mission. One member expressed its support to contributing to future roundtables and ad-hoc tasks on benchmarks after the end of the WG. Another comment from a WG member was whether some ongoing discussions within the €STR Task Force (e.g., those around the credit adjustment spread) would be tackled as part of the outstanding deliverable of the WG work programme. Mr Goodwin confirmed that open topics relating to the WG's deliverables will be discussed at the €STR Task Force. It was noted earlier in the meeting that the approach to credit spread adjustments specifically is already defined in the May 2021 Recommendations ie same for compounded €STR and term €STR rates.

6. AOB.

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. Mrs Iliana Lani (ESMA) suggested the possibility for the last meeting of the WG to be in-person.

List of participants

Participant's organisation	Name of participant
Chairperson	
Deutsche Bank	Mr James von Moltke
Chair's office	
Deutsche Bank	Mr Simon Goodwin
Deutsche Bank	Ms Queenie Choong
Deutsche Bank	Mr Alex Wilson
Voting members	
Banco Sabadell	Ms Marta Riveira Cazorla
Bank of Ireland	Mr Barry Moran
Bank of Ireland	Mr David Tilson
BBVA	Ms Ana Rubio
BBVA	Mr Ignacio Ollero
BME Clearing	Mr Emilio Gamarra Mompeán
BME Clearing	Ms Monica Blanco Vieito
BNP Paribas	Ms Dominique Le Masson
BNP Paribas	Mr David Gorans
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
Crédit Agricole	Mr Yann Marhic
Deutsche Bank	Mr Christian Gau
DZ Bank	Mr Christoph Block
DZ Bank	Mr Philipp Nordloh
Erste Group	Mr Rene Brunner
Erste Group	Mr Neil Mcleod
Eurobank SA	Mr Dimitris Psichogios
Eurobank SA	Mr Theodoros Stamatiou
European Investment Bank	Mr Nikolaos Tzoldos
ING Bank	Ms Stephanie Broks
ING Bank	Mr Jaap Kes
Intesa Sanpaolo	Ms Maria Cristina Lege
KfW Bankengruppe	Mr Markus Schmidtchen
LCH Group	Mr Davide Tortora

Santander	Mr Santiago Lobato Piñana
Santander	Mr Javier Pareja Marta
Société Générale	Mr Stephane Cuny

Non-voting members

European Money Markets Institute	Ms Petra de Deyne
International Capital Market Association	Ms Katie Kelly
International Swaps and Derivatives Association	Mr Rick Sandilands
International Swaps and Derivatives Association	Ms Olga Roman
Loan Market Association	Mr Keith Taylor
Loan Market Association	Ms Kam Hessling

Observers

European Central Bank	Mr Helmut Wacket
European Central Bank	Mr Pascal Nicoloso
European Central Bank	Ms Anne-Lise Nguyen
European Commission	Mr Rik Hansen
European Commission	Mr Antoine Picot
European Commission	Ms Mehtap Oelger
European Securities and Markets Authority	Ms Iliana Lani

Secretariat

European Securities and Markets Authority	Mr Michele Mazzoni
European Securities and Markets Authority	Mr Cristian Weststeijn
European Securities and Markets Authority	Mr Lelio Lapresa
European Securities and Markets Authority	Mr Enos Barkas

Annex I – ISDA presentation under item 3 of the agenda

March 2023

Analysis of IRD Trading Activity by Underlying Reference Rates and Tenors

ISDA Safe, Efficient Markets

Executive Summary

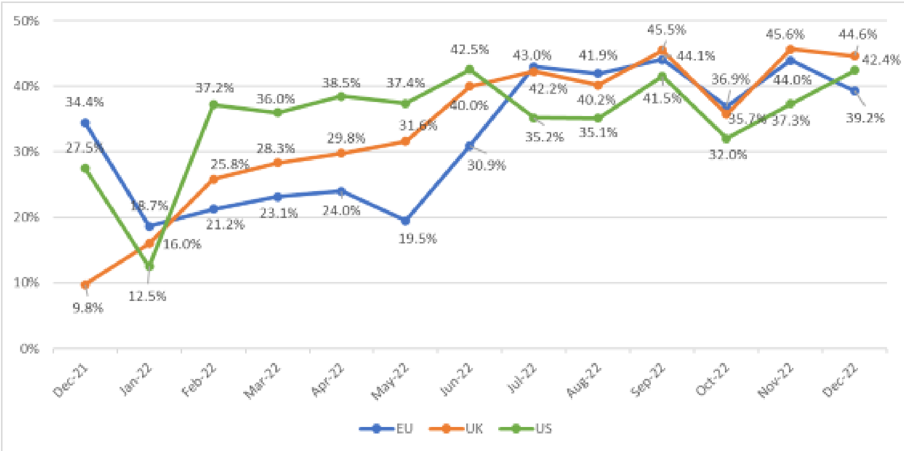
€STR Adoption

- **In the EU, the percentage of trading activity in €STR reached 39.2% of total euro denominated IRD traded notional in December 2022 compared to 34.4% in December 2021.**
- **In the UK, €STR-linked traded notional increased to 44.6% from 9.8% over the same period.**
- **In the US, the percentage of trading activity in €STR increased to 42.4% of total euro denominated IRD traded notional in December 2022 compared to 27.5% in December 2021.**
- **Most transactions referencing €STR were short-term. In December 2022, 90.2% of €STR-linked IRD traded notional in the EU, 92.8% in the UK and 87.8% 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 66.8% of total US dollar-denominated IRD traded notional in December 2022 compared to 25.6% in December 2021.**
- **In the UK, SOFR-linked traded notional increased to 60.5% from 16.6% over the same period.**
- **In the US, the percentage of trading activity in SOFR increased to 49.9% of total US dollar-denominated IRD traded notional in December 2022 compared to 22.5% in December 2021.**
- **In December 2022, 46.0% of SOFR-linked IRD traded notional in the EU, 46.9% in the UK and 41.8% in the US had a tenor up to and including one year.**

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



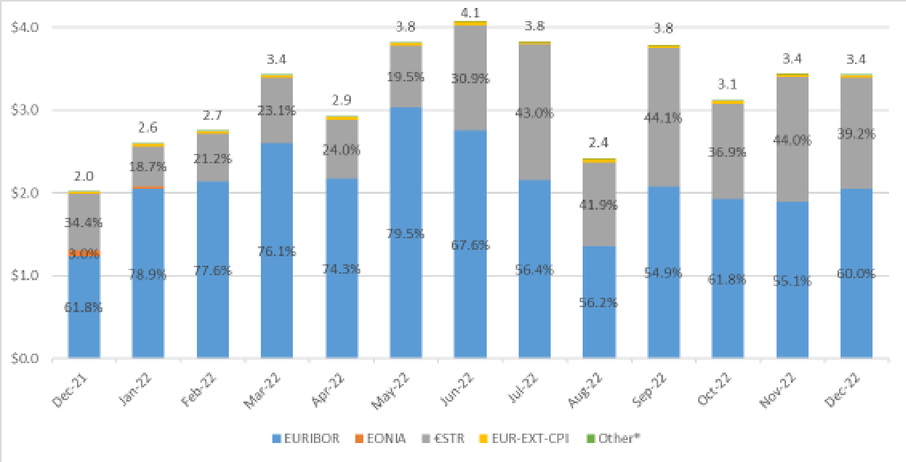
Source: DTCC SDR, European APAs and TVs

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

	EU			UK			US		
	€STR	EONIA	EURIBOR	€STR	EONIA	EURIBOR	€STR	EONIA	EURIBOR
Dec-21	34.4%	3.0%	61.8%	9.8%	0.5%	79.4%	27.5%	0.0%	67.9%
Jan-22	18.7%	1.2%	78.9%	16.0%	0.5%	76.5%	12.5%	0.0%	66.3%
Feb-22	21.2%	0.0%	77.6%	25.8%	0.0%	67.0%	37.2%	0.0%	61.1%
Mar-22	23.1%	0.0%	76.1%	28.3%	0.0%	65.7%	36.0%	0.0%	62.7%
Apr-22	24.0%	0.0%	74.3%	29.8%	0.0%	64.2%	38.5%	0.0%	60.1%
May-22	19.5%	0.0%	79.5%	31.6%	0.0%	61.9%	37.4%	0.0%	61.1%
Jun-22	30.9%	0.0%	67.6%	40.0%	0.0%	55.0%	42.5%	0.0%	55.7%
Jul-22	43.0%	0.0%	56.4%	42.2%	0.0%	52.2%	35.2%	0.0%	63.1%
Aug-22	41.9%	0.0%	56.2%	40.2%	0.0%	53.9%	35.1%	0.0%	63.3%
Sep-22	44.1%	0.0%	54.9%	45.5%	0.0%	49.5%	41.5%	0.0%	57.2%
Oct-22	36.9%	0.0%	61.8%	35.7%	0.0%	58.0%	32.0%	0.0%	66.1%
Nov-22	44.0%	0.0%	55.1%	45.6%	0.1%	48.6%	37.3%	0.0%	61.0%
Dec-22	39.2%	0.0%	60.0%	44.6%	0.0%	49.5%	42.4%	0.0%	52.5%

Source: DTCC SDR, European APAs and TVs

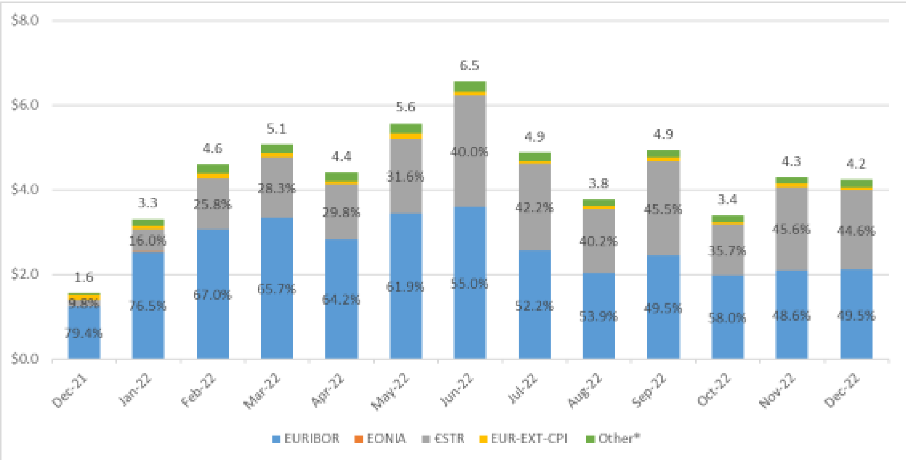
Euro-denominated IRD Traded Notional Reported in the EU (US$ trillions)



Source: **European APAs and TVs**

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

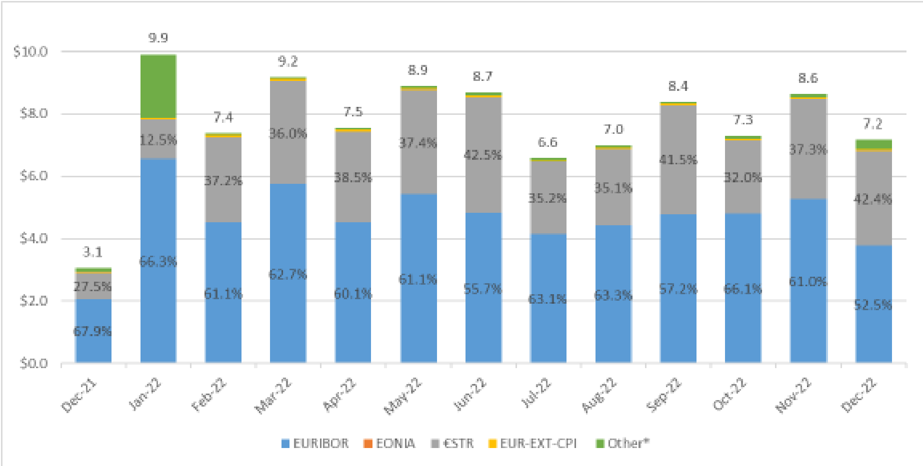
Euro -denominated IRD Traded Notional Reported in the UK (US$ trillions)



Source: **European APAs and TVs**

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

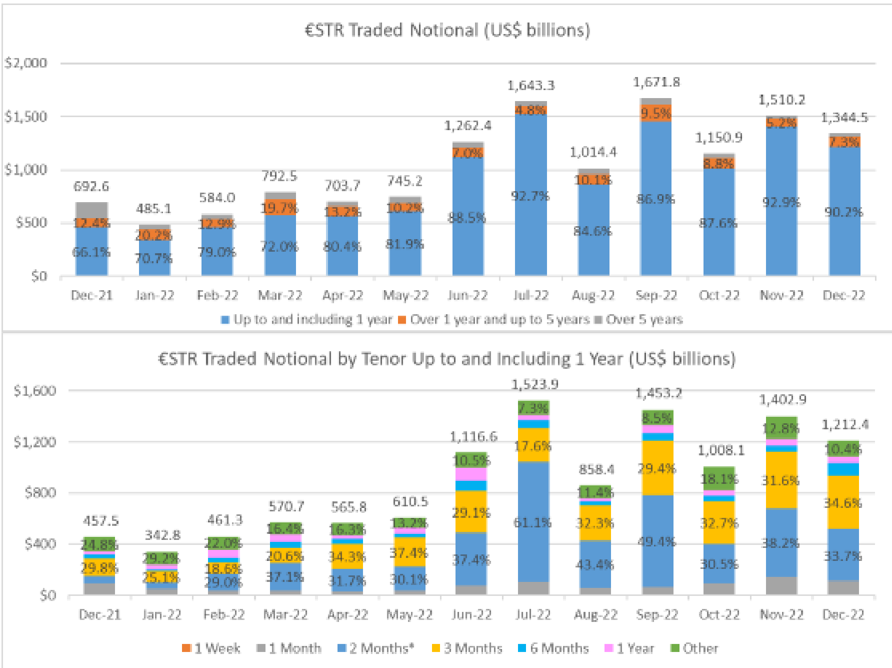
Euro -denominated IRD Traded Notional Reported in the US (US$ trillions)



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

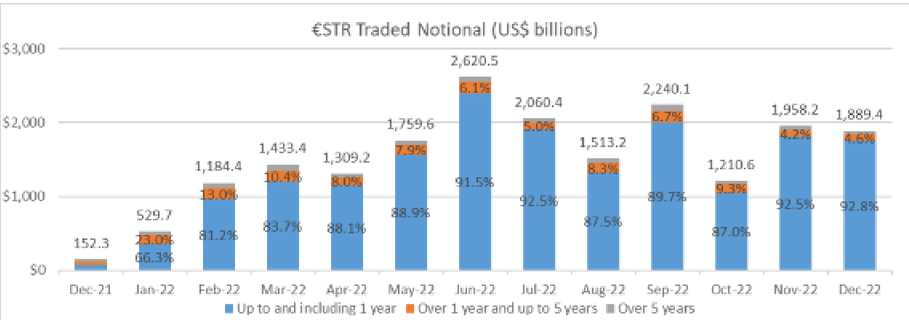
*2 months tenor also includes 6 weeks and 7 weeks tenors

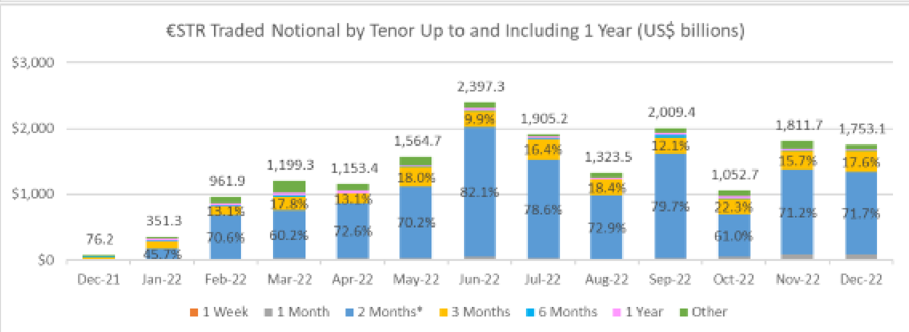
Percentage of €STR Traded Notional Reported in the EU by Tenors

	€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		
Dec-21	0.9%	12.6%	8.3%	19.7%	5.2%	3.0%	16.4%	12.4%	21.5%
Jan-22	0.0%	10.6%	10.3%	17.7%	3.6%	7.8%	20.6%	20.2%	9.1%
Feb-22	0.0%	6.2%	22.9%	14.7%	6.7%	11.1%	17.3%	12.9%	8.1%
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%	3.5%
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%	30.4%	31.2%	7.2%	3.8%	9.4%	7.3%	2.5%

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





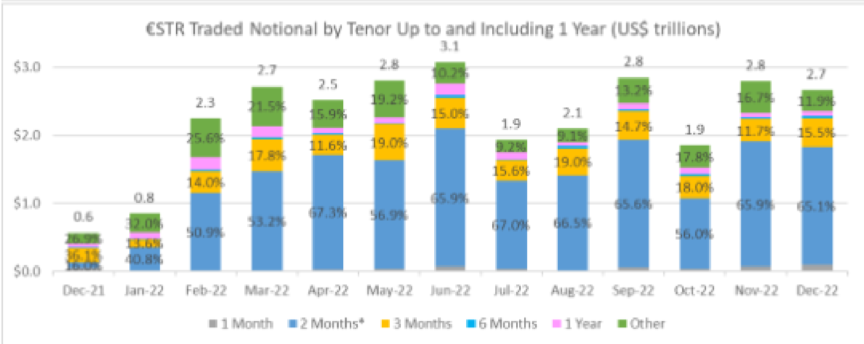
Source: European APAs and TVs
*2 months tenor also includes 6 weeks and 7 weeks tenors

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		
Dec-21	0.0%	3.0%	3.0%	20.2%	2.1%	5.8%	15.9%	28.5%	21.5%
Jan-22	0.0%	1.7%	30.3%	20.2%	2.5%	6.5%	5.0%	23.0%	10.7%
Feb-22	0.0%	0.7%	57.3%	10.6%	1.2%	2.7%	8.7%	13.0%	5.8%
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%	63.9%	11.5%	0.1%	3.3%	7.3%	8.0%	3.9%
May-22	0.0%	1.5%	62.4%	16.0%	0.8%	1.1%	7.0%	7.9%	3.2%
Jun-22	0.0%	2.1%	75.1%	9.1%	0.3%	1.5%	3.4%	6.1%	2.4%
Jul-22	0.0%	1.3%	72.7%	15.2%	0.5%	1.0%	1.7%	5.0%	2.5%
Aug-22	0.0%	1.1%	63.8%	16.1%	0.3%	1.6%	4.6%	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%

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 US by Tenors



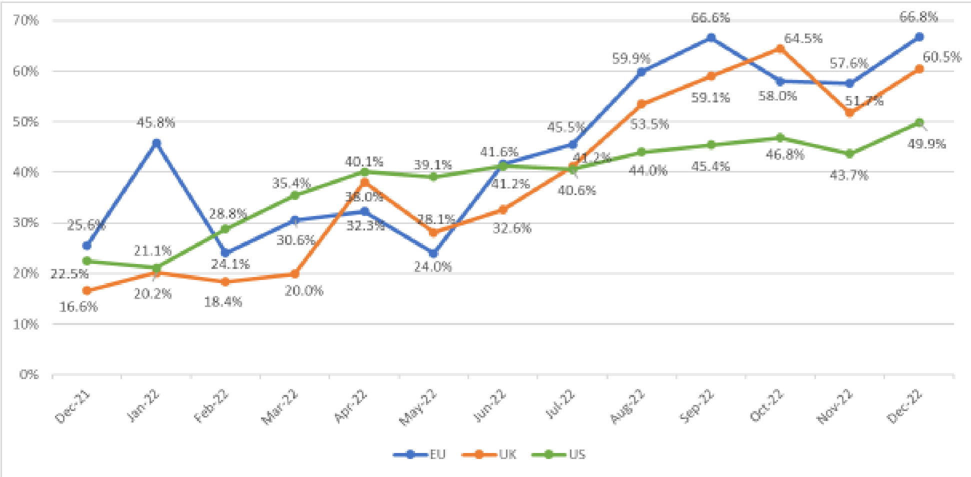
Source: DTCC SDR
*2 months tenor also includes 6 weeks and 7 weeks tenors

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		
Dec-21	5.4%	10.8%	24.4%	1.6%	7.2%	18.2%	22.0%	10.4%
Jan-22	0.8%	27.9%	9.3%	1.0%	7.5%	21.9%	21.7%	9.9%
Feb-22	0.3%	41.8%	11.4%	1.0%	6.4%	21.0%	12.9%	5.1%
Mar-22	0.6%	43.9%	14.7%	0.6%	5.0%	17.7%	12.7%	4.9%
Apr-22	0.9%	58.3%	10.0%	0.9%	2.8%	13.8%	9.4%	4.0%
May-22	1.1%	48.1%	16.0%	0.3%	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%	55.9%	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%	53.8%	12.0%	0.9%	2.6%	10.8%	13.3%	4.8%
Oct-22	1.5%	44.4%	14.3%	1.3%	3.8%	14.1%	15.2%	5.5%
Nov-22	2.1%	57.3%	10.1%	0.6%	2.3%	14.5%	9.3%	3.8%
Dec-22	3.1%	57.1%	13.6%	1.0%	2.4%	10.4%	8.6%	3.6%

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



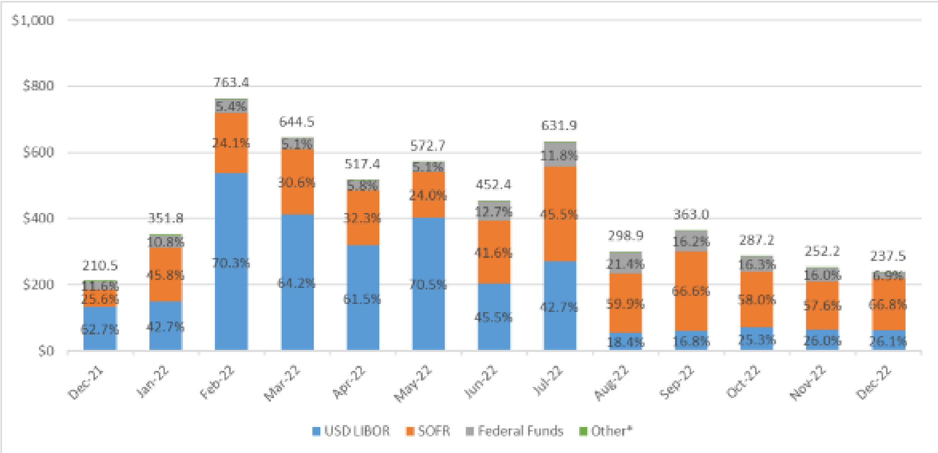
Source: DTCC SDR, European APAs and TVs

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

	EU		UK		US	
	SOFR	USD LIBOR	SOFR	USD LIBOR	SOFR	USD LIBOR
Dec-21	25.6%	62.7%	16.6%	44.5%	22.5%	52.2%
Jan-22	45.8%	42.7%	20.2%	16.5%	21.1%	50.4%
Feb-22	24.1%	70.3%	18.4%	25.9%	28.8%	45.0%
Mar-22	30.6%	64.2%	20.0%	21.7%	35.4%	38.9%
Apr-22	32.3%	61.5%	38.0%	19.3%	40.1%	40.7%
May-22	24.0%	70.5%	28.1%	27.3%	39.1%	41.2%
Jun-22	41.6%	45.5%	32.6%	16.2%	41.2%	35.4%
Jul-22	45.5%	42.7%	41.2%	24.4%	40.6%	38.1%
Aug-22	59.9%	18.4%	53.5%	15.3%	44.0%	37.6%
Sep-22	66.6%	16.8%	59.1%	10.7%	45.4%	25.8%
Oct-22	58.0%	25.3%	64.5%	5.4%	46.8%	35.5%
Nov-22	57.6%	26.0%	51.7%	12.6%	43.7%	31.2%
Dec-22	66.8%	26.1%	60.5%	5.0%	49.9%	20.9%

Source: DTCC SDR, European APAs and TVs

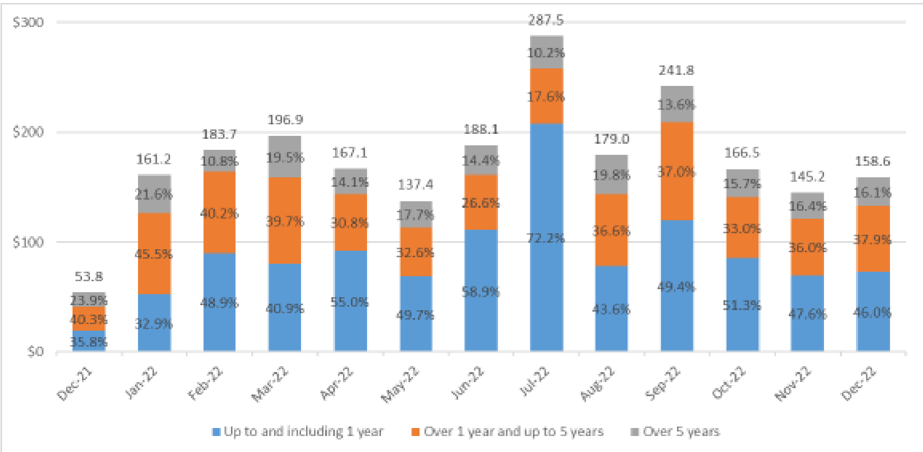
USD -denominated IRD Traded Notional Reported in the EU (US$ billions)



Source: European APAs and TVs

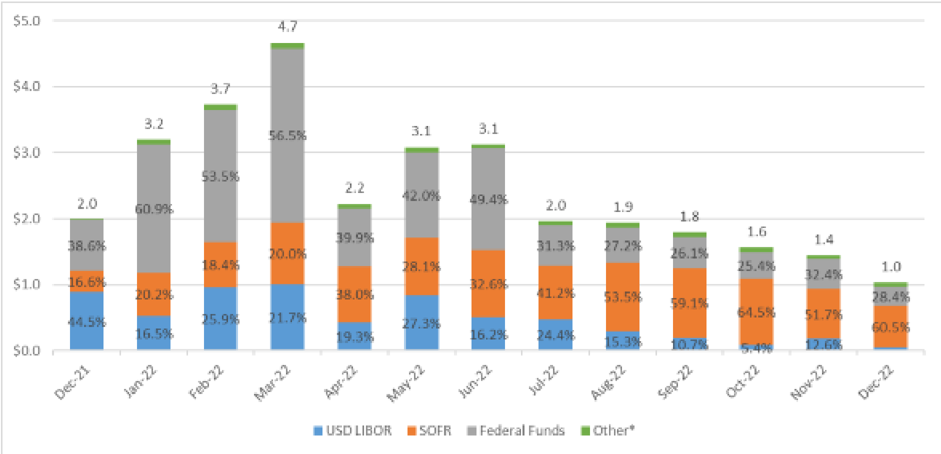
*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR

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



Source: European APAs and TVs

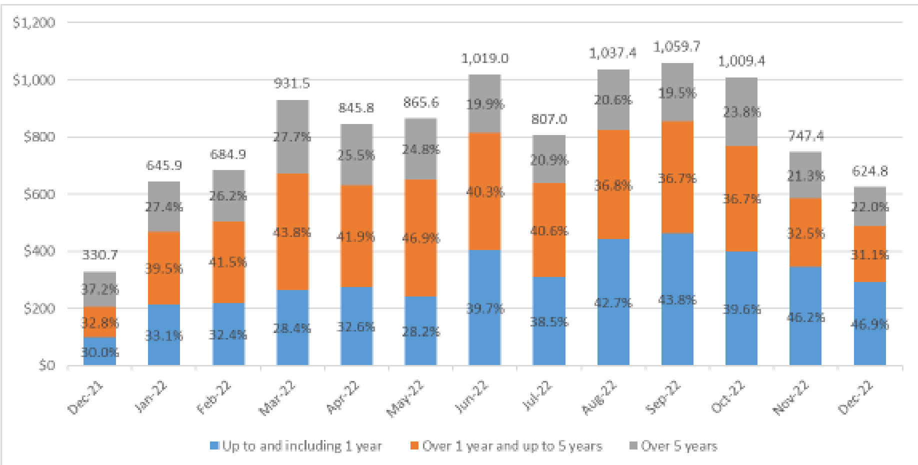
USD- denominated IRD Traded Notional Reported in the UK (US$ trillions)



Source: European APAs and TVs

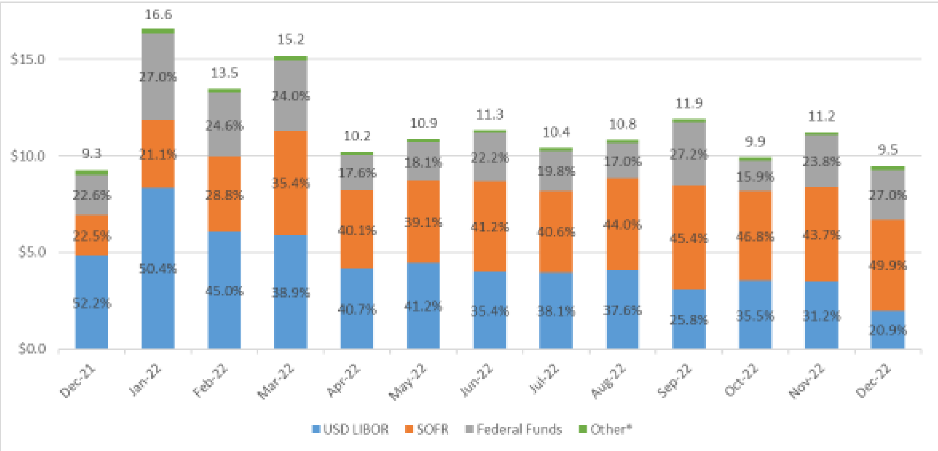
*Other includes other underlying reference rates. SOFR/USD LIBOR and SOFR/Fed Funds swaps are included under SOFR

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



Source: European APAs and TVs

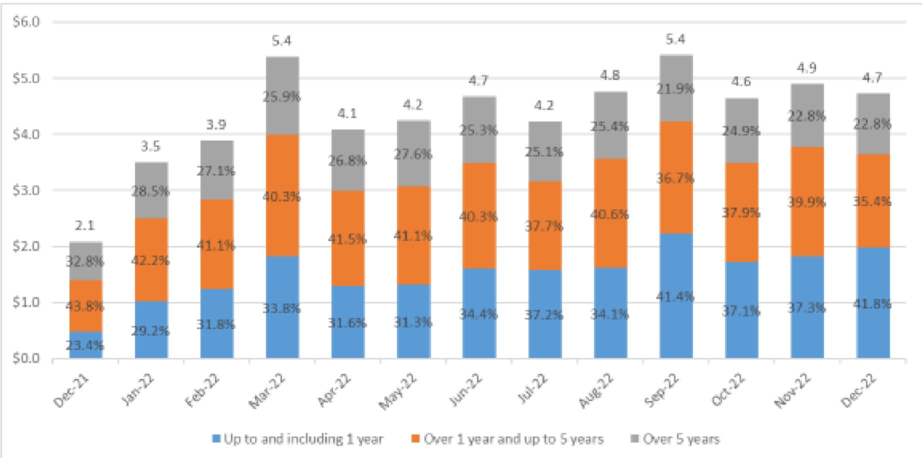
USD -denominated IRD Traded Notional Reported in the US (US$ trillions)



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 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:

Olga Roman
Head of Research
International Swaps and Derivatives Association, Inc. (ISDA)
Office: 212-901-6017
oroman@isda.org

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Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 990 member institutions from 78 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org
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