€STR forward-looking term rate

Status update



Introduction

Methodology is subject to further refinement based on evolution of market structure and liquidity

Overview of Refinitiv: Our strengths



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



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



Established regulated benchmarks and indices business responsible for some the industries most widely used benchmarks including WM/R & CDOR



Stable business with strong financials (>\$3.2BN H1 2020 revenue at 38% adjusted EBITDA margin) ensures the long run provision of the rates



Strategic alignment: Administer a forward-looking Term SONIA and expressed interest to administer a comparable rate in USD (Term SOFR)

Refined Term €STR methodology overview

1

- Median of a series of mid rates snapped mid-morning from electronic executable quotes on interdealer MTF CLOBs¹
- Instruments will be a combination of centrally cleared, spot starting €STR OIS and EONIA OIS subject to a predetermined minimum volume

2

- Median of a series of mid rates snapped mid-morning from electronic streaming quotes on an institutional platform¹
- Instruments will be centrally cleared, spot starting €STR
 OIS subject to a predetermined minimum volume

3



Published daily in 1M, 3M, 6M and 12M tenors

1. 20 minute collection window (subject to confirmation); subject to maximum bid-ask spread checks and minimum volume requirements



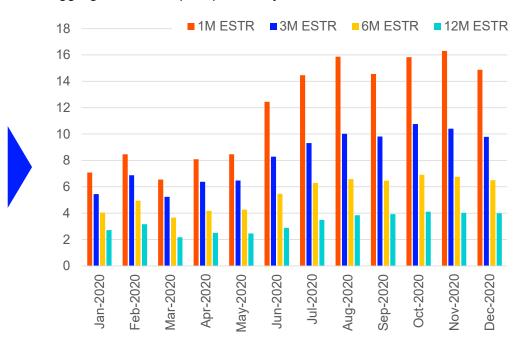
Market liquidity

Level 1 Interdealer €STR and EONIA OIS liquidity

- Although the voice brokered market has liquidity it may not be a suitable benchmark input
 - Activity concentrated in EONIA, but insufficient trades to create a robust benchmark; limited €STR OIS activity
 - Voice brokered quotes are subject to manipulation risk
- Currently there is very limited liquidity in electronic €STR and EONIA OIS interdealer markets⁵
 - No liquidity in interdealer electronic CLOBs for €STR OIS
 - Very limited liquidity on a single interdealer electronic CLOB for select tenors of EONIA OIS
- Outlook for liquidity formation in electronic interdealer €STR and EONIA OIS markets is unclear
 - One platform expects some improvement in liquidity in the near term
 - Timeline for significant improvements in €STR OIS liquidity is unclear but likely to develop over the course of 2021 based on client demand and official sector encouragement

Level 2 Institutional €STR OIS liquidity

Daily average streaming quote volume for €STR OIS Aggregate volume (€BN), January – December 20201,2,3,4



^{1.} Daily at 10:50CET; 2. LCH cleared products; 3. Bid-side only, as ask-side is almost identical; 4. Sum of individual streaming quotes provided by each dealer; 5. Reflects discussions with 3 major interdealer brokers (TP ICAP, Tradition, BGC Partners)

Source: Tradeweb, Refinitiv analysis;

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Market participant composition

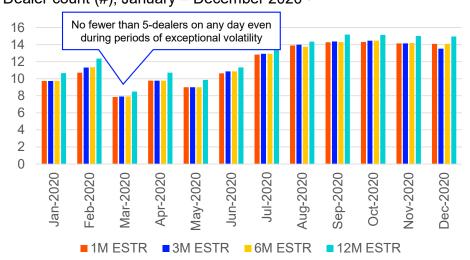
Level 1 Interdealer €STR and EONIA OIS liquidity

- Currently there is very limited participation in the electronic interdealer markets
 - No participants in electronic €STR OIS
 - 2 European dealers providing liquidity on EONIA OIS on one platform
- Once electronic €STR OIS and EONIA OIS markets fully develop. we expect there will be a diverse pool of participants providing committed quotes, which will be comparable to what's available in the FURIBOR OIS market

1. Daily at 10:50CET; 2. LCH cleared products; 3. Bid-side only, as ask-side is almost identical

Level 2 Institutional €STR OIS liquidity

Daily average number of dealers quoting €STR OIS Dealer count (#), January – December 2020^{1,2}



- 23 unique liquidity providers (15 EMEA, 6 AM, 2 APAC)
 - Mostly liquidity providers are universal banks
 - ~14 banks actively streaming prices at any given time
- ~60 buy-side firms (asset managers, bank treasury, banks and options desks, pension funds, hedge funds, prop desks)
- Range of 5+ participants providing liquidity during stress periods REFINITIV

Source: Tradeweb, Refinitiv analysis;

Implementation approach and timeline

Project status

Topic	Approach	Status / next steps
Data licensing	 Extend existing license agreements with IDBs and Tradeweb for use of €STR and EONIA OIS in Term €STR benchmark 	 Satisfactory completion of sample data review Commence contract negotiations with IDBs and Tradeweb for input data; leverage existing agreement already as precedent
Data integration	Extend existing technical connectivity between Tradeweb and IDBs to Refinitiv benchmark calculation engine	 Integrated fallback data already connected Validate existing connectivity is suitable by reconfirming data model and technical interface Implement levels 1 & 2 integration
Technology and product	Enhance existing cloud based calculation engine	 Implement methodology rules into calculation engine Implement surveillance and monitoring rules into surveillance tool Enable Term €STR on terminals, feeds & website Distribute Term €STR via outbound partners
Operations	Leverage established content operations team	 Test calculation engine output behaviour Document processes Complete content operations training
Compliance and governance	 Administer Term €STR rate using existing BMR compliant regulated entity, Refinitiv Benchmark Services UK Ltd (RBSL) 	 Complete EU BMR Checklist and implement control framework Complete governance pathway to ensure all approvals are obtained Agree migration of Term €STR into RBSL entity with regulatory bodies

Forecast timeline

- Development of sufficient interdealer electronic liquidity:
 Timeline is unclear and likely to benefit from official sector encouragement
- Creation of prototype rate: 2 months
- Industry testing of prototype, refinement of methodology and launch of production rate: 4 months



Thank you

