

Term Risk-Free Rates

London Stock Exchange Group

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LSEG – A trusted partner in financial markets

The London Stock Exchange Group is a **global market infrastructure company**.

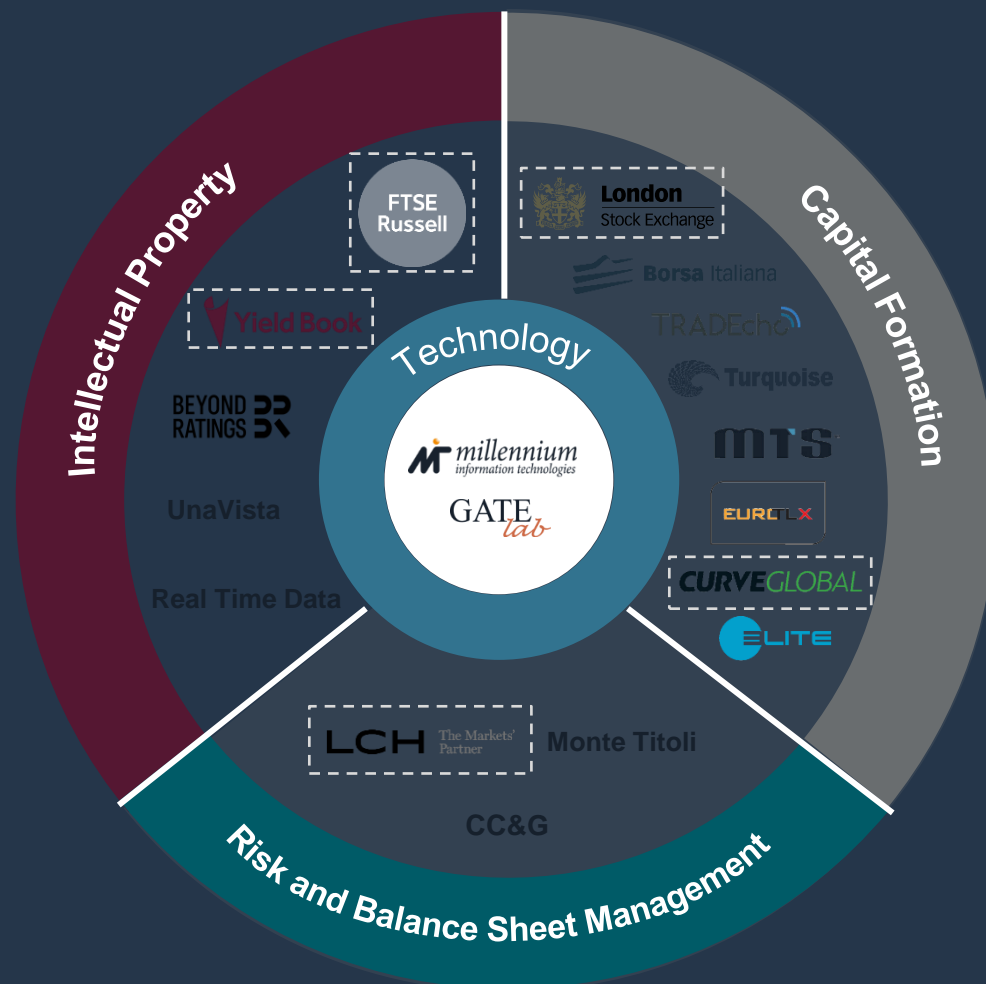
The group is formed of **interconnected business areas**:

1. Intellectual Property;
2. Risk and Balance Sheet Management; and
3. Capital Formation.

Our businesses are fundamental to **the stability of critical global market infrastructure**.

LIBOR transition affects many of our businesses and we have a key role to play in supporting both the regulatory agenda and our clients.

As a Group we are **committed to supporting the transition** to a more reliable and robust interest rate benchmarking environment.



Recap: Term Risk-Free Rates

Working Groups select o/n RFRs

- National/Regional Working Groups established.
- RFRs identified and selected.
- Adoption promoted and liquidity developing.

The Case for Term Rates

- Key differences between selected RFRs and LIBORs:
 - risk-free vs. credit component
 - overnight vs. forward-looking term rates
- Compounded in arrears versions of the overnight rate are different from forward looking term rates, and for certain LIBOR replacement use cases forward-looking term RFRs are needed.
- For a 'synthetic LIBOR' solution the FCA has stated publicly that the most obvious way to create a 'synthetic LIBOR' is to take a forward looking term rate based on the relevant RFR and add a fixed spread (credit risk) building on the ISDA consensus in derivatives.

UK Market Developments to support Term Rate creation

- In the UK, spot OIS committed quotes on CLOBs were identified as the preferred TSRR input data.¹
- IDBs have since set up the technical capabilities to support this market.
- Market maker commitments to stream prices and support market development.
- IDBs making CLOB data available to all interested Benchmark Administrators.

¹ the Bank of England Working Group on Sterling Risk Free Rates consultation on Term SONIA Reference Rates (TSRRs)

LSEG Approach

Key Principles

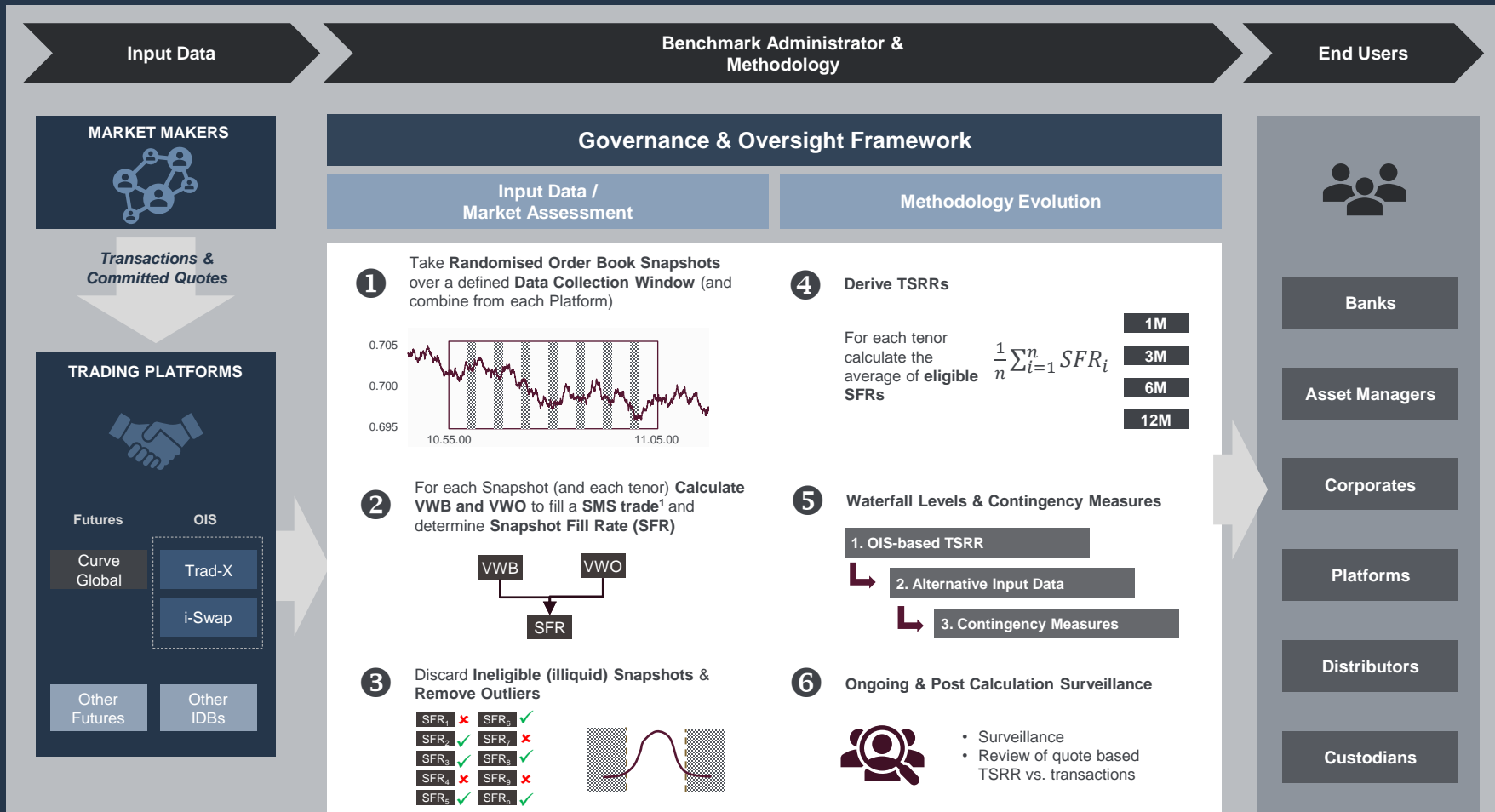
- LSEG is proposing an approach to Term SONIA Reference Rate (TSRR) determination that promotes the availability of the highest quality TSRR benchmarks to the market on appropriate commercial terms on a sustainable basis
- In our view, an industry-wide solution is needed that aligns incentives of multiple market participants. Key elements needed to achieve this are:
 - 1) **Methodology:** a transaction-ready, robust benchmark methodology that caters for a range of market participants and uses cases. Pre-defined Contingency Plans must be comprehensive
 - 2) **Governance:** a governance structure that supports evolution of the methodology and effectively manages potential conflicts of interest
 - 3) **Commercial Model:** an approach that fosters the long term availability of term rates on appropriate commercial terms and adequately incentivises submitters and end users

Regional Approaches

- Different regional approaches to term rates may require variations in methodology configuration, input data, governance etc. but we don't expect to change our overarching design principles.
 - In the US, the ARRC has issued an RFP to identify a vendor for Term SOFR,
 - In Europe, the Euro RFR Working Group has invited potential benchmark administrators to discuss Term ESTR creation, and
 - In the UK, multiple benchmark providers have begun publishing indicative Term SONIA rates.

Methodology Overview: FTSE TSRRs

Term SONIA is “a measure of the market’s current expectation of compound SONIA over the designated term period”



Note: Indicative FTSE TSRRs are now available daily on the FTSE Russell website with history from 31 March 2020

¹ Standard Market Size (SMS). For each TSRR tenor, we define a standard trade size for which to compute the VWB and VWO prices

Methodology Details: FTSE TSRRs

The methodology uses a waterfall approach, with separate TSRRs calculated for each identified input data type in a consistent and coherent manner, using a methodology appropriate for that data type. This enables the final methodology to be dynamic, adapting according to changing market dynamics to best measure the Underlying Interest. This can evolve in a transparent and tractable manner as markets develop.

Further information on the Methodology can be found in our “Beta” Methodology Overview on our website.¹

“Beta” TSRR Waterfall

Level	Input Data	Current Sources	High Level Methodology
Level 1	Spot-starting SONIA OIS committed quotes	iSwap Trad-X	<ul style="list-style-type: none"> - Set a 10-minute time window for data collection around 11am (10.55.00am – 11.05.00am). - Collect 30 snapshots of live order book information. A random snapshot within the first 20 seconds of the collection window followed by a further 29 snapshots every 20 seconds thereafter. - Combine snapshot order book information to create a single order book. - Compute the price of a standard market size (SMS) swap in each snapshot (remove ineligible snapshots where the SMS cannot be filled). - Discard outliers and average to determine TSRRs.
Level 1+	Spot-starting SONIA OIS committed quotes	iSwap Trad-X	<ul style="list-style-type: none"> - Extend time window and repeat L1 calculation
Level 2	SONIA OIS quotes or SONIA Futures prices	N/A	<ul style="list-style-type: none"> - OIS quotes – see L1 Methodology. - Futures: Use current futures prices and a modelling approach to infer forward SONIA rates.
Level 3	Contingency Measures	N/A	<ul style="list-style-type: none"> - Roll the previous day's rate. <p>Note: monitoring the behaviour of the indicative TSRR rates to refine approach.</p>

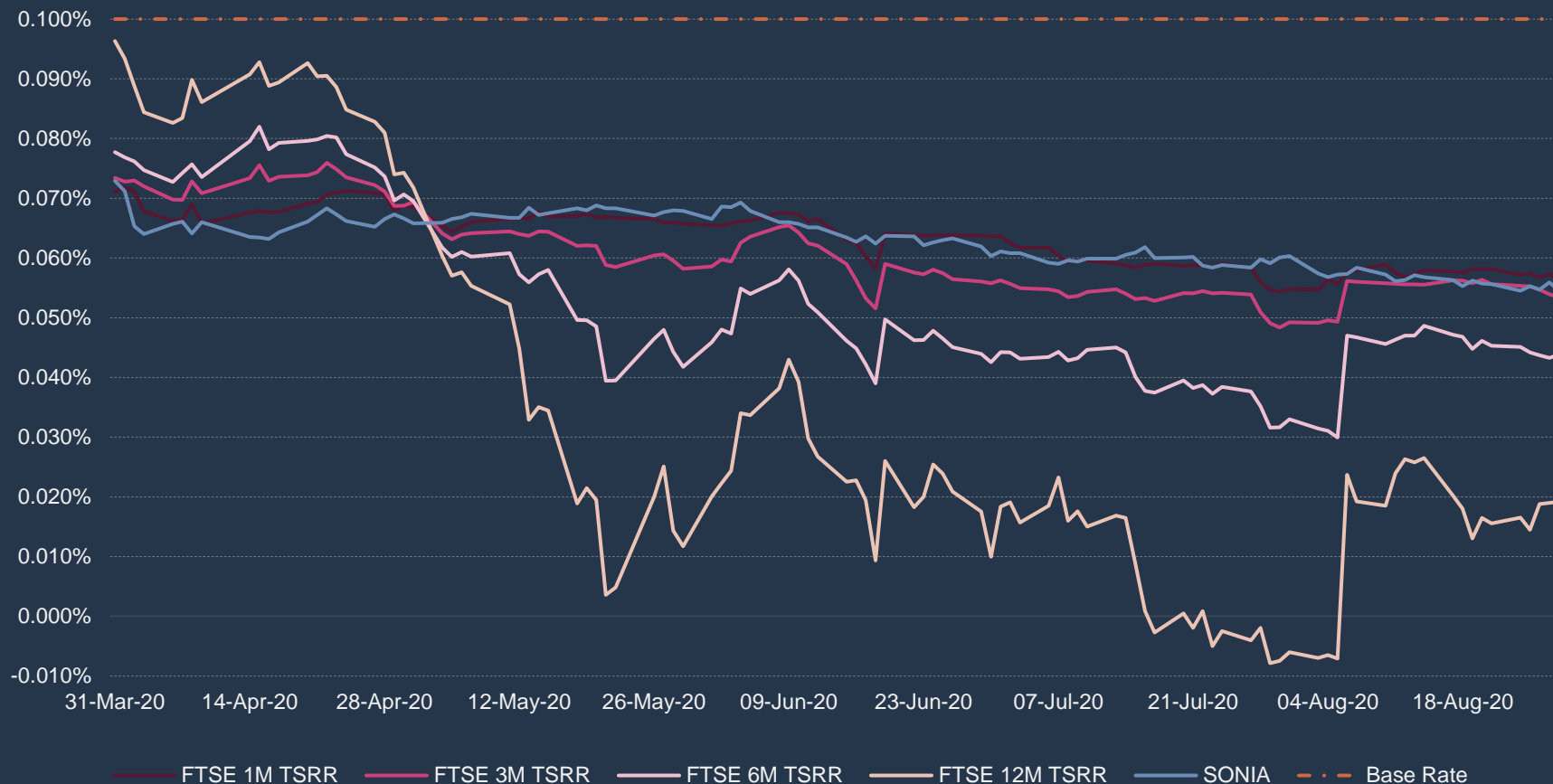
Additional data sources not currently in scope of calculation but under consideration:

- Other platforms and data providers with SONIA OIS committed quotes
- SONIA OIS transaction data
- SONIA OIS quotes

¹ [FTSE “Beta” Methodology Overview](#)

Historical Performance: FTSE Indicative TSRRs

Indicative FTSE TSRRs vs. SONIA vs. Base Rate



Current Status & Next Steps

- Production and publication of TSRRs:
 - From 6 July 2020 FTSE Russell has been publishing indicative TSRRs on its website.¹
 - Publication is daily at c.11.45am each SONIA publication day.
 - Full history is available to download from 31 March 2020.
 - Further information on methodology can be found on the website.
- Timetable to live TSRRs:
 - Support the Working Group & official sector's desire to monitor indicative TSRRs for some time.
 - We will continue to share our progress with the Working Group and prepare for Live TSRR publication.
- Broad client engagement:
 - Continued outreach to seek further feedback from market participants on our approach.
 - Evolve and iterate our approach.

¹ www.ftserussell.com/products/indices/tsrr-sonia

Full history from 31 March 2020 is accessible and available for download.

