

# FTSE Eurozone Covered Bond Index Series

v3.3



**FTSE  
RUSSELL**

An LSEG Business

# Contents

|   |    |
|---|----|
| Section 1 Introduction .....                | 3  |
| Section 2 Management responsibilities ..... | 5  |
| Section 3 FTSE Russell index policies ..... | 6  |
| Section 4 Eligibility criteria .....        | 8  |
| Section 5 Price sources .....               | 9  |
| Section 6 Index rebalancing.....            | 10 |
| Appendix A Calculations .....               | 11 |
| Appendix B Further information .....        | 14 |

## Section 1

# Introduction

## 1. Introduction

### 1.1 The FTSE Eurozone Index Structure

1.1.1 FTSE Eurozone Indices<sup>1</sup> are a set of benchmarks for the European sovereign and covered bond market. The indices are calculated and distributed by FTSE Russell, using pricing data from the Refinitiv Evaluated Pricing Services (REPS)<sup>2</sup>.

1.2 The FTSE Eurozone Covered Bond Index Series does not take account of ESG factors in its index design.

1.2.1 FTSE Russell hereby notifies users of the index series that it is possible that circumstances, including external events beyond the control of FTSE Russell, may necessitate changes to, or the cessation of, the index series and therefore, any financial contracts or other financial instruments that reference the index series or investment funds which use the index series to measure their performance should be able to withstand, or otherwise address the possibility of changes to, or cessation of, the index series.

1.2.2 Index users who choose to follow this index series or to buy products that claim to follow this index series should assess the merits of the index's rules-based methodology and take independent investment advice before investing their own or client funds. No liability whether as a result of negligence or otherwise is accepted by FTSE Russell nor its group companies (or any person concerned with the preparation or publication of these Ground Rules) for any losses, damages, claims and expenses suffered by any person as a result of:

- any reliance on these Ground Rules, and/or
- any inaccuracies in these Ground Rules, and/or
- any non-application or misapplication of the policies or procedures described in these Ground Rules, and/or
- any inaccuracies in the compilation of the index or any constituent data.

### 1.3 These Ground Rules

1.3.1 This document sets out the Ground Rules for the construction and management of the FTSE Eurozone Covered Bond Index Series.

### 1.4 FTSE Russell

FTSE Russell is a trading name of FTSE International Limited, Frank Russell Company, FTSE Global Debt Capital Markets Limited (and its subsidiaries FTSE Global Debt Capital Markets Inc. and FTSE Fixed Income Europe Limited), FTSE Fixed Income LLC, FTSE (Beijing) Consulting Limited, Refinitiv Benchmark Services (UK) Limited, Refinitiv Limited and Beyond Ratings.

<sup>1</sup> With effect from 1 April 2022 rebranded from FTSE MTS Indices.

<sup>2</sup> With effect from 10 October 2022, REPS replaced prices from MTS platform.

## **1.5 Index series objectives**

- 1.5.1 The FTSE Eurozone Covered Bond Index Series is designed to be a measure of the Eurozone Covered Bond market. They are transparent indices and are designed to be replicable with individual security holdings and prices disclosed electronically each day.

## **1.6 Publication of index and underlying data**

The FTSE Eurozone Covered Bond Indices are published on end of day basis following market close at 17:15 CET.

- 1.7 The base currency of the benchmark is EUR.

## **1.8 FTSE Eurozone Covered Bond Index Series**

- 1.8.1 The FTSE Eurozone Covered Bond Index Series consists of 17 bond indices comprising Euro-denominated covered bonds and was launched on 18 July 2005.
- 1.8.2 The main FTSE Eurozone Covered Bond Index includes all covered bonds selected in the aggregate maturity indices (1-3yr, 3-5yr, 5-7yr, 7-10yr and 10-15yr). These sub-maturity aggregate indices contain a maximum of one bond per issuing entity, with the weight of selected bonds established from the total market capitalisation of all eligible bonds from the bond's issuer.
- 1.8.3 Additionally, there are sub-indices which are further broken down by country of issuance and maturity.

## **1.9 Total return index**

- 1.9.1 FTSE Eurozone Indices are total return indices. Coupons paid out on any bond in an index portfolio are reinvested overnight in the index itself. No deduction is made to a coupon before it is reinvested in the index i.e. no withholding tax is applied.

## **1.10 Index analytics**

- 1.10.1 In addition to the capital index and total return index, the following index analytics are also calculated:
- Average coupon
  - Average yield to maturity
  - Average time to maturity
  - Average Macaulay duration
  - Average modified duration
  - Average convexity

For a description of the methodology used to calculate the index and bond level analytics, please [refer to Appendix A.](#)

## **1.11 Index calculation**

- 1.11.1 The indices are calculated on every day that is a TARGET Business day. The index calculation will use the T+2 settlement convention for the valuation of index constituents and the calculation of index analytics.

## Section 2

# Management responsibilities

## 2. Management responsibilities

### 2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the benchmark administrator of the index series.<sup>3</sup>

2.1.2 FTSE Russell is responsible for the daily calculation, production and operation of the FTSE Eurozone Covered Bond Indices and will:

- maintain records of all the constituents;
- be responsible for the addition and deletion of bonds and changes of nominal amounts, in accordance with the Ground Rules.

### 2.2 FTSE EMEA Fixed Income Advisory Committee

2.2.1 The FTSE EMEA Fixed Income Advisory Committee has been established by FTSE Russell. The Committee may recommend changes to the Ground Rules for approval by the FTSE Russell Index Governance Board.

2.2.2 The Terms of Reference of the FTSE EMEA Fixed Income Advisory Committee are set out on the FTSE Russell website and can be accessed through the following link:

[FTSE EMEA Fixed Income Advisory Committee.pdf](#)

### 2.3 Amendment to these Ground Rules

2.3.1 These Ground Rules shall be subject to regular review (at least once a year) by FTSE Russell to ensure that they continue to best reflect the aims of the index series. Any proposals for significant amendments to these Ground Rules will be subject to consultation with the FTSE EMEA Fixed Income Advisory Committee and other stakeholders if appropriate. The feedback from these consultations will be considered by the FTSE Russell Index Governance Board before approval is granted.

2.3.2 As provided for in the Statement of Principles for FTSE Fixed Income Indices, where FTSE Russell determines that the Ground Rules are silent or do not specifically and unambiguously apply to the subject matter of any decision, any decision shall be based as far as practical on the Statement of Principles. After making any such determination, FTSE Russell shall advise the market of its decision at the earliest opportunity. Any such treatment will not be considered as an exception or change to the Ground Rules, or to set a precedent for future action, but FTSE Russell will consider whether the Rules should subsequently be updated to provide greater clarity.

### 2.4 Market disruption

2.4.1 If the value of one or more constituents is not published due to a suspension or a market disruption event, the index will be calculated taking the previous end of day value.

<sup>3</sup> The term administrator is used in this document in the same sense as it is defined in [Regulation \(EU\) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds](#) (the European Benchmark Regulation) and [The Benchmarks \(Amendment and Transitional Provision\) \(EU Exit\) Regulations 2019](#) (the UK Benchmark Regulation).

## Section 3

# FTSE Russell index policies

## 3. FTSE Russell index policies

These Ground Rules should be read in conjunction with the following policy documents which can be accessed through the links below:

### 3.1 Queries and Complaints

FTSE Russell's complaints procedure can be accessed through the following link:

[Benchmark Determination Complaints Handling Policy.pdf](#)

### 3.2 Guide to the Calculation Methods for the FTSE Fixed Income Indices

3.2.1 For a description of the methodology used to calculate the index and bond level analytics, please refer to Appendix A.

### 3.3 Statement of Principles for FTSE Fixed Income Indices (the Statement of Principles)

3.3.1 Indices need to keep abreast of changing markets and the Ground Rules cannot anticipate every eventuality. Where the Ground Rules do not fully cover a specific event or development, FTSE Russell will determine the appropriate treatment by reference to the Statement of Principles for FTSE Bond Indices, which summarises the ethos underlying FTSE Russell's approach to index construction. The Statement of Principles is reviewed annually and any changes proposed by FTSE Russell are presented to the FTSE Russell Index Policy Advisory Board for discussion before approval by the FTSE Russell Index Governance Board.

The Statement of Principles for Bond Indices can be accessed through the following link:

[Statement of Principles Fixed Income Indices.pdf](#)

### 3.4 Index Policy in the Event Clients are Unable to Trade a Market or a Security

3.4.1 Details of FTSE Russell's treatment can be accessed through the following link:

[Index Policy in the Event Clients are Unable to Trade a Market or a Security.pdf](#)

### 3.5 Recalculation Policy and Guidelines

The Recalculation Policy and Guidelines for Fixed Income Indices document is available from the FTSE Russell website through the link below or by contacting [info@ftserussell.com](mailto:info@ftserussell.com).

[Fixed Income Recalculation Policy and Guidelines.pdf](#)

### 3.6 Policy for Benchmark Methodology Changes

3.6.1 Details of FTSE Russell's policy for making benchmark methodology changes can be accessed through the following link:

[Policy for Benchmark Methodology Changes.pdf](#)

### **3.7 FTSE Russell Governance Framework**

- 3.7.1 To oversee its indices, FTSE Russell employs a governance framework that encompasses product, service and technology governance. The framework incorporates the London Stock Exchange Group's three lines of defence risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks<sup>4</sup>, the European benchmark regulation<sup>5</sup> and the UK benchmark regulation<sup>6</sup>. The FTSE Russell Governance Framework can be accessed through the following link:

[FTSE Russell Governance Framework.pdf](#)

### **3.8 Real Time Status Definitions**

- 3.8.1 Please refer to the following guide for details of real time status definitions for indices that are calculated in real time.

[Real Time Status Definitions.pdf](#)

---

<sup>4</sup> IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

<sup>5</sup> Regulation (EU) 2016/1011 of the European Parliament and of the Council of 8 June 2016 on indices used as benchmarks in financial instruments and financial contracts or to measure the performance of investment funds.

<sup>6</sup> The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

## Section 4

# Eligibility criteria

---

## 4. Eligibility criteria

### 4.1 Eligible bonds

To be eligible for the index series, bonds must meet the following eligibility criteria:

- Nominal, fixed coupon, non-amortising bonds denominated in Euros which, with the exception of extendible bonds (see below), have no embedded options or convertibility;
- Covered with mortgages and/or public sector loans have a minimum outstanding amount of €1 billion;
- Have at least one investment grade rating from the three main credit ratings agencies;
- Have at least 3 lead managers, not including the issuer itself;
- Extendible bonds are eligible, subject to meeting the above criteria. Their valuation and analytics are based on the original maturity date and not the extended maturity date;
- For the avoidance of doubt, extended bonds are ineligible. If a constituent is extended, it will leave the index at the next rebalance;
- Structured bonds that meet the criteria outlined above are eligible, and that eligibility will be considered with respect to their expected maturity dates. Expected maturity date is defined as the date on which the last coupon is scheduled to be paid and the principal amount is scheduled to be repaid in full.

### 4.2 Selection criteria

The maturity sub-indices are subject to a limit of one bond per issuer. If multiple bonds are available for the same issuer, the following expression is used to derive a score for each bond:

***Outstanding amount x residual maturity within the maturity range***

The bonds are then ranked in descending order of this score and the highest ranked bond is selected.

For the purposes of this exercise, an “issuer” is defined as any unique issuer name for the bonds concerned, according to the data source(s) used.



## Section 5

# Price sources

---

## 5. Price sources

5.1.1 FTSE Eurozone Covered Bond Indices are priced using the Refinitiv Evaluated Pricing Service (REPS).

New bonds entering the index for the first time use the offer price, replicating the bid-offer spread experienced by a fund tracking the index. This applies to both the all-maturity and the individual maturity sub-indices.

Selected indices of each series are also available in mid-priced versions, where existing constituents are valued using mid prices. In order to replicate the bid-offer spread incurred when tracking the mid-index, new constituents enter the mid-priced index using their respective offer prices and leave the index using their respective bid prices. The mid-price is calculated as the arithmetic average of the respective bid and offer price pair.

### 5.2 Alternate prices

5.2.1 If the price of a bond is missing at the time of the index calculation the Last Good Price (LGP) available will be used.

### 5.3 Verification and price challenges

5.3.1 Statistical techniques are used to identify pricing anomalies based on bid-ask spreads, day-over-day changes and comparisons across peer groups by maturity, asset type, etc.

5.3.2 Any price challenges from index users and possible outliers from the verification process are reviewed with our pricing provider.

5.3.3 In the event that an issue is not able to be resolved in a timely manner, FTSE Russell may exercise expert judgement and roll prices from the previous day. Any exercise of expert judgement is recorded.

## Section 6

# Index rebalancing

## 6. Index rebalancing

### 6.1 Monthly rebalancing

FTSE Eurozone Indices are rebalanced every calendar month. New selections for the index portfolios and their amounts are established using market data at 17:15 CET on the first day that is a TARGET business day, following the 15th day of the month prior to the effective date of the new selections (such business day being the “Selection Day”). The first settlement day of a bond following issuance must be on or before Selection Day in order for it to be eligible for the new monthly selections.

The monthly rebalance is applied post close on the last business day of the month with prices from 17:15 CET, i.e. with effect from open on the first business day of the following month.

In the event that there are no eligible bonds available to be selected for a new monthly index portfolio, the current (populated) index portfolio is held constant until a new bond(s) becomes eligible.

### 6.2 Notional amounts

The notional amounts of each Selected Bond is determined using data from 17:15 CET on the first business day, following the 15th day of the month immediately preceding the effective month. This time is denoted t0. Bond eligibility and selections are established by applying the relevant criteria for each index at the same time t0.

The maturity sub-indices have a restriction of one bond per issuer. However, their nominal amount is adjusted so that the weight of the selected bond is equal to the weight of all the eligible bonds of the issuer relative to all eligible bonds which are eligible for the sub-indices.

The all-maturity FTSE Eurozone Covered Bond Index is composed of bonds selected in the maturity sub-indices.

### 6.3 Missing price

On the Selection Day, any new bond which meets the eligibility criteria as specified in Section 4, but has no price on the Refinitiv Evaluated Pricing Service (REPS), will not be added to the index.

A bond which is already in the index, and for which an alternate price is being used, will be excluded from the selection and removed from the index at the last good price on rebalance-effective day.

Subsequently, if the price is available from Refinitiv Evaluated Pricing Service (REPS) and the bond still meets the eligibility criteria as specified in Section 4, it will be considered for inclusion at the Selection Day after the price is available.

# Appendix A

## Calculations

### Index level calculations

#### Total return index

$$TR(t) = TR(t-1) \times \frac{\sum_{i=1}^n ((P_i(t) + AI_i(t)) \times N_i(r)) \times WF_i(r) + Cash(t)}{\sum_{i=1}^n (P_i(t-1) + AI_i(t-1)) \times N_i(r) \times WF_i(r)}$$

#### Index yield

$$IndexYield(t) = \frac{\sum_i^n Y_i(t) \times MV_i(t) \times MD_i(t) \times WF_i(r)}{\sum_i^n MV_i(t) \times MD_i(t) \times WF_i(r)}$$

#### Market value

$$MarketValue(t) = \sum_{i=1}^n (P_i(t) + AI_i(t)) \times N_i(r) \times WF_i(r)$$

#### Macauley duration

$$Duration(t) = \frac{\sum_i^n MV_i(t) \times D_i(t) \times WF_i(r)}{\sum_i^n MV_i(t) \times WF_i(r)}$$

#### Modified duration

$$ModDuration(t) = \frac{\sum_i^n MV_i(t) \times MD_i(t) \times WF_i(r)}{\sum_i^n MV_i(t) \times WF_i(r)}$$

#### Convexity

$$Convexity(t) = \frac{\sum_i^n MV_i(t) \times Cvxt_i(t) \times WF_i(r)}{\sum_i^n MV_i(t) \times WF_i(r)}$$

#### Average coupon

$$Coupon(t) = \frac{\sum_i^n N_i(t) \times C_i(t) \times WF_i(r)}{\sum_i^n N_i(r) \times WF_i(r)}$$

#### Average time to maturity

$$TimeToMaturity(t) = \frac{\sum_i^n N_i(t) \times TTM_i(t)}{\sum_i^n N_i(r)}$$

#### Index notional

$$IndexNotional(t) = \sum_i^n N_i(r)$$

## Index cash

$$Cash(t) = \sum_i^n C_i(t) \times N_i(r) \times X_i(t) \times WF_i(r)$$

## Bond level calculations

### Accrued interest

$$AI_i(t) = \frac{D_i(sd, pcd_i)}{D_i(cpi)} \times \frac{C_i(t)}{f_i}$$

### Gross price

$$DP_i(t) = P_i(t) + AI_i(t)$$

### Market value

$$MV_i(t) = DP_i(t) \times N_i(r)$$

### Yield to maturity

$$DP_i(t) = \sum_{k_i=tc_i}^{n_i} \frac{CF_i}{\left(1 + \frac{Y_i(t)}{f_i}\right)^{k_i}}$$

### Simple yield

$$SY_i(t) = \frac{\left(\frac{FV_i}{DP_i(t)} - 1\right)}{TTM_i(t)}$$

### Macauley duration

$$D_i(t) = \frac{\sum_{k_i=tc_i}^{n_i} \frac{CF_i \times k_i}{\left(1 + \frac{Y_i(t)}{f_i}\right)^{k_i}}}{DP_i(t)}$$

### Modified duration

$$MD_i(t) = \frac{D_i(t)}{\left(1 + \frac{Y_i(t)}{f_i}\right)}$$

### Convexity

$$Cnvxt_i(t) = \frac{1}{4 \times DP_i(t)} \times \sum_{k_i=tc_i}^{n_i} \frac{(k_i^2 + k_i) \times CF_i}{\left(1 + \frac{Y_i(t)}{f_i}\right)^{k_i+2}}$$

## Key to terms

| Key   | Description  |
|---|--|
| <b><i>TR</i></b>                                | Total return index   |
| <b><i>IndexYield</i></b>                        | Average yield to maturity of the index   |
| <b><i>MarketValue</i></b>                       | Total market value of the index  |
| <b><i>Duration</i></b>                          | Average Macaulay duration of the index   |
| <b><i>ModDuration</i></b>                       | Average modified duration of the index   |
| <b><i>Convexity</i></b>                         | Average convexity of the index   |
| <b><i>Coupon</i></b>                            | Average coupon of the index  |
| <b><i>TimeToMaturity</i></b>                    | Average time to maturity of the index  |
| <b><i>IndexNotional</i></b>                     | Total amount outstanding of the index  |
| <b><i>Cash</i></b>                              | Total cash held in the index as a result of coupon payments  |
| <b><i>P<sub>i</sub></i></b>                     | Clean price of the bond <i>i</i> used for index calculation  |
| <b><i>AI<sub>i</sub></i></b>                    | Accrued interest if the bond <i>i</i>  |
| <b><i>N<sub>i</sub></i></b>                     | Amount outstanding of the bond <i>i</i> used for index calculation   |
| <b><i>WF<sub>i</sub></i></b>                    | Weight adjustment factor of the bond <i>i</i>  |
| <b><i>Y<sub>i</sub></i></b>                     | Annualised yield to maturity of the bond <i>i</i>  |
| <b><i>MV<sub>i</sub></i></b>                    | Total market value of the bond <i>i</i>  |
| <b><i>MD<sub>i</sub></i></b>                    | Modified duration of the bond <i>i</i>   |
| <b><i>D<sub>i</sub></i></b>                     | Macaulay duration of bond <i>i</i>   |
| <b><i>D<sub>i</sub>(sd,pcd<sub>i</sub>)</i></b> | Calendar days between the index settlement date and the previous coupon date of the bond <i>i</i> , based on day count basis           |
| <b><i>D<sub>i</sub>(cp<sub>i</sub>)</i></b>     | Number of days in the coupon period of the bond <i>i</i> , based on day count basis  |
| <b><i>Cvxt<sub>i</sub></i></b>                  | Convexity of bond <i>i</i>   |
| <b><i>C<sub>i</sub></i></b>                     | Coupon rate of bond <i>i</i>   |
| <b><i>TTM<sub>i</sub></i></b>                   | Time to maturity of bond <i>i</i>  |
| <b><i>X<sub>i</sub></i></b>                     | Coupon payment marker of bond <i>i</i> , will be 1 if coupon payment date else 0   |
| <b><i>D<sub>i</sub></i></b>                     | Days applicable to bond <i>i</i>   |
| <b><i>DP<sub>i</sub></i></b>                    | Dirty price of bond <i>i</i>   |
| <b><i>f<sub>i</sub></i></b>                     | Coupon payment frequency of bond <i>i</i>  |
| <b><i>CF<sub>i</sub></i></b>                    | Cash flow amount of bond <i>i</i>  |
| <b><i>SY<sub>i</sub></i></b>                    | Annualised yield to maturity of the bond <i>i</i> , simple interest basis. Calculated only when the bond is in its final coupon period |
| <b><i>FV<sub>i</sub></i></b>                    | Face value of bond <i>i</i>  |
| <b><i>n<sub>i</sub></i></b>                     | Total number of remaining cash flows of bond <i>i</i>  |
| <b><i>k<sub>i</sub></i></b>                     | Time to each cash flow of bond <i>i</i>  |
| <b><i>t</i></b>                                 | Calculation date   |
| <b><i>t – 1</i></b>                             | Previous calculation date  |
| <b><i>r</i></b>                                 | Index rebalance-effective date   |

## Appendix B

# Further information

---

A glossary of terms used in FTSE Russell's Ground Rule documents can be found through the following link:

[Fixed Income Glossary of Terms.pdf](#)

For further information on the FTSE Eurozone Covered Bond Index Ground Rules please visit [www.lseg.com/en/ftse-russell/](http://www.lseg.com/en/ftse-russell/) or e-mail [info@ftserussell.com](mailto:info@ftserussell.com).

## Disclaimer

© 2024 London Stock Exchange Group plc and its applicable group undertakings ("LSEG"). LSEG includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) FTSE (Beijing) Consulting Limited ("WOFE"), (7) Refinitiv Benchmark Services (UK) Limited ("RBSL"), (8) Refinitiv Limited ("RL") and (9) Beyond Ratings S.A.S. ("BR"). All rights reserved.

The FTSE Eurozone Covered Bond Indices are calculated by or on behalf of FTSE International Limited or its affiliate, agent or partner. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator. Refinitiv Benchmark Services (UK) Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, WOFE, RBSL, RL and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "WMR™", "FR™", "Beyond Ratings®" and all other trademarks and service marks used herein (whether registered or unregistered) are trade marks and/or service marks owned or licensed by the applicable member of LSEG or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, WOFE, RBSL, RL or BR.

All information is provided for information purposes only. All information and data contained in this publication is obtained by LSEG, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical inaccuracy as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of LSEG nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or LSEG Products, or of results to be obtained from the use of LSEG products, including but not limited to indices, rates, data and analytics, or the fitness or suitability of the LSEG products for any particular purpose to which they might be put. The user of the information assumes the entire risk of any use it may make or permit to be made of the information.

No responsibility or liability can be accepted by any member of LSEG nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any inaccuracy (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of LSEG is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of LSEG nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of LSEG nor their respective directors, officers, employees, partners, or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indices and rates cannot be invested in directly. Inclusion of an asset in an index or rate is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index or rate containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of LSEG. Use and distribution of LSEG data requires a licence from LSEG and/or its licensors.

