

Guide to the Calculation of Tradeweb FTSE Euro Government Benchmark Closing Prices

v1.8



**FTSE
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Section 1

Introduction

1. Introduction

1.1 Tradeweb FTSE European Government Benchmark Closing Prices

- 1.1.1 This guide describes the method by which Tradeweb FTSE European Government Benchmark Closing Prices for European government bonds are derived. Three Tradeweb FTSE European government benchmark closing prices are calculated for each security, reflecting a bid-, mid- and offer-side quote type.¹ The process is jointly the responsibility of Tradeweb and FTSE Russell.
- 1.1.2 Benchmark closing prices are calculated for nominal fixed-rate Euro-denominated bonds issued by the European Union and the following countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain.
- 1.1.3 Index-linked Euro-denominated bonds issued by France, Germany, Italy and Spain.
- 1.1.4 Treasury Euro-denominated bills issued by the European Union and the following countries: Austria, Belgium, Finland, France, Germany, the Netherlands, Portugal and Spain.
- 1.1.5 Benchmark closing prices are generally available for when-issued bonds on the business day after the auction date.

1.2 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.

1.3 Tradeweb

- 1.3.1 Tradeweb Europe Limited is a company registered in England and Wales with company number 03912826 and authorised and regulated by the Financial Conduct Authority with firm reference number (FRN) 193705. Tradeweb Europe Limited is a subsidiary of Tradeweb Markets Inc., a leading, global operator of electronic marketplaces for rates, credit, equities and money markets. References in this guide to Tradeweb refer to Tradeweb Europe Limited.

1.4 Publication

- 1.4.1 The benchmark closing prices are calculated at the end of each business day. Delivery is available through a variety of mechanisms including the Tradeweb Close file service.

1.5 Trading holidays and early close

- 1.5.1 Tradeweb will not publish European Government Benchmark Closing Prices during trading holidays. The trading holiday schedule can be found at the following link: <https://www.tradeweb.com/who-we-are/trading-calendar>.

¹ Prices that reflect bid-side and offer-side were introduced in March 2025. Prior to this date, only mid-side prices were calculated.

1.5.2 Publication times will be adjusted on early close days.

Section 2

Management responsibilities

2. Management responsibilities

2.1 FTSE International Limited (FTSE)

2.1.1 FTSE is the administrator of the Tradeweb FTSE European Government Benchmark Closing Prices.²

2.2 Tradeweb

2.2.1 Tradeweb is responsible for calculating the benchmark closing prices based on price quotes available on their electronic trading platform.

2.2.2 Tradeweb is the calculation agent of the Tradeweb FTSE European Government Benchmark Closing Prices as defined by the IOSCO Principles.

2.3 FTSE Russell Governance Framework

2.3.1 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 defense risk management framework and is designed to meet the requirements of the IOSCO Principles for Financial Benchmarks³, the European benchmark regulation⁴ and the UK benchmark regulation⁵. The FTSE Russell Governance Framework can be accessed using the following link:

[FTSE Russell Governance Framework](#)

2.4 FTSE Global Fixed Income Index Advisory Committees

2.4.1 The FTSE global fixed income index advisory committees, which have regional representation in the Americas, EMEA and APAC, have been established by FTSE Russell.

The committees provide external oversight of the methodology under which Tradeweb calculates end-of-day benchmark closing prices for European government bonds, in addition to other asset classes. The committees may also provide their feedback on changes to this methodology. The Terms of Reference of the FTSE global fixed income advisory committees are set out on the FTSE Russell website and can be accessed using the following links:

[FTSE US Fixed Income Advisory Committee](#)

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

[FTSE APAC Fixed Income Advisory Committee](#)

² 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).

³ IOSCO Principles for Financial Benchmarks Final Report, FR07/13 July 2013.

⁴ 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.

⁵ The Benchmarks (Amendment and Transitional Provision) (EU Exit) Regulations 2019.

Section 3

Derivation of Tradeweb FTSE European Government Benchmark Closing Prices

3. Benchmark closing prices

3.1 Tradeweb FTSE European Government Benchmark Closing Prices are calculated by Tradeweb using the methodology outlined below, with FTSE Russell responsible for governance and oversight of the calculation process. Prices are calculated reflecting a bid-, mid- and offer-side quote type.

3.1.1 Benchmark closing prices are calculated for the following asset types:

Nominal fixed-rate Euro-denominated bonds issued by the European Union and the following countries: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal and Spain.

Index-linked Euro-denominated bonds issued by France, Germany, Italy and Spain.

Treasury Euro-denominated bills issued by the European Union and the following countries: Austria, Belgium, Finland, France, Germany, the Netherlands, Portugal and Spain.

3.2 Benchmark closing prices for European Government Bonds

Prices are based on executable bid- and offer-side price quotes supplied by market makers to Tradeweb's electronic trading platform for institutional market makers and clients (the "Tradeweb Platform") in a two-minute collection window centred around the notional market closing time of 16:15 (London) and 13:00 p.m. (London) on dates when the European bond market closes early.

Price quotes sourced from the Tradeweb Platform are attributable to specific market makers and are executable by the receiving liquidity takers, subject to liquidity providers accepting the trade.

The two-minute collection window captures all observed price quotes that are submitted between 16:14 to 16:16 (London). From each market maker's contributions, a single input price quote per instrument is derived, reflecting the median bid- mid- and offer-side price. All non-zero prices are incorporated, regardless of size.

The two-minute price collection window is divided into one-second time intervals where, for each market maker, a value will be populated starting from when the first price quote submission occurs within the window. For each market maker, an average price is calculated for each instrument resulting in a single price per instrument per market maker. The Tradeweb FTSE benchmark closing mid-side price is then derived as the median price of all market maker input prices.

A bid-offer spread is calculated as the difference between the median bid of all market maker input bid-side prices and the median offer of all market maker input offer-side prices. To calculate the benchmark closing bid- and offer-side price, the median bid-offer spread of all bid-offer spreads from the collection window is calculated and applied to the benchmark closing mid-side price by adding one-half of the spread to

benchmark closing mid-price (benchmark closing offer-side price) and subtracting one-half of the spread from the benchmark closing mid-side price (benchmark closing bid-side price).

The closing bid-, mid- and offer-side prices are rounded to three decimal places for bonds with 10 years or less to maturity and two decimal places for bonds with more than ten years to maturity.

3.3 Benchmark closing prices for European Government Treasury Bills

- 3.3.1 Market makers quote and trade European government treasury bills on the Tradeweb Institutional platform based on a money-market equivalent yield. Therefore, the closing prices for these Bills will be calculated according to the same steps described above in section 3.2 except the primary quote will be yield.

3.4 Price verification

- 3.4.1 Tradeweb compares the derived prices against the previous day's price in the context of yield curve movements and prices from transactions on the Tradeweb system. At least three market makers must contribute prices during the collection window. Deviations outside of pre-defined price tolerances and/or market maker contribution levels will be investigated. In the event that a price is unable to be calculated, the previous day's closing price for that day will be used.

A Tradeweb composite price may be assigned for When-Issued securities.

3.5 Governance and oversight

- 3.5.1 On a periodic basis, Tradeweb provides reports to the FTSE Russell Global Fixed Income Advisory Committees showing details of price contributions of all market makers for each security and the number of times contingency plans have been required. Also, every quarter FTSE Russell requests Tradeweb data from ten randomly chosen business days in the past quarter to reproduce the calculations of primary and window-based contingency prices for all European government bonds on those days.

Section 4

Price challenges

4. Price challenges

- 4.1 Tradeweb and FTSE Russell have established a means by which clients can query or challenge the price or other measures of value of any European government bond which has been calculated using the closing prices methodology.
 - 4.1.1 Users who wish to challenge a price or other measure of value can do so using the following link:
<https://reports.tradeweb.com/closing-prices/challenge/>
 - 4.1.2 Clients contacting FTSE Russell with the intention of challenging a price, or with a query that may reasonably be expected to result in a challenge, will be referred to Tradeweb and the above link. FTSE Russell will subsequently contact Tradeweb to check whether a challenge was made and the outcome.
 - 4.1.3 Clients submitting a query will receive an email acknowledgement. Details of the resolution of the issue will be further communicated to the client in a timely manner. Where files are republished, all clients using the price service will be notified by email.
 - 4.1.4 Details of challenges and ensuing actions will be tracked and reported on a periodic basis to the FTSE Russell Global Fixed Income Advisory Committees.

Appendix A

Further information

For contact details, please visit the FTSE Russell website or contact FTSE Russell client services at info@ftserussell.com.

Website: www.lseg.com/en/ftse-russell/

For further information on the delivery mechanisms for the Tradeweb FTSE European Government Benchmark Closing Prices, please contact Tradeweb at ECS@Tradeweb.com.

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