

**TECHNICAL REGULATIONS FOR THE COMPOSITION AND
CALCULATION OF FIXED INCOME AND PUBLIC DEBT INDICES
ADMINISTRATED BY SOCIEDAD DE BOLSAS, S.A.**

FAMILY OF GOVERNMENT DEBT TRANSACTION YIELD (RODE) INDICES

DAILY RODE INDICES

PUBLIC DEBT INDEX UP TO 6 MONTHS (M)
PUBLIC DEBT INDEX FROM 6 TO 12 MONTHS (M)
PUBLIC DEBT INDEX FROM 1 TO 2 YEARS (M)
PUBLIC DEBT INDEX FROM 2 TO 4 YEARS (M)
PUBLIC DEBT INDEX FROM 2 TO 6 YEARS (M)
PUBLIC DEBT INDEX FROM 4 TO 8 YEARS (M)
PUBLIC DEBT INDEX FROM 8 TO 12 YEARS (M)
PUBLIC DEBT INDEX FROM 12 TO 20 YEARS (M)
PUBLIC DEBT INDEX OVER 20 YEARS (M)

MONTHLY RODE INDICES

PUBLIC DEBT INDEX UP TO 6 MONTHS (S)
PUBLIC DEBT INDEX FROM 6 TO 12 MONTHS (S)
PUBLIC DEBT INDEX FROM 1 TO 2 YEARS (S)
PUBLIC DEBT INDEX FROM 2 TO 4 YEARS (S)
PUBLIC DEBT INDEX FROM 2 TO 6 YEARS (S)
PUBLIC DEBT INDEX FROM 4 TO 8 YEARS (S)
PUBLIC DEBT INDEX FROM 8 TO 12 YEARS (S)
PUBLIC DEBT INDEX FROM 12 TO 20 YEARS (S)
PUBLIC DEBT INDEX OVER 20 YEARS (S)

Index

0. REVIEW HISTORY	3
1. INTRODUCTION	4
2. INDEX GOVERNANCE	4
2.1. Technical Advisory Committee	4
2.2. Index Manager	5
3. RODE INDICES	5
3.1. COMPOSITION AND CALCULATION OF THE GOVERNMENT DEBT TRANSACTION YIELD INDICES	5
3.1.1. Composition of the RODE indices	6
3.1.2. Formula for calculating RODE indices	7
3.1.3. Data for the calculation of the RODE Indices	8
3.2. YIELD RATE IN THE SECONDARY PUBLIC DEBT MARKET FOR THE PERIOD OF TWO TO SIX YEARS	8
4. CALCULATION OF REFERENCE PRICES FOR INDEX-LINKED PRODUCTS	9
5. COMPLAINTS REGARDING INDEX CALCULATION	9
6. INFORMATION ABOUT THE INDICES	9

0. REVIEW HISTORY

- May 2021: RODE Indices creation whose administrator is Sociedad de Bolsas, S.A. New methodology document.
- February 2022: Creation of the review history. Section: 0. Availability of a public procedure on substantial modifications of the methodology. Section: 1. Definition of active market. Section: 3.1. Calculation data: Section: 3.1.3.

1. INTRODUCTION

The present document contains the Technical Regulations for the Composition and Calculation governing the fixed income and public debt indices (fixed-income indices) administrated by Sociedad de Bolsas, S.A.

Sociedad de Bolsas, S.A., a BME Group company, is responsible for the management and functioning of the Spanish Stock Exchange Interconnection System (SIBE) – a technical trading platform of the Spanish stock exchange market that also houses the order book. Sociedad de Bolsas is the primary source of information generated in SIBE and is responsible for its organization and management. It is also the administrator of the IBEX indices and the strategy indices on stocks, the benchmarks for the Governing Bodies of the Stock Exchanges, the fixed income and Public Debt indices, and the FTSE Latibex Index Series, and is responsible for their structure, management, calculation, and dissemination.

These technical regulations will be revised periodically within a period never to exceed one year.

The aim of these revisions will be first, to make sure that the indices continue to reflect the reality they are intended to measure, and second, to ensure their role as underlying assets in the trading of derivative products, i.e. that they continue to be appropriate, representative, and reproducible. Among others, any changes that involve a change in the type of calculation data, fundamental changes in the methodology, changes related to any interruption or suspension of the indices – including the transitional rules for the new index – as well as changes that affect the ability of index users to continue using them as established are considered substantial changes. Any modification or alteration of these technical regulations must be approved by the Board of Directors of Sociedad de Bolsas, S.A. following a report by the Technical Advisory Committee on the indices as proposed by the Index Manager (with reference to section 3 thereof).

Such modifications or alterations are published no later than 48 hours after the corresponding decision is made and take effect within seven days of their publication, unless expressly agreed otherwise.

Sociedad de Bolsas, S.A. has a transition procedure for possible cessation of the indices cited in these technical regulations, which stipulates the conditions for its implementation. It also has a procedure to be implemented should a contingency arise [and a procedure of public consultations on substantial changes in the methodology](#).

2. INDEX GOVERNANCE

2.1. Technical Advisory Committee

The oversight function for the fixed income and public debt indices is assigned to the Technical Advisory Committee.

The Technical Advisory Committee responsible for the indices is composed of at least five and no more than nine members. If the number is even, the chair will cast the deciding vote.

The Board of Directors of Sociedad de Bolsas, S.A. is responsible for appointing the members of the Technical Advisory Committee, its chair, and secretary and for renewing the offices every four years, as established in the procedures for its appointment, replacement or cessation, and the establishment of its internal rules of operations.

2.2. Index Manager

The Index Management Secretariat at Sociedad de Bolsas is responsible for management of the indices. Its main functions are the management, calculation, publication, and maintenance of the Sociedad de Bolsas indices.

3. RODE INDICES

3.1. COMPOSITION AND CALCULATION OF THE GOVERNMENT DEBT TRANSACTION YIELD INDICES

The family of State Debt Transaction Yield (RODE) indices is designed to reflect the evolution of the Spanish Public Debt market at different maturities.

The RODE indices reflect an average for the internal rates of return and prices as weighted by the nominal volume of the transactions carried out in the secondary Public Debt market.

Each of the terms is determined by the residual bond maturity, which is calculated as the difference between the maturity date and the value date for each instrument.

The range of terms to maturity is:

- Up to 6 months: up to 180 days
- 6 to 12 months: from 181 to 366 days
- 1 to 2 years: from 367 to 730 days
- 2 to 4 years: from 731 to 1,460 days
- 2 to 6 years: from 731 to 2,190 days
- 4 to 8 years: from 1,461 to 2,920 days
- 8 to 12 years: from 2921 to 4,385 days
- 12 to 20 years: from 4386 to 7,315 days
- Over 20 years: over 7,316 days

This series of indices consists of nine daily indicators and nine monthly indicators that reflect the internal rate of return in the public Debt Market at different maturities ranging from six months to over 20 years, in the form of a monthly index and a six-month index.

The daily RODE indices are designed to reflect an average for rates and prices as weighted by the nominal volume of the transactions carried out over the past month. For these purposes, the past month is considered to be the previous 30 calendar days (M).

The monthly RODE indices are defined as an average for rates and prices as weighted by the nominal volume of the transactions received in the previous semester. The first session of each month is calculated using the data from the previous six months (S).

A) DAILY RODE INDICES:

1. Public Debt Index up to 6 Months (M)
2. Public Debt Index from 6 to 12 Months (M)
3. Public Debt Index from 1 to 2 Years (M)
4. Public Debt Index from 2 to 4 Years (M)
5. Public Debt Index from 2 to 6 Years (M)
6. Public Debt Index from 4 to 8 Years (M)
7. Public Debt Index from 8 to 12 Years (M)
8. Public Debt Index from 12 to 20 Years (M)
9. Public Debt Index over 20 Years (M)

B) MONTHLY RODE INDICES:

1. Public Debt Index up to 6 Months (S)
2. Public Debt Index from 6 to 12 Months (S)
3. Public Debt Index from 1 to 2 Years (S)
4. Public Debt Index from 2 to 4 Years (S)
5. Public Debt Index from 2 to 6 Years (S)
6. Public Debt Index from 4 to 8 Years (S)
7. Public Debt Index from 8 to 12 Years (S)
8. Public Debt Index from 12 to 20 Years (S)
9. Public Debt Index over 20 Years (S)

3.1.1. Composition of the RODE indices

For their calculation, the RODE indices will consider any transactions carried out in the Fixed Income Market, AIAF, the SENAF multilateral trading system, and OTC transactions for securities traded in the aforementioned systems that are reported to BME. For these purposes, it constitutes an active market, when exchanging homogeneous goods, being a liquid market with transparent prices based on real transactions.

To select eligible transactions, the following types of instruments, characteristics, and restrictions will be considered:

- Securities issued by the Spanish Government at a fixed interest rate are considered.
- Transactions involving inflation-linked issues are excluded.
- The asset types are: BON, OBL, PRL, CUP y LET
- Spot transactions: difference in business days between the value date and the trade date is five days or less.

- Outright transactions in the secondary market: simultaneous transactions will not be considered.
- Transactions carried out using non-market rates or any with an effective rate of zero or less are excluded.
- No distinction in account holders is made (own accounts, third-party accounts, individual accounts).

3.1.2. Formula for calculating RODE indices

A) Calculation of the Daily Indices

The daily indices are calculated on a daily basis using data from the past 30 days expressed as Price and internal rate of return (IRR).

Both the price index and the IRR index will be published to three decimal places for each maturity.

The formula for calculating the price index:

$$I_{Pm} = \frac{\sum_{i=1}^{i=M} P_i \cdot V_i}{\sum_{i=1}^{i=M} V_i}$$

Where:

IPm = Daily price index

Pi = Transaction price

Vi = Nominal volume of the transaction

i = Number of eligible transactions in the past 30 days

The formula for calculating the IRR index:

$$I_{TIRm} = \frac{\sum_{i=1}^{i=M} TIR_i \cdot V_i}{\sum_{i=1}^{i=M} V_i}$$

Where:

ITIRm = Daily IRR index

TIRi = IRR of the transaction

Vi = Nominal volume of the transaction

i = Number of eligible transactions in the past 30 days

B) Calculation of the Monthly Indices

The monthly indices are calculated the first business session of each month using data from the previous six months expressed as Price and internal rate of return (IRR).

Both the price index and the IRR index will be published to three decimal places for each maturity.

The formula for calculating the price index:

$$I_{PS} = \frac{\sum_{i=1}^{i=S} P_i \cdot V_i}{\sum_{i=1}^{i=S} V_i}$$

IPS = Monthly price index

Pi = Transaction price

Vi = Nominal volume of the transaction

i = Number of eligible transactions in the past six months

The formula for calculating the value of the six-month IRR index is:

$$I_{TIRs} = \frac{\sum_{i=1}^{i=S} TIR_i \cdot V_i}{\sum_{i=1}^{i=S} V_i}$$

ITIRs = Monthly IRR index

TIRi = IRR of the transaction

Vi = Nominal volume of the transaction

i = Number of eligible transactions in the past six months

3.1.3. Data for the calculation of the RODE Indices

In general, the price and nominal volume of the transaction are taken to be those at which each eligible transaction was executed on the Fixed Income Market, AIAF, in the Multilateral Trading System SENAF, as well as OTC transactions on securities traded in the aforementioned systems, reported to BME.

However, in situations of market stress, the index shall be calculated with the available data of the last thirty days for daily RODE Indices and of the last six months for monthly RODE Indices as set out in 3.12.

In addition, the Manager may, in exceptional circumstances, propose to the Technical Advisory Committee a different solution from those indicated above, if it is considered appropriate, bearing in mind the characteristics of each case.

3.2. YIELD RATE IN THE SECONDARY PUBLIC DEBT MARKET FOR THE PERIOD OF TWO TO SIX YEARS

This yield rate is represented by one of the indices in the RODE family: the Public Debt Index from 2 to 6 Years (S).

This Benchmark is considered an official interest rate. It will be published each month by the Bank of Spain in the Spanish Official Gazette and will also be available on its website.¹

It is defined as the average of the internal returns for the securities issued by the Government with a residual maturity between two and six years traded in outright spot

¹ Order EHA/2899/2011, of October 28 on transparency and the protection of banking services customers

transactions in the immediately preceding six months as weighted by nominal trade volumes.²

4. CALCULATION OF REFERENCE PRICES FOR INDEX-LINKED PRODUCTS

At the discretion of the manager and by virtue of the corresponding contract, financial products linked to the index are referenced to the index via one of the following systems:

- Closing prices, or arithmetic averages of several closing prices.
- Any other reference deemed appropriate at the discretion of the manager based on the characteristics and issued volumes of the corresponding products.

5. COMPLAINTS REGARDING INDEX CALCULATION

Complaints regarding index calculation must be addressed to the Technical Advisory Committee in writing, which includes the electronic means established for such purpose. Such complaints will be resolved within a reasonable period of time pursuant to the complaint procedure in place for such purposes.

6. INFORMATION ABOUT THE INDICES

As the administrator, Sociedad de Bolsas, S.A., will publish information on the indices by the channels it establishes for such purpose. Information regarding the indices will consist of announcements published in its information feed (vendor feed) available to professional information distributors as well as on its website.

Specifically, the Public Debt Index from 2 to 6 years (S) is published each month by the Bank of Spain in the Spanish Official Gazette and is also available on its website.³

Sociedad de Bolsas, S.A., will issue the corresponding certificates on the relevant prices of the indices at the request of parties to contracts that use such prices. For more information on the indices, you can visit the site www.sbolsas.com or contract the Manager at ibex@grupobme.es

² Bank of Spain Circular 5/2012, of June 27 addressed to credit institutions and payment service providers, on transparency of banking services and responsibility in the granting of loans

³ Order EHA/2899/2011, of October 28 on transparency and the protection of banking services customers