

DEFINITION AND CONTENT

The fourth Maastricht criterion is based on the level of long-term interest rates. Article 4 of the Protocol on the convergence criteria, as referred to in Article 121 of the Treaty, states that compliance with the fourth convergence criterion “shall mean that, observed over a period of one year before the examination, a Member State has had an average nominal long-term interest rate that does not exceed by more than 2 percentage points that of, at most, the three best performing Member States in terms of price stability. Interest rates shall be measured on the basis of long-term government bonds or comparable securities, taking into account differences in national definitions.”

DATA SOURCES AND METHODOLOGY

The long-term interest rate statistics for the acceding countries refer to the monthly average interest rates for long-term government bonds issued by the acceding country to the Eurozone, quoted as percentages per annum. The statistical framework for the definition of the long-term interest rates for the acceding countries follows the principles that were specified and implemented by the European Central Bank (ECB) in conjunction with the European Commission (EC) as part of the preparations for Stage Three of Economic and Monetary Union (EMU) for the current EU Member States.

TABLE 1: STATISTICAL FRAMEWORK FOR DEFINING THE LONG-TERM INTEREST RATES

Ref.	Concept	Recommendation
1	Bond issuer	The bond should be issued by the central government.
2	Maturity	The maturity should be as close as possible to ten years residual maturity. Any replacement of bonds should minimise maturity drift.
3	Choice of bonds	The applied bonds should be sufficiently liquid. This requirement should determine the choice between a benchmark method or a basket of bonds method, depending on national market conditions; special feature bonds are to be omitted; national central banks keep the ECB and the Commission informed about the choice of bonds.
4	Coupon effects	No direct adjustment.
5	Taxation	Gross of tax.
6	Yield formula	The “yield to maturity” ISMA formula 6.3 should be applied.
7	Aggregation	If the basket of bonds method is used, a simple arithmetic average of the yields on bonds included in the basket is used to calculate the representative rate.

METHOD OF CALCULATION

The bond yield is determined using the formula recommended by the *International Securities Market Association* for yield to maturity (ISMA 6.3).

$$P = \sum_{i=1}^n CF_i * V^{L_i}$$

where:

P	...	gross price, i.e. clean price (mean of quotations) plus accrued interest,
n	...	number of future cash flows,
CF _i	...	i-th cash flow,
L _i	...	time in years to i-th cash flow,
V	...	annualised discounting factor, i.e. 1/(1+y), where y is annualised yield.

The monthly average yield is calculated as a simple average of the daily data. The calculation is based on the mid of quotations for Treasury bonds on the Prague Stock Exchange.

CHANGE IN METHODOLOGY

At the same time as publishing the long-term interest rate for convergence purposes for April 2008, the CNB changed the LTIR calculation methodology and simultaneously revised the time series as from January 2004. This change was discussed with and approved by the European Central Bank. The LTIR calculation method has been refined by switching from a calculation based on a single benchmark bond (the benchmark approach) to a calculation using a defined set of benchmark bonds (the basket of bonds approach). The basket of bonds contains government bonds with original maturities exceeding or equal to 10 years which are classified by the Czech National Bank as benchmark bonds. The CNB uses the following criteria to classify benchmark bonds: they must be issued in CZK; they must have been sold in sufficient volumes in all tranches (net of repurchases by the Czech Ministry of Finance) as of the basket determination date; they must have an original maturity of 10 to 30 years; and they must be traded in the Prague Stock Exchange's main market.

MANNER OF INCLUSION OF BONDS IN THE LTIR CALCULATION BASKET

A basic set containing koruna-denominated government bonds classified by the Czech National Bank as benchmark bonds is specified each working day. Their residual maturities range from 8 to 12 years (this range is fully in line with the conditions on the Czech government bond market and is based on the Czech government bond issue frequency). A combination of bonds is then generated from this set whose average residual maturity is as close to 10 years as possible. For this combination of bonds, referred to as the basket of bonds, the average yield is calculated as a simple arithmetic average of the yields on all bonds included in the basket. This represents the LTIR.

More information on the changeover to the new methodology is available in the document entitled "**Change in the methodology for calculating the interest rate convergence criterion for the Czech Republic**" published on the CNB website in the methodological notes explaining compilation of the statistics on Long-term interest rates for convergence purposes (section Statistics >> Monetary and financial statistics >> Methodological notes).

On 5 April 2013, revised long-term interest rate for convergence purposes was published for the period since and including September 2012. The revision was due to a methodological change in the calculation consisting in the new compilation of government bond yields based on reference bond prices of the electronic business platform MTS Czech Republic instead of available reference prices of the Prague Stock Exchange (PSE). The change in the methodology was caused by market-makers' redirecting the obligatory daily fixing of government bonds from the PSE business system to the MTS Czech Republic business platform.

TABLE 2: USE OF BONDS IN INDIVIDUAL PERIODS UP TO DECEMBER 2003

From	To	ISIN
January 2000	October 2001	CZ0001000731
November 2001	June 2003	CZ0001000764
July 2003	December 2003	CZ0001000814

TABLE 3: REPRESENTATION OF BONDS IN BASKET OF BONDS SINCE JANUARY 2004

From	To	ISIN
1. 1. 2004	10. 2. 2004	CZ0001000814
11. 2. 2004	29. 4. 2005	CZ0001000749, CZ0001000814
2. 5. 2005	22. 6. 2005	CZ0001001143
23. 6. 2005	14. 11. 2005	CZ0001000749, CZ0001001143
15. 11. 2005	17. 8. 2006	CZ0001000749
18. 8. 2006	20. 10. 2006	CZ0001000749, CZ0001000822, CZ0001001143
23. 10. 2006	23. 2. 2007	CZ0001000822, CZ0001001143
26. 2. 2007	24. 8. 2007	CZ0001000749, CZ0001000822
27. 8. 2007	16. 4. 2008	CZ0001000822, CZ0001001903
17. 4. 2008	30. 9. 2008	CZ0001000822
1. 10. 2008	4. 12. 2008	CZ0001000822, CZ0001001317, CZ0001001903
5. 12. 2008	20. 3. 2009	CZ0001001317, CZ0001001903
23. 3. 2009	27. 5. 2009	CZ0001002471
28. 5. 2009	6. 8. 2009	CZ0001000822, CZ0001001317, CZ0001002471
7. 8. 2009	28. 10. 2009	CZ0001000822, CZ0001001317
29. 10. 2009	4. 5. 2010	CZ0001001317, CZ0001002471
5. 5. 2010	17. 10. 2010	CZ0001001317
18. 10. 2010	8. 12. 2010	CZ0001001317, CZ0001001945, CZ0001002471
9. 12. 2010	11. 4. 2011	CZ0001001945, CZ0001002471
12. 4. 2011	11. 3. 2012	CZ0001001945, CZ0001001317
12. 3. 2012	11. 3. 2013	CZ0001001945
12. 3. 2013	20. 12. 2013	CZ0001001945, CZ0001002547
21. 12. 2013	23. 9. 2014	CZ0001002547
24. 9. 2014	19. 5. 2015	CZ0001002547, CZ0001004253
20. 5. 2015	26. 11. 2015	CZ0001004253
27. 11. 2015	16. 4. 2016	CZ0001004253, CZ0001004469
17. 4. 2016	19. 9. 2016	CZ0001004469
20. 9. 2016	24. 1. 2017	CZ0001004469, CZ0001003859, CZ0001004253

From	To	ISIN
25. 1. 2017	15. 5. 2017	CZ0001003859, CZ0001004253
16. 5. 2017	18. 5. 2017	CZ0001003859, CZ0001004469
19. 5. 2017	28. 6. 2017	CZ0001003859, CZ0001004469, CZ0001005037
29. 6. 2017	21. 9. 2017	CZ0001003859, CZ0001004469
22. 9. 2017	5. 4. 2018	CZ0001003859, CZ0001005037
6. 4. 2018	14. 5. 2018	CZ0001003859
15. 5. 2018	18. 6. 2018	CZ0001004469, CZ0001004477
19. 6. 2018	26. 6. 2018	CZ0001003859, CZ0001004469, CZ0001004477
27. 6. 2018	15. 7. 2018	CZ0001003859
16. 7. 2018	17. 7. 2018	CZ0001003859, CZ0001005037, CZ0001005375
18. 7. 2018	5. 9. 2018	CZ0001003859
6. 9. 2018	22. 9. 2018	CZ0001003859, CZ0001004477, CZ0001005037
23. 9. 2018	30. 10. 2018	CZ0001004477, CZ0001005037
31. 10. 2018	19. 12. 2018	CZ0001003859, CZ0001004477, CZ0001005037, CZ0001005375
20. 12. 2018	22. 1. 2019	CZ0001004477, CZ0001005037, CZ0001005375
23. 1. 2019	21. 4. 2019	CZ0001003859, CZ0001005375
22. 4. 2019	7. 7. 2019	CZ0001003859, CZ0001004477
8. 7. 2019	16. 7. 2019	CZ0001003859, CZ0001004477, CZ0001005375
17. 7. 2019	5. 10. 2019	CZ0001005375
6. 10. 2019	1. 3. 2020	CZ0001005375, CZ0001004477
2. 3. 2020	12. 3. 2020	CZ0001004477
13. 3. 2020	21. 3. 2020	CZ0001003859, CZ0001004477, CZ0001005888
22. 3. 2020	15. 5. 2020	CZ0001004477
16. 5. 2020	17. 5. 2020	CZ0001004477, CZ0001005375, CZ0001005888
18. 5. 2020	31. 7. 2020	CZ0001005375, CZ0001005888
1. 8. 2020	29. 12. 2020	CZ0001004477, CZ0001005888
30. 12. 2020	22. 4. 2021	CZ0001005888
23. 4. 2021	20. 5. 2021	CZ0001004477, CZ0001005888, CZ0001006233
21. 5. 2021	18. 8. 2021	CZ0001004477, CZ0001006233
19. 8. 2021	28. 2. 2022	CZ0001005888, CZ0001006233
1. 3. 2022	25. 5. 2023	CZ0001006233
26. 5. 2023	26. 10. 2024	CZ0001006233, CZ0001006894
27. 10. 2024	11. 5. 2025	CZ0001007355, CZ0001006894
12. 5. 2025	14. 5. 2025	CZ0001007355, CZ0001006894, CZ0001006431, CZ0001001796, CZ0001005243
15. 5. 2025	22. 5. 2025	CZ0001007355, CZ0001006894, CZ0001006431
23. 5. 2025	22. 6. 2025	CZ0001006431
23. 6. 2025	27. 7. 2025	CZ0001001796, CZ0001006894, CZ0001006431
28. 7. 2025	29. 7. 2025	CZ0001001796, CZ0001006894
30. 7. 2025	4. 8. 2025	CZ0001005243, CZ0001006316, CZ0001006431
5. 8. 2025	7. 8. 2025	CZ0001005243, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001001796
8. 8. 2025	14. 8. 2025	CZ0001006894, CZ0001001796

From	To	ISIN
15. 8. 2025	21. 8. 2025	CZ0001005243, CZ0001007355, CZ0001006431, CZ0001001796
22. 8. 2025	30. 8. 2025	CZ0001005243, CZ0001006316, CZ0001006894, CZ0001001796
31. 8. 2025	11. 9. 2025	CZ0001005243, CZ0001006316
12. 9. 2025	18. 9. 2025	CZ0001005243, CZ0001007355, CZ0001001796
19. 9. 2025	22. 9. 2025	CZ0001001796
23. 9. 2025	25. 9. 2025	CZ0001001796, CZ0001005243, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355, CZ0001007546
26. 9. 2025	28. 9. 2025	CZ0001001796, CZ0001005243, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355
29. 9. 2025	30. 9. 2025	CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007546
1. 10. 2025	2. 10. 2025	CZ0001001796, CZ0001006431, CZ0001006894, CZ0001007355, CZ0001007546
3. 10. 2025	4. 10. 2025	CZ0001006316, CZ0001006431, CZ0001006894
5. 10. 2025	8. 10. 2025	CZ0001001796, CZ0001006431, CZ0001006894, CZ0001007355
9. 10. 2025	13. 10. 2025	CZ0001005243, CZ0001006316, CZ0001006431, CZ0001007355, CZ0001007546
14. 10. 2025	19. 10. 2025	CZ0001001796, CZ0001006431, CZ0001006894, CZ0001007355
20. 10. 2025	4. 11. 2025	CZ0001001796, CZ0001006894, CZ0001007355, CZ0001007546
5. 11. 2025	8. 11. 2025	CZ0001006431, CZ0001007355, CZ0001007546
9. 11. 2025	13. 11. 2025	CZ0001006316, CZ0001006894, CZ0001007546
14. 11. 2025	18. 11. 2025	CZ0001001796, CZ0001006894, CZ0001007355
19. 11. 2025	25. 11. 2025	CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355, CZ0001007546
26. 11. 2025	2. 12. 2025	CZ0001006431, CZ0001007355
3. 12. 2025	5. 12. 2025	CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355
6. 12. 2025	16. 12. 2025	CZ0001006316, CZ0001006894
17. 12. 2025	28. 12. 2025	CZ0001001796, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007546
29. 12. 2025	4. 1. 2026	CZ0001006316, CZ0001006894, CZ0001007355, CZ0001007546
5. 1. 2026	13. 1. 2026	CZ0001001796, CZ0001006431, CZ0001007546
14. 1. 2026	20. 1. 2026	CZ0001001796, CZ0001006316, CZ0001006431, CZ0001006894
21. 1. 2026	24. 1. 2026	CZ0001001796, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355, CZ0001007546
25. 1. 2026	31. 1. 2026	CZ0001007355, CZ0001007546
2. 2026	9. 2. 2026	CZ0001006316, CZ0001006894, CZ0001007355
10. 2. 2026	15. 2. 2026	CZ0001001796, CZ0001006431, CZ0001007355, CZ0001007546
16. 2. 2026	16. 2. 2026	CZ0001001796, CZ0001006316, CZ0001006431, CZ0001006894, CZ0001007355
17. 2. 2026	24. 2. 2026	CZ0001001796, CZ0001006316, CZ0001006894, CZ0001007546
25. 2. 2026	4. 3. 2026	CZ0001001796, CZ0001006431
5. 3. 2026	17. 3. 2026	CZ0001001796, CZ0001006316, CZ0001006894, CZ0001007355, CZ0001007546
18. 3. 2026	nowadays	CZ0001006316, CZ0001006431, CZ0001007546