Latvijas Banka

Regulation No. 247

Adopted 21 August 2023

**Regulations for Corrections to Calculations of Modified Duration for Debt Instruments**

*Issued pursuant to*

*Section 50, Paragraph two of the Credit Institution Law, Section 4.2 of the Financial Instrument Market Law, Section 45, Paragraph six of the Law on Investment Firms*

1. The Regulation prescribes the procedures whereby investment firms, central securities depositories, and credit institutions registered in Latvia (hereinafter together – the institution), except for the credit institutions supervised by the European Central Bank, make corrections to the calculations of modified duration for debt instruments subject to prepayment risk in accordance with the second subparagraph of Article 340(3) of Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and amending Regulation (EU) No 648/2012 (hereinafter – Regulation No 575/2013).

2. The following terms are used in the Regulation:

2.1. callable bond – a debt instrument that gives its issuer the right, but not the obligation, to redeem the bond before it reaches its date of maturity;

2.2. puttable bond – a debt instrument that gives its holder the right, but not the obligation, to demand prepayment of the bond’s principal from the issuer.

3. When following a standardised method to calculate the own funds requirement against the general risk on debt instruments under the duration-based approach within the meaning of Regulation No 575/2013, the institution shall assess and document whether the debt instruments classified as such in its trading book are subject to prepayment risk.

4. To make corrections to the calculations of modified duration for debt instruments subject to prepayment risk referred to in the second subparagraph of Article 340(3) of Regulation No 575/2013, the institution shall use one of the following formulas:

4.1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CMD = MD × | B | × (1 + ∆ + | 1 | ГdB + Ψ) |
| P | 2 |

where:

CMD – corrected modified duration;

MD ‒ modified duration calculated in accordance with the first subparagraph of Article 340(3) of Regulation No 575/2013;

B ‒ theoretical market price of a vanilla bond;

P ‒ market price of a callable or puttable bond;

Δ ‒ delta of the embedded option;

Г ‒ gamma of the embedded option;

dB ‒ change in the value of a vanilla bond;

Ψ ‒ additional factor that describes the transaction costs and behavioural variables consistent with a change of 100 basis points in the internal rate of return;

4.2.

|  |  |  |
| --- | --- | --- |
| CMD = | P ‒ Δr‒ P + Δr | + Ψ |
| 2 × P0 × Δr |

where:

CMD – corrected modified duration;

P0 ‒ current market price of the debt instrument subject to prepayment risk;

P – theoretical market price of the debt instrument subject to prepayment risk after a positive and a negative change in the internal rate of return by Δr;

Δr ‒ change of 50 basis points in the internal rate of return;

Ψ ‒ additional factor that describes the transaction costs and behavioural variables consistent with a change of 100 basis points in the internal rate of return.

5. When following a standardised method to calculate the own funds requirement against the general risk on debt instruments under the duration-based approach, the institution shall assess and document whether the debt instruments and behavioural variables materially affect the corrected modified duration and shall, where necessary, determine the additional factor Ψ. If the institution has the right to demand prepayment of the debt instrument’s principal, the additional factor for the embedded optionality shall not be determined.

6. When determining the additional factor Ψ in accordance with Sub-paragraph 4.2 of this Regulation, the institution shall take into account that the transaction costs reduce the optionality value of a callable or puttable bond and that certain customers, retail clients in particular, may, in some cases, not take advantage of the optionality even though it is financially beneficial.

7. The institution shall ensure that by incorporating the additional factor Ψ into the calculations according to Sub-paragraphs 4.1 and 4.2 of this Regulation the corrected modified duration is not shorter than the corrected modified duration calculated without incorporating the additional factor Ψ.

8. The institution shall determine the additional factor Ψ based on internal or external data sources. Information on other balance sheet items subject to prepayment risk, such as the positions held in the non-trading book, inter alia loans, within the meaning of Regulation No 575/2013, is considered a suitable internal data source.

9. To calibrate the additional factor Ψ, the institution shall evaluate divergences between the real observed historical behaviour of a specific customer group and the theoretical expected behaviour of a customer group that acts rationally. The institution shall calibrate the additional factor Ψ if at least the following conditions are met:

9.1. the trading portfolio contains a significant number of debt instruments subject to prepayment risk;

9.2. the counterparty is a retail client.

10. The Financial and Capital Market Commission’s Regulation No. 104 of 21 July 2020, Regulations for Corrections to Modified Duration for Debt Instruments (*Latvijas Vēstnesis*, 2020, No. 143, 2022, No. 126), is repealed.

Deputy Governor of Latvijas Banka M. Kālis