National Bank of Belgium

Insurance Stress Test 2020

Technical Specifications v1.0

Version	Date	Major changes
v1.0	2 March 2020	Initial version of the Technical Specifications

TABLE OF CONTENTS

INTRODUCTION

The National Bank of Belgium (NBB) has been designated as the authority entrusted with the conduct of macroprudential policy in Belgium. The ultimate objective of macroprudential policy is to contribute to the safeguard of the stability of the financial system as a whole by strengthening the resilience of the financial system and decreasing the build-up of systemic risks and thereby ensuring a sustainable contribution of the financial sector to economic growth.

1. To this end, the NBB has the task to detect, assess and monitor the different elements and developments which may affect the stability of the financial system. It shall issue recommendations on measures to be implemented by the various relevant stakeholders in order to contribute to the stability of the financial system, preventing the occurrence of systemic risks and limiting the effect of potential disruptions. The NBB shall adopt measures falling within the scope of its competences with a view to ensure the stability of the financial system/sector.

2. Stress testing is an appropriate tool to identify vulnerabilities of the financial system and to assess the potential impact of risks on the stability of the financial system in general and the insurance sector more specifically. Stress testing also helps to identify those undertakings that may pose a risk to the stability of the financial system or the insurance sector. The NBB can, after the analysis of the stress test results, issue recommendations to be implemented by the insurance undertakings in order to contribute to the stability of the financial system.

3. The NBB provides additional guidance on the use of stress tests in its *Communication NBB_2017_06 on the stress test framework for the insurance sector*. The framework makes a distinction between microprudential stress tests that are *proper to the undertaking* (e.g. stress tests for the purpose of the ORSA) and stress tests which are *initiated by the NBB* and can have either a microprudential objective (e.g. focus on a specific exposure which is present only in a few undertakings) or a macroprudential objective.

4. The design and features of these NBB stress tests are flexible and depend on the objective of the exercise. However, to limit the impact for the undertakings, the NBB stress tests will leverage – to the extent possible – on the experience built up during previous (EIOPA) stress tests. There will be a yearly stress test initiated by either EIOPA and/or the NBB. The NBB stress tests for insurance are based on articles 322 and 467 of the law of 13 March 2016 on the legal status and supervision of insurance or reinsurance companies. For 2020, the insurance stress test is initiated by the NBB.

NBB INSURANCE STRESS TEST 2020

Scope

5. In 2020, the Belgian insurance sector is subject to a stress test consisting of one scenario (*Low yield)*. The scenario was developed by the NBB and is applied to all Belgian insurance undertakings having life activities.

6. The scenario (*Low Yield*) assumes a persistent low interest rate environment and is combined with a new calibration for the SCR interest rate risk as proposed in the *Consultation Paper on the Opinion on the 2020 review of Solvency II* (EIOPA-19/451) published by EIOPA on the 11 September 2019. The stress test is a bottom-up exercise focussed on solo insurers.

7. The scope of the Low Yield (LY) scenario is defined in function of its primary objective i.e. identifying and assessing the vulnerabilities of Belgian insurance companies to a further decrease of the risk-free rate curve. All undertakings with life insurance activities must participate to the Low Yield scenario

stress test. Undertakings will be informed of their participation via a dedicated letter. Participating undertakings are kindly invited to an **information session** covering all aspects of the NBB Insurance Stress Test 2020. This will take place on **13 March 2020** from **10:00 till 11:00** in the Auditorium of the NBB (Warmoesberg 61, 1000 Brussels). Please confirm your participation by sending an email to ist@nbb.be with the name of the participants before **6 March 2020**.

8. A dedicated insurance stress test webpage (www.nbb.be/insurancestresstest) can be found on the NBB website and contains all relevant information for this stress test.

Scenario

9. The NBB stress test 2020 is based on a 2-step process:

    a. Step 1 - the recalculation of the SCR interest rate risk, as proposed in the EIOPA consultation paper on the SII review

    b. Step 2 – the application of the shocked EIOPA risk free interest rate curve.

Step 1 – Basecase recalculation of SCR IRR

10. The first step requires the recalculation of the SCR interest rate risk as proposed in the *Consultation Paper on the Opinion on the 2020 review of Solvency II* (EIOPA-19/451) published by EIOPA on the 11 September 2019 (more detail, see below).

Step 2 - Low Yield (LY) scenario

11. The application of the low yield scenario requests stress test participants to calculate the impact of a stressed risk-free rate curve (see below) on their financial situation including a recalculation of the SCR following the same methodology of the SCR interest rate risk as in step 1.

Process and timeline

12. The NBB Insurance Stress Test 2020 will be launched on **2 March 2020**. The results will have to be submitted to the NBB no later than **8 June 2020**. The results must be transmitted electronically via the OneGate application of the NBB (domain CPA). The data can be entered manually or the reporting can be automated by making use of files generated in a CSV or XML format. Please refer to Annex 1 for the exact list of templates to be submitted.

13. Table 2 gives an overview of the timeline of the NBB Insurance Stress Test 2020.

Date	Activity
2 March 2020	Launch of the NBB Insurance Stress Test 2020
13 March 2020	Information session at the NBB
8 June 2020	Submission of the results
June 2020	Validation (resubmission) and analysis of the results

14. For information purposes only, a mock spreadsheet containing all reporting templates is available on the NBB stress test webpage (NBB IST 2020 reporting templates). The reporting templates have been developed with the intention to be as consistent as possible with the corresponding Solvency II QRTs and previous stress test templates.

15. After the submission of the results, a thorough validation will take place. Undertakings should be able to explain the main drivers behind the impact of a scenario on their balance sheet and solvency. The analysis of the results could lead to a request for further clarifications or resubmission of the results.

Communication and disclosure

16. The NBB will not disclose individual results of the stress test. All public communication will be based on anonymised and/or aggregated data. The format and content of the communication will depend on the results of the stress test and the type of messages that the NBB would like to convey to the stakeholders.

17. The undertakings participating at the stress test cannot disclose, discuss or comment on any of their individual results.

Impact on flashing light provision

18. The general conditions to be exempted from the set-up of the flashing light provision are outlined in article 34*quinquies* § 4 of the royal decree of 17 November 1994 on the ***statutory account*** of insurance and reinsurance undertakings and the circular letter NBB_2016_39. In summary:

    a. All undertakings should submit to the NBB a formal request for exemption of the mandatory contribution to the flashing light provision.

    b. The undertaking's own funds should cover its capital requirements without the use of transitional measures as in articles 668 and 669 of the insurance supervisory law[1].

    c. In addition, the NBB can impose additional conditions for the recognition or preservation of the exemption, when necessitated by the condition of the undertaking and the market.

19. Following condition a), undertakings must explicitly confirm the NBB if they wish to ask for the exemption from the mandatory contribution to the flashing light provision by sending an email to ist@nbb.be before 15 April 2020.

20. Following condition c), the results of the low yield scenario of the 2020 stress test will determine whether or not an exemption from the mandatory contribution to the so-called flashing light provision can be obtained.

TECHNICAL SPECIFICATIONS

21. The reference date for the stress test exercise is 31 December 2019. Shocks prescribed in the stressed scenario shall be applied to the entire in force business at the reference date. Measures, actions or risk mitigating strategies that rely on taking future actions after the reference date should not be taken into account.

22. The scenario is designed as an instantaneous shock. The entire balance sheet including Unit Linked / Index Linked assets and liabilities are subject to the prescribed shocks.

23. All interest rate sensitive assets and liabilities shall be revalued using the stressed interest rate term structures.

24. The shocks to be applied for the (re)calculation of the SCR interest rate risk according to the new methodology follow the principles as consulted in scope of the EIOPA SII review (based on the *Consultation Paper on the Opinion on the 2020 review of Solvency II).* These shocks are derived according to the process described below:
    - The increased term structure for a given currency is equal to: $r_t^{up}(m) = r_t(m)\left(1 + s_m^{up}\right) + b_m^{up}$ where $r_t(m)$ denotes the risk-free interest rate in the corresponding currency, m denotes the maturity and b_m^{up} and s_m^{up} are the calibrated maturity dependent up-shock components.
    - The decreased term structure for a given currency is equal to: $r_t^{down}(m) = r_t(m)(1 - s_m^{down}) - b_m^{down}$ where $r_t(m)$ denotes the risk-free interest rate in the corresponding currency, m denotes the maturity and b_m^{down} and s_m^{down} are the calibrated maturity dependent down-shock components.
    - For maturities between 1 and 20 years, the shock components are as follows (the resulting curves can be found in the Excel file: *2020 ST - Technical Information)*:

Maturity M [years]	s_m^{down}	b_m^{down}	s_m^{up}	b_m^{up}
1	58%	1.16%	61%	2.14%
2	51%	0.99%	53%	1.86%
3	44%	0.83%	49%	1.72%
4	40%	0.74%	46%	1.61%
5	40%	0.71%	45%	1.58%
6	38%	0.67%	41%	1.44%
7	37%	0.63%	37%	1.30%
8	38%	0.62%	34%	1.19%
9	39%	0.61%	32%	1.12%
10	40%	0.61%	30%	1.05%
11	41%	0.60%	30%	1.05%
12	42%	0.60%	30%	1.05%
13	43%	0.59%	30%	1.05%
14	44%	0.58%	29%	1.02%
15	45%	0.57%	28%	0.98%

16	47%	0.56%	28%	0.98%
17	48%	0.55%	27%	0.95%
18	49%	0.54%	26%	0.91%
19	49%	0.52%	26%	0.91%
20	50%	0.50%	25%	0.88%

- For maturities shorter than one year the value of b_m^{up} and s_m^{up} are equal to 61% and 2.14% respectively. For maturities shorter than one year the value of b_m^{down} and s_m^{down} are equal to 58% and 1.16%.
- For maturities between 20 and 90 years, the value of s_m^{up} is linearly interpolated. For maturities of 90 years and up the value of s_m^{up} is 20%. For maturities between 20 and 60 years the value of b_m^{up} is linearly interpolated. For maturities of 60 years and up the value of b_m^{up} is 0%.
- For maturities between 20 and 90 years, the value of s_m^{down} is linearly interpolated. For maturities of 90 years and up the value of s_m^{down} is 20%. For maturities between 20 and 60 years the value of $b_m^{down}$is linearly interpolated. For maturities of 60 years and up the value of b_m^{down} is 0%.

25. The final base and stressed interest rate risk curves which need to be applied are to be found in the Excel file: *2020 ST - Technical Information* (available on NBB's stress test webpage). These interest rate curve include:
    - Basic RFR curves for the reference date 31/12/2019 (with and without VA)
    - Basic RFR curves for the reference date 31/12/2019 to calculate the SCR IRR shock upwards/downwards (with and without VA) according to the new methodology
    - NBB Stress test 2020 curves (with and without VA)
    - NBB Stress test 2020 curves to calculate the SCR IRR shock upwards/downwards (with and without VA) afters stress according to the new methodology

26. In case no stressed interest rate term structures are provided for a scenario or a particular currency, participating groups shall use the relevant term structures used for the base case at the reference date as published by EIOPA.

27. The look-through approach should be applied when calculating the impact of the scenario.

28. Simplifications in the calculation of the stress test can be used only if they have an insignificant economic impact. Undertakings applying simplifications should inform, via IST@nbb.be, the NBB prior to the submission of results.

29. The post-stress figures shall be generated coherently with the model(s) applied for Solvency II valuation purposes. The use of (partial) internal models and undertaking specific parameters (USPs) should have been approved by the NBB at reference date.

30. The long-term guarantee (LTG) and Transitional measures are part of the stress test framework, in alignment with Solvency II. Hence, undertakings are requested to apply any LTG and Transitional measures they used at reference date.

a. LTG and Transitional measures can only be used insofar approval at reference date has been granted.
b. The impact of the LTG and Transitional measures on the post-stress technical provisions, basic own funds, eligible own funds and SCR have to be calculated.
c. Transitional measures on Equity shall be applied consistently with the baseline scenario.

REPORTING TEMPLATES

31. All data should be reported in units (incl. ratios and percentages) and no blank cells are allowed.

32. Participants shall submit their results through OneGate. For information purposes only, a mock spreadsheet (NBB *quantitative reporting templates*) containing all reporting templates is provided. The templates are grouped in three main section:

    a. Base case situation (0)
    b. Base Case – Interest rate risk – SII Review 2020
    c. Low Yield (LY) scenario

33. The templates are based on the Solvency II annual reporting. Annex 1 gives an overview of the templates covered in the spreadsheet and indicates which template must be completed and be submitted to the NBB.

34. **Balance sheet** (0.BS, LY.BS). The base case balance sheet (0.BS) equals the 2019 annual SII balance sheet and will not be collected again. The LY balance sheet (LY.BS) require a lower degree of detail on the asset side.

35. Impact of **long term guarantees measures and transitionals** (0.LTG, LY.LTG). The base case LTG template (0.LTG) equals the 2019 annual SII LTG template and will not be collected again. Only the data of the overall impact of all LTG and Transitional measures on the technical provisions, basic own funds, eligible own funds to meet the SCR and the SCR is required for the post-stress LTG template.

36. **Own Funds** (0.OF, LY.OF). The base case own funds template (0.OF) equals the 2019 annual SII own funds template and will not be collected again. The LY own funds template (LY.OF) reflects the fact that no MCR recalculation is required and it does not ask for the information on the expected profits.

37. Templates devoted to collect data on the **Solvency Capital Requirement** (SCR.SF, SCR.PIM, SCR.IM) are mutually exclusive. Undertakings shall report the SCR.SF in case there is no authorisation to use a full or partial internal model at reference date. SCR.PIM or SCR.IM shall be reported in case an authorisation for respectively a partial internal model or a full internal model was granted by the NBB at reference date. The MCR should not be recalculated after stress.

38. The base case SCR templates (0.SCR.SF, 0.SCR.PIM, 0.SCR.IM) equals the 2019 annual SII SCR template and will not be collected again.
    For the basecase recalculated with the new interest rate risk sub-module, only the following elements need to be recalculated for the SCR templates: SCR market risk, diversification effect between the different modules and loss absorbing capacity of technical provisions and deferred taxes. All parameters not asked in the reporting are to be considered as unaffected by the interest rate shock recalculation The BC_REV.SCR template (BC_REV.SCR.SF, BC_REV.SCR.PIM) reflects that only the SCR market risk is requested to be filled.
    The undertakings are required to recalculate their SCR after applying the Low Yield scenario (LY.SCR.SF, LY.SCR.PIM, LY.SCR.IM).

39. The base case **SCR Market risk** templates (0.SCR.MKT) equals the 2019 annual SII SCR template and will not be collected again.
    For the basecase with the recalculated interest rate risk sub-module, within the SCR market risk module, only changes in the SCR interest rate risk, diversification effects between SCR market risk submodules and loss absorbing capacity of technical provisions and deferred taxes need to be recalculated. When calculating the SCR, all parameters not asked in the reporting are to be considered as unaffected by the interest rate shock recalculation. The BC_REV.SCR template (BC_REV.SCR.SF, BC_REV.SCR.PIM) reflects the fact that only the interest rate shock recalculation and its impact on SCR market risk is required.

CONTACT

Email ist@nbb.be
Webpage www.nbb.be/insurancestresstest

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ANNEX 1 - Overview of templates

Templates				Scenario
Content	Title	Origin	Prefilled	Low Yield
Information				
General information	Information	IST2020 specific	Not prefilled	
Overview of sheets	Index	IST2020 specific	Not prefilled	
Participant information				
Participating entity information	Participant.Basics	IST2020 specific	Not prefilled	X
Base case (pre-stress)				
Balance sheet	0.BS	QRT-based	Prefilled	
Long-term Guarantees	0.LTG	QRT-based	Prefilled	
Own funds	0.OF	QRT-based	Prefilled	
SCR - for undertakings using SF	0.SCR.SF	QRT-based	Prefilled	
SCR - for undertakings using PIM	0.SCR.PIM	QRT-based	Prefilled	
SCR - for undertakings using full IM	0.SCR.IM	QRT-based	Prefilled	
SCR - Market risk	0.SCR.MKT	QRT-based	Prefilled	
Base case - Interest rate risk - SII Review 2020				
SCR - for undertakings using SF	BC_REV.SCR.SF	QRT-based	Partly prefilled	X
SCR - for undertakings using PIM	BC_REV.SCR.PIM	QRT-based	Partly prefilled	X
SCR - Market risk	BC_REV.SCR.MKT	QRT-based	Partly prefilled	X
Low Yield (LY) scenario				
Balance sheet	LY.BS	QRT-based	Not prefilled	X
Long-term Guarantees	LY.LTG	QRT-based	Not prefilled	X
Own funds	LY.OF	QRT-based	Not prefilled	X
SCR - for undertakings using SF	LY.SCR.SF	QRT-based	Not prefilled	X
SCR - for undertakings using PIM	LY.SCR.PIM	QRT-based	Not prefilled	X
SCR - for undertakings using full IM	LY.SCR.IM	QRT-based	Not prefilled	X
SCR - Market risk	LY.SCR.MKT	QRT-based	Not prefilled	X