



# National Bank of Belgium

## Insurance Stress Test 2017

### Technical Specifications v1.1

Version	Date	Major changes
v1.0	30 June 2017	First version of the Technical Specifications
v1.1	7 July 2017	Modifications to reflect Q&As (para 61 & 64)

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## INTRODUCTION

1. 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.
2. To this end the NBB has the task to detect, assess and monitor different factors 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 achieving the stability of the financial system.
3. 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.
4. 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.
5. The design and features of these NBB stress tests are very 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 EIOPA or the NBB if there is no EIOPA exercise foreseen that year. 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.
6. In line with article 23 of its Regulation<sup>1</sup>, EIOPA, in cooperation with the ESRB, regularly initiates and coordinates European wide stress tests to assess the resilience of insurance undertakings to adverse market developments. These macroprudential exercises are carried out in order to identify potential systemic risks and vulnerabilities. In 2016 the EIOPA stress test focused on the resilience of the insurance sector to a Low for Long scenario and a Double Hit scenario.

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<sup>1</sup> Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/79/EC

## NBB INSURANCE STRESS TEST 2017

7. In 2017, the Belgian insurance sector is subject to a stress test consisting of two distinct parts. The first part is a bottom-up stress test focusing on the impact of a persistent low yield environment and is developed by the NBB (*Low for Long scenario*). The second part is the IMF FSAP stress test designed by the IMF in the context of its 2017 Belgian FSAP mission. It consists of a bottom-up stress test focusing on an increase of the asset risk premia due to adverse macrofinancial evolutions (*IMF Adverse scenario*), a sensitivity analysis based on single-factor shocks and a top-down stress test.
8. Participating undertakings are kindly invited to an **information session** covering all aspects of the NBB Insurance Stress Test 2017. This will take place on **July 6<sup>th</sup> 2017** from **10:00 till 12:00** in Room A of the Auditorium of the NBB (Warmoesberg 61, 1000 Brussels). Please confirm your participation by sending an email to [ist@nbb.be](mailto:ist@nbb.be) with the name of the participants before July 4<sup>th</sup> 2017.
9. A dedicated insurance stress test webpage ([www.nbb.be/insurancestresstest](http://www.nbb.be/insurancestresstest)) can be found on the NBB website and contains all relevant information for both scenarios of this stress test.

### General principles <sup>2</sup>

10. The Low for Long scenario and the IMF Adverse scenario are bottom-up exercises which involve calculations performed by the insurance undertakings on the impact of these scenarios on their balance sheet, own funds and solvency capital requirement. Undertakings should be able to explain the main drivers of the impact of the scenarios on their balance sheet and solvency position.
11. Both scenarios should be applied at solo entity level and the reference date is December 31<sup>th</sup> 2016.
12. The base case is the pre-stress financial situation of an undertaking at reference date. The pre- and post-stress valuation has to be done at reference date according to Solvency II and all of its related technical specifications.
13. The entire balance sheet is subject to the prescribed shocks.<sup>3</sup>
14. All technical provisions shall be revalued using the stressed interest rate term structures. For currencies for which no stressed interest rate term structure is provided<sup>4</sup>, undertakings shall use the risk free rate curve at reference date as published by EIOPA.
15. All interest rate sensitive assets and liabilities should be revalued following the change of the risk free interest rate curve.
16. The look-through approach should be applied when calculating the impact of the scenarios (e.g. for Collective Investment Undertakings).

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<sup>2</sup> These general principles apply to the Low for Long scenario as well as the IMF Adverse scenario.

<sup>3</sup> Including all assets, technical provisions and other liabilities.

<sup>4</sup> Including currencies with a fixed exchange rate to the euro for which no stressed interest rate term structure is provided.

17. The post-stress figures shall be generated coherently with the model applied by the undertakings for Solvency II valuation purposes. Use of (partial) internal models and USPs should have been approved by the NBB at reference date.
18. The use of simplifications for the recalculation of the SCR of a module is acceptable *only* when the undertaking is able to *demonstrate* that the impact of the scenario on the SCR of this particular module is not material. Companies should be able to describe these simplifications and provide a margin of error on the SCR after stress as a result of these simplifications. The NBB can require a full recalculation of the SCR if those conditions are not respected.
19. In order to achieve a level playing field and to ensure that the results before and after stress are comparable the undertakings cannot take into account any measures, actions or strategies that have been implemented or decided upon after the reference date.
20. Undertakings shall follow the principles stated in Circular NBB\_2017\_14 when calculating the loss absorbing capacity of the deferred taxes after stress.
21. The scenarios are designed as an instantaneous shock; management actions should only be included in the calculations as far as they relate to non-discretionary rules already in place at reference date.
22. The LTG and Transitional measures are part of the stress test framework, in alignment with Solvency II, hence for the purpose of the stress test undertakings are requested to apply any LTG and Transitional measures they applied at reference date. When the application of a measure requires a prior approval by the NBB e.g. transitional on technical provisions, this measure can only be used insofar the undertaking had the approval at reference date.
23. The impact, in absolute terms, of the transitional measure on the technical provisions shall be calculated in the pre-stress scenario and then kept constant in the post-stress scenario. The recalculation of the impact of the transitional in the post-stress situation is thus not requested.

## Scope and coverage

### Low for Long

24. The scope of the Low for Long scenario is defined in function of its primary objective i.e. identifying and assessing the vulnerabilities of the Belgian insurance sector to interest rate risk. To this end, the scenario focuses on individual insurance undertakings offering any type of interest rate guarantee – which are deemed to be more vulnerable to a low interest rate environment.
25. In order to be representative for the Belgian market, the scope includes the seven largest undertakings in terms of Life technical provisions (excluding health and index-linked and unit-linked) by year-end 2016 (table 1). Together they cover 78% of the life insurance market in Belgium. These undertakings are **required to participate** at the Low for Long scenario.
26. All other Belgian insurers active in life insurance or occupational accident insurance are invited to take part in the Low for Low scenario on a voluntary basis. If they wish to be exempted from the mandatory contribution to the flashing light provision they are nevertheless **strongly advised to**

**participate** at the Low for Long scenario. As mentioned in Circular NBB\_2016\_39, the compliance with the capital requirements without the use of the transitional measure on the technical provisions is a necessary but not sufficient condition to be granted an exemption from the mandatory contribution to the flashing light provision. The satisfactory result of the Low for Long scenario will serve as an additional condition when assessing the appropriateness to grant an exemption. Undertakings have to **explicitly confirm** if they will participate or not at the Low for Long scenario by sending an email to [jst@nbb.be](mailto:jst@nbb.be) before July 20<sup>th</sup> 2017.

### IMF FSAP stress test

27. In recent IMF FSAP stress tests, the IMF aimed to achieve a coverage of at least 70% of the market. The Belgian insurance market is rather concentrated so that the coverage can be reached by including 8 companies. ARAS has been included because it is part of a financial conglomerate which is an area of interest for the IMF. Table 1 lists the individual insurance undertakings that are **required to participate** at the IMF FSAP stress test.

YE 2016 (x€1000)	Assets	Liabilities	TP Life *			GWP **			Scenario	
			Share	Cum.		Share	Cum.		LY	IMF
0079 - AG Ins	79.909.805	74.086.559	57.215.039	28,6%	28,6%	1.671.183	12,0%	12,0%	X	X
0039 - AXA Belgium	50.491.567	45.530.690	30.396.220	15,2%	43,8%	1.929.169	13,8%	25,8%	X	X
0014 - KBC	37.759.294	34.130.957	16.209.610	8,1%	52,0%	1.021.341	7,3%	33,2%	X	X
0037 - BELINS	23.182.427	21.105.986	15.586.317	7,8%	59,8%	581.127	4,2%	37,3%	X	X
0058 - P&V	18.875.462	17.520.741	13.742.263	6,9%	66,6%	648.607	4,7%	42,0%	X	X
0196 - Ethias	19.464.989	17.778.597	11.725.786	5,9%	72,5%	1.189.351	8,5%	50,5%	X	X
0097 - Allianz Benelux	17.435.485	15.808.617	11.192.408	5,6%	78,1%	1.232.338	8,8%	59,4%	X	X
0858 - Aras	6.324.368	5.628.938	3.359.973	1,7%	79,8%	93.348	0,7%	60,0%		X
MARKET	326.184.440	295.404.492	199.822.949	100%		13.936.952	100%			

\* TP Life (excluding health and index-linked and unit-linked)

\*\* Non-life gross written premium - direct business

Table 1: Overview of undertakings required to participate at the stress test.

### Process

28. The Low for Long scenario will be launched on Friday June 30<sup>th</sup> 2017. The results will have to be submitted to the NBB no later than Friday September 15<sup>th</sup> 2017. 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. Table 2 gives an overview of the relevant milestones of the NBB Insurance Stress Test 2017.

29. The IMF FSAP stress test will be launched on Friday June 30<sup>th</sup> 2017. The results will have to be submitted to the NBB no later than Friday September 15<sup>th</sup> 2017. In order for the IMF to be able to

work on the top-down stress test during the first IMF FSAP mission<sup>5</sup> a limited number of base case templates should be submitted by Friday August 25<sup>th</sup> 2017. Please refer to Annex 1 for the exact list of templates. 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.

30. An additional, qualitative data request (*Qualitative reporting templates*) is available on the NBB stress test webpage and should be completed by all IMF FSAP stress test participants. This Excel file should be submitted to the NBB by email ([ist@nbb.be](mailto:ist@nbb.be)) no later than Friday September 15<sup>th</sup> 2017.

Date	Activity
June 20 <sup>th</sup> – June 23 <sup>th</sup> 2017	Consultation of stress test package with Assuralia
<b>June 30<sup>th</sup> 2017</b>	<b>Launch of the NBB Insurance Stress Test 2017</b>
<b>July 6<sup>th</sup> 2017</b>	<b>Information session at the NBB</b>
June 30 <sup>th</sup> – August 25 <sup>th</sup> 2017	Q&A process
<b>August 25<sup>th</sup> 2017</b>	<b>Early submission</b> of a part of the results of the IMF Adverse scenario
<b>September 15<sup>th</sup> 2017</b>	<b>Submission</b> of the results of the Low for Long and IMF Adverse scenario
Mid-September – October 2017	Validation and analysis of the results
End December 2017	Communication on the Low for Long results
Q1 2018 (tentative date)	Communication on the IMF FSAP stress test results

Table 2: Relevant milestones of the NBB Insurance Stress Test 2017.

31. For information purposes only, a mock spreadsheet containing all reporting templates (*Quantitative reporting templates*) that will be used when analysing the results is available on the NBB stress test webpage. This spreadsheet covers the base case, Low for Long and IMF FSAP stress test templates. The templates have been developed with the intention to be as consistent as possible with the corresponding Solvency II QRTs and the EIOPA 2016 stress test templates. Only the templates containing information that has not yet been submitted to the NBB in the context of the annual Solvency II reporting or the Interest Rate Risk reporting should be completed and will be visible in OneGate.
32. To ensure the consistency and comparability of the results, a Question & Answer process will run from the launch of the stress test until the submission of the results. All questions should be sent to [ist@nbb.be](mailto:ist@nbb.be) and your file manager. It should be clear to which part of which document they relate. The Q&A process covers both the Low for Long and the IMF FSAP stress test. Questions not directly

<sup>5</sup> The first IMF FSAP mission is planned from August 29<sup>th</sup> until September 15<sup>th</sup> 2017.

relating to the stress test but to the Solvency II framework in general will not be treated in this Q&A process.

33. Questions will be treated on a bilateral basis first. If the nature of the question is of general relevance and of interest to the other participants, both the (anonymised) question and the answer will be published every Friday until August 25<sup>th</sup> 2017 on the NBB stress test webpage. To the extent that a Q&A affects other reference documents, they will be updated with the same frequency. Undertakings shall regularly verify if new Q&As or new versions of the reference documents have been published and take them into account when performing the stress test.
34. 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 NBB will engage in a discussion with each participant on their results; this could lead to a request for further clarifications or resubmission of the results. The aim is to close the validation phase by the end of October after which the results will be further analysed. Priority will be given to the validation of the IMF FSAP stress test results.

## Communication and disclosure

35. Communication on the Low for Long results is envisaged by year-end 2017. 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.
36. Regarding the IMF FSAP stress test, the results will be published as a part of the IMF FSAP report on Belgium. The results will be presented in an aggregated format for groups of companies; no individual company results will be published. Besides aggregated results, also the dispersion of the results will be shown, taking into account the small sample size in this exercise. The NBB will verify all documents before publication and thereby ensure that no individual company results can be derived from the aggregated information.
37. The undertakings participating at the stress test cannot disclose, discuss or comment on any of their individual results.

## LOW FOR LONG SCENARIO

### Objective and rationale

38. The primary objective of the NBB Low for Long scenario is to detect and assess potential vulnerabilities of the Belgian insurance sector to a specific risk exposure – i.e., interest rate risk. How resilient are undertakings to prolonged low interest rates? This exercise is part of a ‘macroprudential risk assessment’ and evaluates the impact of a stress scenario on the insurance sector without being

bound by the regulatory framework in place. It complements the risk assessments done for the individual undertakings. In this respect, the objective of the Low for Long scenario is similar to that of the EIOPA 2016 stress test.

39. The current macroeconomic environment remains fragile and is to some extent similar to the environment at the beginning of 2016. The environment is still characterised by low inflation and (s)low economic growth even though certain positive evolutions in the expectations and fundamentals are apparent since the beginning of 2017. (Geo)political risks e.g. Brexit, elections throughout Europe, US policy ... remain important and some have materialised in 2016. This could hamper economic growth and lead to higher risk premia. This would increase funding costs and could trigger debt sustainability concerns in some countries.
40. Since several years the core inflation has settled around a level of, close to but below, 1% which is a full percentage point below the ECB's medium-term inflation target. As a consequence, a change of the current expansionary monetary policy is not expected in the short term. For this to happen, the (core) inflation should rise and prove to be durable, self-sustaining (without the aid of nonstandard monetary policy) and homogeneous throughout the Eurozone (not driven by high inflation in a few countries).
41. Even though an increase of the risk free rate curve has been observed – after reaching absolute lows during Q3 2016 – the low yield environment remains a major source of concern for the insurance sector (figure 1). The EIOPA 2016 Low for Long scenario materialised to some extent during 2016. Until a maturity of 13 years, the July 2016 risk free rate curve lies (well) below the 2016 stressed curve. It then follows a very similar path until year 20. Also at the end of 2016 the risk free rate curve lay below the 2016 stressed curve until year 6.
42. In conclusion, interest rates are still at historically low levels and could remain low for some time even though the probability of an increase in interest rates is higher than at the beginning of 2016.
43. The macroprudential approach of this stress test is complemented with a microprudential dimension. Notwithstanding the primary objective of the stress test to assess vulnerabilities at *market level*, identified weaknesses at *individual level* cannot be neglected. Moreover, given the current state of the prudential regulation and the lack of macroprudential tools, potential vulnerabilities identified at market level can best be addressed at individual level. This implies that the results of the Low for Long scenario will be taken into account when assessing the appropriateness to exempt undertakings from the contribution to the flashing light provision.

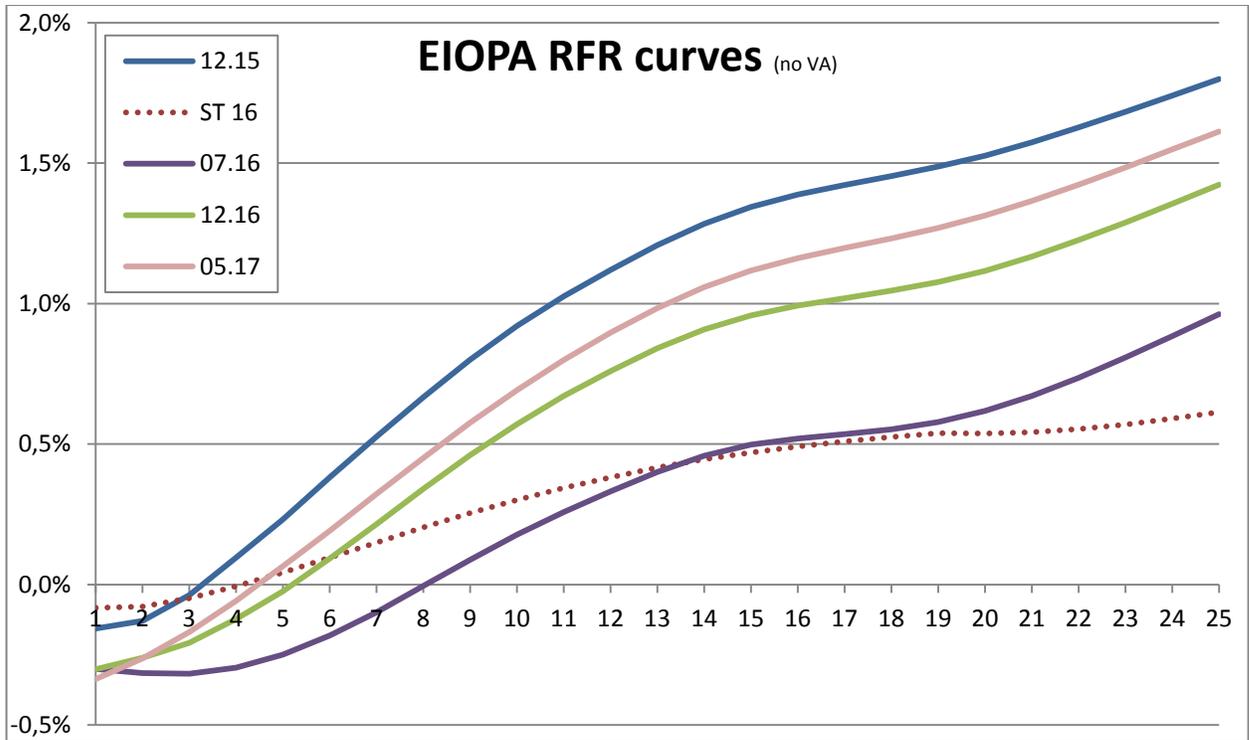


Figure 1: Evolution of the EIOPA EUR risk free rate curves without volatility adjustment.

## Design

44. The Low for Long scenario is based on a situation of secular stagnation. Savers facing a lack of long term investment opportunities and permanently low productivity growth - combined with a scarcity of risk free assets - drive down yields across all maturities. The stressed interest rate term structures reflect both historical and hypothetical developments possible in this context of prolonged low interest rates. In order to take the long term zero growth assumption into account the ultimate forward rate (UFR) is set at 2% (= ECB inflation target) instead of 4,2%.
45. The NBB uses the same methodology as EIOPA in their 2016 stress test to derive a stressed EUR interest rate term structure.
  - a. First, the euro swap curve with the lowest average rate for 4 different maturities (1, 5, 10 and 20 year) over the last 2 years was identified. This curve was observed on September 7<sup>th</sup> 2016.
  - b. Next, the liquid part of this curve (until year 20) is shocked downwards with 15 bps (which includes the credit risk adjustment of 10 bps).
  - c. Finally, for the maturities after the last liquid point (year 20), interest rates are determined using the Smith-Wilson extrapolation method towards an UFR of 2%.

The volatility adjustment is kept constant at its level at reference date (13 bps). Figure 2 compares the stressed EUR risk free rate curve with selected EIOPA RFR curves over the first 25 years.

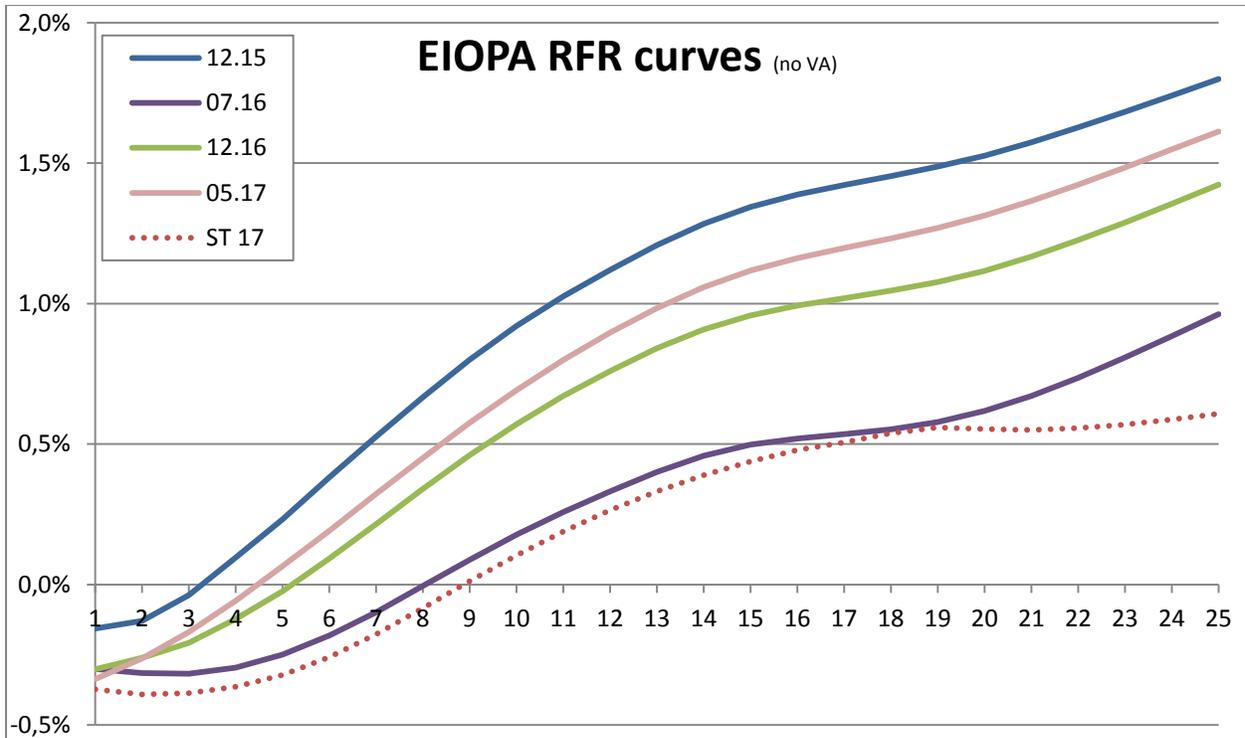


Figure 2: Comparison of the EUR stressed risk free rate curve with selected EIOPA risk free rate curves.

46. A similar method is used to derive a stressed GBP interest rate term structure.

- a. First, the lowest GBP risk free rate curve, published by EIOPA since the start of Solvency II, was identified. This is the August 2016 GBP risk free rate curve.
- b. Next, the liquid part of this curve (until year 50) is shocked downwards with 5 bps (which comes on top of the credit risk adjustment of 15 bps included in the August 2016 GBP risk free rate curve).
- c. Finally, for the maturities after the last liquid point (year 50), interest rates are determined using the Smith-Wilson extrapolation method towards an UFR of 2%.

The volatility adjustment is kept constant at its level at reference date (30 bps).

47. The risk free rate curves for other currencies are not stressed. The stressed EUR and GBP interest rate term structures are available on the NBB stress test webpage in the *Technical Information* spreadsheet.

## Technical specifications

48. The Low for Long scenario is a bottom-up exercise which involves calculations performed by the insurance undertakings on the impact of a low interest rate environment on their balance sheet, own funds and solvency capital requirement.

49. Second round effects are not covered and should not be taken into account.

50. The Low for Long scenario differs from the base case situation only with respect to the prescribed (stressed) interest rate term structures.
51. All other parameters shall be considered unchanged with reference to the valuation before the stress is applied.
52. The Low for Long scenario assumes that credit spreads remain constant at their level at reference date after applying the instantaneous shock on the risk free rate curves. This implies that also the volatility adjustments remain constant at their level at reference date.

## IMF FSAP STRESS TEST

### Overall approach

53. The IMF FSAP stress test consists of two integral parts, one being performed by the insurance undertakings (bottom-up stress test) and one being performed by the IMF FSAP team (top-down stress test).
54. Central to the insurance sector stress test is the **bottom-up exercise** (*IMF Adverse scenario*) for which the IMF, in cooperation with the NBB, provides scenario specifications in the *Technical Information* spreadsheet. The participating companies should calculate the impact of the scenario on their balance sheet and ultimately on their own funds and solvency capital requirement. They should be able to explain the main drivers of the impact.
55. One of the outcomes of this stress test will be to assess the capital needs of the insurers after stress.
56. A purely instantaneous stress test lacks informational value about medium-term risks and vulnerabilities. Therefore, the banking sector stress test uses a 5 year projection horizon and tracks capital adequacy over time in the stressed scenario. For the insurance sector, a similar but less complex approach is used. The objective is to understand how quickly insurance companies are able to recover from a severe market shock.
57. Additional **single-factor shocks** complement the IMF Adverse scenario. The single-factor shocks should be calculated separately and should not be aggregated to the IMF Adverse scenario results.
58. To benchmark the results of the bottom-up stress test, an additional **top-down exercise** will be run by the IMF team, based on input data received from the NBB and the companies.

### Bottom-up: IMF Adverse scenario

59. To test the resilience of the Belgian financial sector, an adverse macrofinancial scenario has been developed which simulates a recession driven by a sudden increase in global risk aversion, the reassessment of sovereign risk in the Euro Area, a credit cycle downturn in emerging market economies, and a large correction in real estate markets in Belgium.

60. The macrofinancial scenario has been designed for both the banking and the insurance sector stress test performed during the 2017 Belgian FSAP. However, for the purpose of the insurance stress test it has been slightly adjusted. While for the banking stress test a 5 year projection horizon is prescribed, for the insurance stress test all shocks are assumed to occur immediately after the reference date (instantaneous shock). The focus of the scenario specifications for the insurance sector lies on financial market variables:

- Shocks to risk-free interest rates: separate for EUR, USD, GBP and CZK;
- Shocks to sovereign bond spreads: separate for Belgium, low-yield Euro area countries (AT, DE, FI, FR, LU, NL), high-yield Euro area countries (CY, ES, GR, IE, IT, PT), other EU countries and advanced economies, other emerging and developing economies;
- Shocks to corporate bond spreads: separate per rating class;
- Shock to mortgage loans;
- Shocks to foreign exchange rates: changes of EUR against USD, GBP and CZK;
- Shocks to equity prices: separate for Belgium, other advanced economies, and other emerging and developing economies;
- Shocks to property prices: separate for Belgium and other countries.

61. The increase in sovereign and corporate bond spreads leads to an increase of the VA to 85 bps for the stressed EUR risk free rate curve. The VA for the other currencies remains at its level at reference date. The symmetric equity adjustment equals -10%.

62. Table 3 gives an overview of most of the shocks to be applied for the IMF Adverse Scenario. The complete overview (including the risk free rate curves after stress) can be found in the *Technical Information* spreadsheet on the NBB stress test webpage.

<i>(change compared to the reference date)</i>		<b>IMF Adverse scenario</b>
Interest rates (parallel shift of the liquid part of the risk-free rate term structure)	EUR	+50bp
	USD	+100bp
	GBP	+100bp
	CZK	+100bp
Sovereign bond spreads	Belgium	+147bp
	Low-yield Euro area countries	+50bp
	High-yield Euro area countries	+200bp
	Other EU countries and advanced economies	+100bp
	Other emerging and developing economies	+200bp
Corporate bond spreads	CQS 0	+50bp
	CQS 1	+80bp
	CQS 2	+120bp
	CQS 3	+180bp
	CQS 4 - 6	+300bp
	Unrated	+200bp

Mortgage loans		-2,0%
Currencies	EUR/USD <sup>6</sup>	-5,7%
	EUR/GBP <sup>6</sup>	-9,4%
	EUR/CZK <sup>6</sup>	-7,1%
Equity	Belgium	-16.2%
	Other advanced economies	-16.2%
	Other emerging and developing economies	-25.0%
Real Estate (commercial and residential)	Belgium	-20,0%
	Other countries	-15,0%

Table 3: Overview of the shocks to be applied for the IMF Adverse scenario.

## Bottom-up: Sensitivity analyses

63. Additional single-factor shocks complement the IMF Adverse scenario. The single-factor shocks should be calculated separately and should not be aggregated to the IMF Adverse scenario results. These shocks cover biometric risks as well as catastrophic events. Only the direct impact from claims should be reported.

64. The biometric shocks to be calculated for life insurance business include the following:

- Longevity, i.e. a permanent 20 percent decline in mortality rates,
- Mortality shock, i.e. a permanent 15 percent increase in mortality rates,
- Pandemic event, with temporarily higher disability and morbidity rates, i.e. a temporary 35 percent increase over one year, as well as temporarily higher mortality rates, i.e. a temporary 10 percent increase over one year.

The biometric shocks should be applied to all policies including those policies for which the Technical Provisions decrease after applying the shock.

65. The effect of catastrophic events should be calculated in a sensitivity analysis for the non-life insurance business. The events prescribed are historical scenarios which have occurred in the past but should be assumed to occur again, with the impact being simulated based on the current exposures of insurance undertakings:

- (i) Windstorm Lothar (December 1999)
- (ii) Windstorm Xynthia (February/March 2010)

In addition, for each of the two catastrophic events, insurance undertakings should provide the reinsurance recoveries from the participant's largest 5 reinsurers (on a group basis).

## Additional data needs

66. To complement the short-term perspective of an instantaneous shock, 3 year **projections** of specific business developments under the base case and the adverse scenario are requested. Reporting

<sup>6</sup> Positive number indicates an appreciation of the Euro.

items include gross written premiums, net written premiums, gross claims, net claims, lapse rates, investment returns, net surplus, shareholder dividends declared, insurance liabilities, and the coverage of the solvency capital requirement.

67. Companies should assume financial markets to remain at their stressed levels, i.e. equity, mortgage loans and property markets would not recover during the 3 year projection horizon and also interest rates, credit spreads and foreign exchange rates would remain at their stressed values. Investment income would therefore not contain any capital gains, but only recurring items like interest payments received, dividends and rental income. Investment return and profitability indicators should include the stress effect in the first year of the projection horizon (as the stress materialises immediately after the reference date). Projections on premiums and claims should take a severely stressed macroeconomic environment into account (e.g. a recession similar to the one observed in 2009).
68. For the projections under the base case (0.Projections), insurance companies are expected to rely on their capital planning and their projections made for the ORSA. For the projection under stress (IMF.Projections) the best effort principle can be applied.
69. The bottom-up stress test results should not be seen and interpreted in isolation. After the materialisation of a shock, insurance companies are likely to react in order to restore their target solvency margin and profitability levels. Therefore information on possible management actions in the IMF Adverse scenarios is collected in a **qualitative questionnaire**.
70. As part of a **top-down** simulation and in order to test the effect of a simultaneous default of the largest banking counterparties and of the largest non-financial corporate counterparties, insurers should provide details on their relevant exposures. The IMF team will apply the following haircuts on those exposures:
  - a 100 percent write-off for equity exposures, subordinated bonds and loans, uncollateralised OTC derivative exposures, as well as guarantees for the counterparties' liabilities,
  - a 50 percent write-off for bonds and loans,
  - a 15 percent write-off for deposits (beyond those exposures protected by a deposit guarantee scheme), loaned securities, collateralised OTC derivative exposures.

These haircuts are part of the top-down stress test and should be seen as a single-factor shock. They do not have to be applied in the IMF Adverse scenario and should not be aggregated to the scenario results.

71. To complement the analysis of systemic risks and vulnerabilities, some **historical data** for the last ten fiscal years, i.e. 2007-2016, is also requested:
  - Premiums,
  - Lapse rates in terms of the number of surrendered contracts,
  - Return on equity,
  - Shareholder dividend pay-outs (dividend declared for respective year).

## REPORTING TEMPLATES

72. All data should be reported in units (incl. ratios and percentages) and no blank cells are allowed.
73. Participants shall submit their results through OneGate. For information purposes only, a mock spreadsheet (*Quantitative reporting templates*) containing all reporting templates is provided. The templates are grouped in three main section:
- a. Base case situation (0)
  - b. Low for Long scenario (LY)
  - c. IMF FSAP stress test (IMF)
74. The templates are based on the Solvency II annual reporting, the NBB Interest Rate Risk reporting and the specific templates that were developed for the EIOPA 2016 stress test. Annex 1 gives an overview of the templates covered in the spreadsheet and indicates which template has to be completed for which scenario and by when they have to be submitted. All templates have to be submitted to the NBB before September 15<sup>th</sup> 2017, except for a part of the base case IMF Adverse scenario templates (X) who have to be submitted before August 25<sup>th</sup> 2017.
75. The template **Participant.Historic** should be completed on a best effort basis. In particular, with regard to the lapse rate, it is sufficient to report it either based on technical provisions or on the number of contracts. The measure used in this template should be the same as the measure used for the lapse rate in the Projections templates. In case a company underwent a major restructuring during the last ten years which very substantially changed its business and risk profile, the time series might start only after the restructuring.
76. **Balance sheet** (0.BS, LY.BS, IMF.BS). The base case balance sheet (0.BS) equals the 2016 annual SII balance sheet and will not be collected again. The LY and IMF balance sheet (LY.BS, IMF.BS) require a lower degree of detail on the asset side.
77. 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 for 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.
78. The base case SCR data equals the 2016 annual SII SCR data and will not be collected again. The undertakings are required to recalculate their SCR for both scenarios. The content of the post-stress SCR templates has been reduced when compared to the base case situation (e.g. Other information on SCR).
79. **Own Funds** (0.OF, LY.OF, IMF.OF). The base case own funds template (0.OF) equals the 2016 annual SII own funds template and will not be collected again. The LY and IMF own funds template (LY.OF and IMF.OF) reflects the fact that no MCR recalculation is required and does not ask for the information on the expected profits.

80. Impact of **long term guarantees measures and transitionals** (0.LTG, LY.LTG, IMF.LTG). The base case LTG template (0.LTG) equals the 2016 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 templates (LY.LTG, IMF.LTG).
81. **Asset information** (0.FI.Details, 0.Assets.Details). 0.FI.Details contains information on the composition of the fixed income portfolio and should be completed by both LY and IMF participants. The look-through approach should not be applied for this template. 0.Assets.Details contains information on the currency breakdown and largest counterparties and should only be completed by IMF participants. The look-through approach should be applied for this template. Both templates should be completed for the base case only. Assets held for unit-linked contracts are always excluded.
82. **0.FI.Details** – Fixed income products. Market value for assets with foreseeable cash flows shall be computed according to the methodology internally applied by undertakings and split over the following asset classes:
- a. Government bonds with a fixed coupon
  - b. Corporate bonds with a fixed coupon
  - c. Other assets with fixed income and/or fixed horizon
    - i. Structured notes
    - ii. Collateralised securities
    - iii. Other (unrated) fixed income
    - iv. Loans and Mortgages
    - v. Other assets for which a cash flow pattern can be obtained

Floating rate notes should be reported under *c) Other assets with fixed income and/or fixed horizon* with their market value. The residual maturity should be based on note's maturity (i.e. not on the coupon re-fix date). It should be possible to reconcile the amount of government bonds on the balance sheet with the sum of the market values of the *government bonds with a fixed coupon* and those with a floating rate included under point *c) Other assets*. The same holds for the amount of corporate bonds on the balance sheet.

Undertakings should be able to reconcile the net value of the derivatives on their balance sheet with the sum of the market value of the derivatives. *Other derivatives* include all other derivatives not reported in the previous lines (and include non-interest rate derivatives).

83. **0.FI.Details** also contains three tables with an assessment of the bond portfolio by country of exposure, by credit quality step and by modified duration. It should be possible to reconcile the sovereign bond exposures in the first two tables with the amount of government bonds on the balance sheet. The sum of the corporate bonds exposures in the second table should equal the amount of corporate bonds on the balance sheet. Structure finance includes structured notes and collateralised securities. For the first two tables, the sum of the market values of all bonds included should be reconcilable with the total bond portfolio on the balance sheet. The last table

decomposes the modified duration of the total bond portfolio by credit quality step and by type of exposure.

84. **0.Assets.Details** should only be completed by undertakings that participate at the IMF Adverse scenario. It includes a currency breakdown of the total assets excluding assets held for unit-linked contracts and an overview of the five largest bank and non-bank, non-sovereign counterparties. The counterparties should be selected based on the total exposure of the insurance undertaking.
85. **0.Liabilities.Details** is based on the NBB Interest Rate Risk reporting and will not be collected again. Undertakings should specify in the Participant.Basics template which valuation basis was used to complete these tables.
86. **0.Liabilities.Currency** should only be completed by undertakings that participate at the IMF Adverse scenario and includes a currency breakdown of the total liabilities excluding the technical provisions for unit-linked contracts.
87. The template on **Life and Health SLT Technical Provisions** (0.Liabilities.L&H, LY.Liabilities.L&H) is based on the annual SII reporting and will thus not be collected again for the base case. The LY version of the template requires fewer details on the reinsurance recoverables. The template will not be collected for the IMF Adverse scenario.
88. The template on the **Projection of future gross cash flows** (0.Liabilities.CF, LY.Liabilities.CF) is based on the annual SII reporting (S13.01) with an additional split of the cash outflows for 3 product categories. The columns on Future Benefits for Insurance with profit participation, Other life insurance and Annuities stemming from non-life contracts (C0010, C0090 and C0130) have been split into a guaranteed part and a discretionary part. The cash outflows from Future Benefits that are not discretionary shall be reported under Future Benefits: Guaranteed Part. The cash outflows from Future Benefits that depend on specific circumstances, such as company profits, shall be reported under Future Benefits: Future discretionary benefits.
89. In the base case (0.Liabilities.CF) only this additional split has to be provided; other information is already collected in the annual SII reporting. The sum of the guaranteed part and the discretionary part should be equal to the Future Benefits for each of the product categories reported in the annual SII reporting. The LY version of the template (LY.Liabilities.CF) should be fully completed and reported.
90. For these liability cash flow projections, participants shall only take into account future cash flows items within the Solvency II contract boundaries. Liability cash flows shall be reported undiscounted and gross of reinsurance.

## CONTACT

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## ANNEX 1 - Overview of templates

Templates				Scope	
Content	Title	Origin	Prefilled	Low for Long	IMF Adverse scenario
<b>Information</b>					
General information	Information	ST17 specific			
Overview of sheets	Index	ST17 specific			
<b>Participant information</b>					
Participating entity information	Participant.Basics	ST17 specific	Not prefilled	X	X
Participating entity comments	Participant.Comments	ST17 specific	Not prefilled	-	X
Participant historic information	Participant.Historic	ST17 specific	Not prefilled	-	X
<b>Pre-stress (Base case)</b>					
Balance sheet	0.BS	QRT-based	Prefilled	X	X
Life and Health SLT Technical Provisions	0.Liabilities.L&H	QRT-based	Prefilled	X	-
Liabilities projection of future gross cash flows	0.Liabilities.CF	Partly QRT-based	Partly prefilled - C0010, C0090 and C0130 are split	X	X
Liabilities details	0.Liabilities.Details	IRR reporting	Prefilled	X	X
Liabilities currency breakdown	0.Liabilities.Currency	ST17 specific	Not prefilled	-	X
Impact of LTG measures and transitionals	0.LTG	QRT-based	Prefilled	X	X
Own funds	0.OF	QRT-based	Prefilled	X	X
SCR - for undertakings using SF	0.SCR.SF	QRT-based	Prefilled	X	X
SCR - for undertakings using PIM	0.SCR.PIM	QRT-based	Prefilled	X	X
SCR - for undertakings using full IM	0.SCR.IM	QRT-based	Prefilled	X	X
Fixed income details	0.FI.Details	ST17 specific	Not prefilled	X	X
Assets details	0.Assets.Details	ST17 specific	Not prefilled	-	X
Medium-term projections	0.Projections	ST17 specific	Not prefilled	-	X
<b>Low for Long scenario</b>					
Balance sheet	LY.BS	QRT-based	Not prefilled	X	-
Life and Health SLT Technical Provisions	LY.Liabilities.L&H	QRT-based	Not prefilled	X	-
Liabilities projection of future gross cash flows	LY.Liabilities.CF	Partly QRT-based	Not prefilled - C0010, C0090 and C0130 are split	X	-
Impact of LTG measures and transitionals	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	-
<b>IMF Adverse scenario</b>					
Balance sheet	IMF.BS	QRT-based	Not prefilled	-	X
Impact of LTG measures and transitionals	IMF.LTG	QRT-based	Not prefilled	-	X
Own funds	IMF.OF	QRT-based	Not prefilled	-	X
SCR - for undertakings using SF	IMF.SCR.SF	QRT-based	Not prefilled	-	X
SCR - for undertakings using PIM	IMF.SCR.PIM	QRT-based	Not prefilled	-	X
SCR - for undertakings using full IM	IMF.SCR.IM	QRT-based	Not prefilled	-	X
Medium-term projections	IMF.Projections	ST17 specific	Not prefilled	-	X
Reactions after materialisation of scenario	IMF.Reactions	ST17 specific	Not prefilled	-	X
Sensitivity analyses	IMF.Sensitivities	ST17 specific	Not prefilled	-	X
Questionnaire on resources	IMF.Resources	ST17 specific	Not prefilled	-	X

<b>X</b>	Should be submitted by <b>15 September 2017</b>
<b>X</b>	Information has already been received - should not be resubmitted
<b>X</b>	Should be submitted by <b>25 August 2017</b>