Komisja
Nadzoru
Finansowego

List of critical errors
in internal models
of insurance undertakings

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Introduction

The Office of the Polish Financial Supervision Authority (UKNF) takes a number of initiatives whose aim is to prepare UKNF and insurance market participants to the assessment and approval of the use of internal models to calculate the Solvency Capital Requirement. The most important measure in this area is so-called pre-application process, which is used to obtain UKNF opinion on insurance or reinsurance undertakings' readiness to apply for an internal model approval.

On the basis of the pre-application processes experience, including the Internal Models Benchmarking Study, UKNF identified several gaps and errors, whose occurrence will prevent the Polish Financial Supervision Authority from granting a positive decision or opinion on internal models. Each of the identified deficiencies can have a significant impact on internal model results or its use, and therefore they have been identified as the critical errors.

In view of the above, bearing in mind the objectives of financial market supervision as stipulated in Article 2 of the Act of 21 July 2006 on Financial Market Supervision (consolidated text: Dziennik Ustaw of 2012, item 1149, with further amendments), such as ensuring the proper functioning of the market, its stability, security as well as confidence in the market, ensuring the protection of the interests of its participants and the Polish Financial Supervision Authority's task defined in Article 4(1)(2), consisting in taking measures for the proper functioning of the financial market, a 'List of critical errors in internal models of insurance undertakings' (hereinafter 'document' or 'list') was developed.

The list was developed on the basis of the provisions of the Directive of the European Parliament and of the Council 2009/138/EC of 25 November 2009 on the taking up and pursuit of the business of Insurance and Reinsurance (hereinafter 'Solvency II'), Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing the Solvency II Directive (hereinafter 'Commission Delegated Regulation (EU)'), EIOPA Guidelines on Pre-Application of Internal Models and EIOPA Guidelines on the Use of Internal Models.

The document contains 18 critical errors identified in the following areas:
1. Use test,
2. Model governance,
3. Model methodology,
4. Model validation,
5. Documentation.

The list is not exhaustive and may be updated. Thus, not committing any of the errors indicated on the list is not equivalent to the model's acceptance, but committing any of these errors is the basis for an negative opinion by UKNF. The list applies to all internal

models, except for the flood risk models. The requirements for flood risk models are specified in the ‘Guidelines for the flood risk management in the insurance sector’, as issued by the Polish Financial Supervision Authority on 16 December 2014.

In view of the diversity of individual undertakings and their internal models, the list will be applied in a manner which is proportionate to the nature, scale and complexity inherent in the risks and business of individual insurance or reinsurance undertakings.

USE TEST

Critical error 1

The internal model is not used for decision-making or the Undertaking is not able to demonstrate how the internal model is used for decision-making.

[Article 120 of the Solvency II Directive, Article 226 of the Commission Delegated Regulation (EU), Guidelines 13-15 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 14 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 2 (effective 1 January 2016)

The Undertaking introduced changes in the internal model in a period shorter than six months preceding the submission of an application for the use of an internal model for the calculation of the Solvency Capital Requirement.

[Guideline 4 - 'EIOPA Guidelines on Pre-Application of Internal Models']

MODEL GOVERNANCE

Critical error 3

The Undertaking manages the model without clear attribution of roles and responsibilities to employees, senior management staff and management board, including communication and escalation paths.

[Article 44 of the Solvency II Directive, Article 244(c) of the Commission Delegated Regulation (EU), Guideline 11 and Guideline 43 - 'EIOPA Guidelines on Pre-Application of Internal Models' (in the scope of validation), Guideline 36 - 'EIOPA Guidelines on the use of internal models' (in the scope of validation)]

Critical error 4

Lack of operational capacity to use the model, where desirable due to business or regulatory requirements.

[Article 120 of the Solvency II Directive, Article 226 of the Commission Delegated Regulation (EU)]

Critical error 5

The Model Change Policy does not contain qualitative and quantitative criteria, or the criteria used do not allow for proper identification of major changes in the model.

[Article 246 of the Commission Delegated Regulation (EU), Guideline 6 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guidelines 6-7 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 6

The model governance process is not embedded into the Undertaking's organizational structure to allow for proper and effective communication and interaction with the Undertaking's key processes affecting the internal model's results.

[Article 226 and Article 258(1)(h) of the Commission Delegated Regulation (EU), Guidelines 19-20 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 17-18 – 'EIOPA Guidelines on the Use of Internal Models']

MODEL METHODOLOGY

Critical error 7

The solvency capital requirement does not correspond to the Value-at-Risk of the change of the basic own funds of the Undertaking in the balance sheet for solvency purposes subject to a confidence level of 99,5 % over a one-year period.

[Article 101(3) of the Solvency II Directive]

Critical error 8

The Undertaking uses an internal model that design or parameterization of selected elements excludes the possibility to perform a reliable statistical analysis.

[Article 121(2) of the Solvency II Directive, Articles 229-231 of the Commission Delegated Regulation (EU), Guideline 27 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 25 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 9

The Undertaking does not ensure sufficient consistency between valuation methods applied in the internal model and methods used for valuation of assets and liabilities in the balance sheet for solvency purposes.

[Article 121 of the Solvency II Directive, Guideline 23 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 21 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 10

The Undertaking uses an internal model that demonstrates instability of results due to a simulation error or a minor modification of input data.

[Article 121(2) of the Solvency II Directive, Article 229 of the Commission Delegated Regulation (EU) (in particular letter (d) and (g)]

Critical error 11

The Undertaking uses internal model simplifications that are inadequate in relation to the nature, scale and complexity of the risks.

[Article 122(3) of the Solvency II Directive, Article 227 of the Commission Delegated Regulation (EU), Guideline 30 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 28 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 12

The design of the internal model used by the Undertaking does not reflect the local specificities or the Polish economy.

[Article 112(5) of the Solvency II Directive, Articles 229(e) of the Commission Delegated Regulation (EU), Guideline 17 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 15 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 13

The Undertaking makes decisions with respect to the internal model, as a result of which, in accordance with the model's methodology, events observed in the last few years may be considered to be extreme.

[Article 121 of the Solvency II Directive, Article 231 of the Commission Delegated Regulation (EU)]

MODEL VALIDATION

Critical error 14

Before submitting an application for the use of an internal model, the Undertaking did not carry out a validation of all the essential elements of the internal model covered by the application.

[Article 124 of the Solvency II Directive, Articles 241-242 of the Commission Delegated Regulation (EU), Guideline 39 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 2 and Guideline 32 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 15

The Undertaking has not conducted sufficient sensitivity analyses of model results to changes in distributions, parameters and input data, has not compared the model forecasts with historically observed changes in the value of asset or liability portfolio or has not assessed the model's fit to the local specificities.

[Article 242 of the Commission Delegated Regulation (EU), Guidelines 47-48 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guidelines 40-41 – 'EIOPA Guidelines on the Use of Internal Models']

DOCUMENTATION

Critical error 16

The Undertaking does not have documentation that allow an independent knowledgeable third party having access to relevant data to reproduce the outputs of the internal model.

[Article 243 of the Commission Delegated Regulation (EU)]

Critical error 17

The Undertaking does not have documentation containing description of the assumptions made and the scope of expert judgment, as well as information on the data used for the purposes of conducting expert judgment.

[Guideline 21 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 19 – 'EIOPA Guidelines on the Use of Internal Models']

Critical error 18

The Undertaking does not have documentation indicating that valuation methods applied for the SCR calculations and valuation methods used for solvency purposes, do not lead to significant discrepancies.

[Article 227 of the Commission Delegated Regulation (EU), Guidelines 23-25 - 'EIOPA Guidelines on Pre-Application of Internal Models', Guideline 21-23 – 'EIOPA Guidelines on the Use of Internal Models']