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Model Governance – the model change policy

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Content

- Background
- Model change policy
  - CP20/16 Solvency II: Consolidation of Directors' letters
  - Observations on model change policies
- Model change
  - CP19/16 and SS12/16 Solvency II: Changes to internal models used by UK insurance firms
  - Observations on model changes
- FAQ

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Background - Approved internal models

- To date the PRA approved 21 internal models (as at 21 Sept 2016)
- Input into the approval of a further 4 Non-UK firms with a UK subsidiary
- Most, if not all, will apply/ have applied for a model change this year.
- Further, to date we have approved (http://www.bankofengland.co.uk/pra/Pages/authorisations/siiapprovals/applying.aspx)::
  - 1 major model change;
  - 1 extension of scope; and
  - 1 change to the model change policy.

Relevant regulations and guidelines

- The Solvency 2 Regulations: www.legislation.gov.uk/uksi/2015/575/pdfs/uksi_20150575_en.pdf
  - Regulations 48 and 49 (transposing Article 112 and 115 of the SII Directive)
- EIOPA's Guidelines on the use of internal models
  https://**eiopa**.europa.eu/Publications/**Guidelines**/IM_Final_document_EN.pdf
  - Guideline 8 – Report of minor and major changes as a combination of major changes
  - Guideline 10 – Extension of use & the scope of group internal models under Article 231 of Solvency II
  - Guideline 12 – Use test and changes to the internal model
- The Commission Implementing Regulation EU 2015/460 for internal models
  http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R0460&from=EN
  - Recitals (1) to (7)
  - Article 2 – Application to calculate the Solvency Capital Requirement using an internal model
  - Article 7 – Changes to the internal model
  - Article 8 – Changes to the policy for changing the internal model
- PRA guidance
  - SS12/16 - Solvency II: Changes to internal models used by UK insurance firms
    http://www.bankofengland.co.uk/pra/Pages/publications/ss/2016/ss1216.aspx
  - CP20/16 – Solvency II: Consolidation of Directors' letters.

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NOT AN EXHAUSTIVE LIST

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Model change policy

Recap of key messages in CP20/16 on the model change policy:

- Scope of the model change policy
  - Sufficiently broad and appropriately flexible
  - Justification of exclusions
- Identification of model changes
  - Robust process to identify, collate and manage all sources of potential model changes.
- Classification of major change
  - Quantitative and qualitative indicators
  - Indicators / thresholds: granularity and justification
- Combination of minor model change
  - Accumulate changes from last approved model
- Governance
- Review of the model change policy

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Observations: Model change policies

- Broad spectrum of approved model change policies (MCPs)
- A number of firms have applied or plan to change their MCP
- Resetting thresholds
- Discussions around:
  - Exclusions from MCP
  - Parameter updates
  - Updates of external models e.g. economic scenario generators (ESGs) and other vendor models
  - Frequency of resetting accumulations
  - Granularity of model change measurement

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MCP: Granularity I

April

Firm: We have expanded the range of distributions for claims frequency and severity for premium risk so these are two model changes?

PRA: Depends on your MCP but generally no, this would be one model change as it relates to one risk area.

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MCP: Granularity II

May

Okay, but then the joint quantitative impact of the change on the SCR is smaller than adding them up for premium risk

Oh. Do these changes amount to a major model change individually or jointly?

Firm

PRA

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MCP: Granularity III

June

It depends. It could be argued either way depending on how you aggregate the changes.

Could you elaborate please?

Firm

PRA

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MCP: Granularity IV

If we add the impact across all affected lobs for frequency and severity separately then it could be classed as a major model change at underwriting risk level.

July

I see…
What view do you take in your internal model?

Firm

PRA

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MCP: Granularity V

- The earlier slides show that not every issue can be covered explicitly in the model change policy
- In the example, there was a lack of clarity on the:
  - Number of model changes (related changes count as two or one model change?)
  - Level at which model changes are accumulated (module, sub-module, lob?)
- Firms currently accumulate changes using their own judgement and provide justification

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Model Change

- Draft supervisory statement (CP 19/16) Solvency II: Changes to internal models used by UK insurance firms published 5 May 2016
- Quick recap of key PRA expectations:
  - Firms to submit no more than one model change application per year in most circumstance
  - To engage as early as possible with their supervision teams:
    - About planned changes and developments to their internal models
    - To agree scope of application and ascertain whether a pre-application period would be useful
    - How they will ensure they will calculate the revised capital requirements and remain adequately capitalised after a transaction or event takes place
    - To discuss what interim measures may be taken following an event which may lead to a model change
    - About plans to change the policy for changing the internal model
  - How to apply and what documentation is needed.
- Number of minor clarifications to reflect industry feedback in final SS (12/16):
  - The accumulation of minor changes will be reset upon receipt of a model change application
  - If minor changes to the IM do not meet T&S; firms will be required to address them.
  - Duplication of previously published regulations and guidelines minimised.

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Observations: Model change applications

- There are currently a number of model change applications in progress
- For groups, the college of supervisors may need to coordinate and agree the overall process for approving a major change application
- When used, the pre-application process has been very useful for agreeing the scope of the model application
- There have been a number of questions in this area leading to…

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FAQ – One major change application

Limiting firms to one major model change application per year is a restriction which goes beyond the Solvency II Directive, associated legal text and EIOPA Guidelines?

This is an expectation rather than a requirement and does not preclude firms from making more than one application in a year should business or market conditions require it.

Firm

PRA

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FAQ – Six months for a decision?

The Solvency II Directive allows the PRA up to six months to review major model changes. Does the PRA intend to use this entire period ?

The entire six month period may be necessary in the case of complex applications; however, some simple applications may be approved in a shorter time frame

Firm

PRA

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FAQ – Binary decision on application?

One application containing several major changes – are you able to approve or reject single changes or do you approve / reject the application as a whole?

Firm

The application is considered as a whole. However, firms may change the scope of their application or withdraw an application to submit at a later date.

PRA

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FAQ – Pre-application

In principle, we welcome a pre-application process. However, will it extend the six month period for approving a model change even further?

Firm

A formal model change can only be submitted once formal governance and model validation processes are complete. The pre-application process may start well in advance.

PRA

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FAQ – Market event

What would happen following a major model change that resulted from significant changes in market conditions, including circumstances where another major change is pending approval?

The impact will vary by firms' exposure. If the event meant that a major model change may be required the first step is to engage with your supervisory contact early to discuss options / solutions.

Firm

PRA

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FAQ – Proportionality in the process

If the same supervisory approval process is adopted for all sources of major model change how is proportionality achieved?

The process is the same for all sources of change; however, the intensity of review is proportionate to the size, scale and complexity of the proposed changes.

Firm

PRA

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FAQ – Year end reporting

Which version of the model should be used for year-end reporting?

Our general position is that firms should base the year-end reporting on the approvals that were in place on the date of the balance sheet.

Firm

PRA

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FAQ – Last approved model

What do you mean by the last approved model?

The version of the model we approved, allowing for minor changes implemented, as long as these fall below the firm's threshold for accumulating minor changes

Firm

PRA

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FAQ – Model updates

If I am using the same model, the same process and same source of data just updated for an extra data point, is this still a source of model change?

Guideline 6 of the EIOPA guidelines on the use of internal models states that the model change policy should cover "all relevant sources of change that would impact its SCR"

Firm

PRA

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FAQ – External models

Firm: Are changes / updates to external models an automatic major model change?

PRA: No. The firm's model change policy will be key in determining whether this is a major model change. Similarly, the extent of the methodological changes in the external model and their materiality

Firm

PRA

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FAQ – Accumulation of minor changes

For the purpose of reporting the accumulation of minor changes are we allowed to offset changes which operate in the opposite direction?

Generally no. However, we may be open to offsetting in limited circumstances where the firm can justify why it would be appropriate

Firm

PRA

FAQ – Minor changes

Is there a set process for reviewing minor changes?

The PRA does not approve minor changes. We receive quarterly (at a minimum) model change reports and the supervisory contact may engage with the firm to discuss

Firm

PRA

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FAQ – Minor changes reports

Is there a standard template for firms to report minor model changes to the PRA?

No. However, details such as a brief description of the change; a reference; risk modules impacted; rationale for change; date of change; basis of classification; level of sign-off are useful.

Firm

PRA

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Questions?

Comments?

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

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