Bank of England

Prudential Regulation Authority

Catastrophe Risk Template, 1 yr (IM.03.05.01)

ITEM	INSTRUCTIONS
General comments	A partial internal model firm that calculates the entire catastrophe risk module of its SCR (natural and man-made catastrophes) using Standard Formula does not expect to complete the templates. In this template, firms are expected to provide catastrophe risk model outputs by peril modelled. Catastrophe risk model is defined for the purposes of this Template as any calibrated tool (internal to the firm or vendor) that quantifies the financial impacts of catastrophe risk. Catastrophe losses relate to a single event that give rise to claims on several insurance policies. ~~Modelled losses from natural catastrophe perils not specified are not required other than a text list of any significant such perils to be entered in cell R0010/C0010.~~ In this template: • no distinction is expected between property and non-property business. • no distinction is expected between losses from direct insurance and losses from reinsurance business. • gross and net mean gross and net of all reinsurance. • natural catastrophe perils are geophysical, climatological, hydrological, or meteorological events such as earthquake, wildfire, flood, or windstorm. ~~natural catastrophe perils / territories are meteorological or geological events such as windstorm hurricane, typhoon, flood, earthquake, earthslide.~~ • man-made catastrophe perils are those other than natural catastrophes, such as: ~~man-made catastrophe perils / territories are those other than meteorological and geological events such as:~~ ➢ a transport vehicle accident; ➢ negligent action causing or facilitating individuals to contract a disease; ➢ negligent action causing or facilitating a financial trading loss when economic conditions are adverse or when financial markets are experiencing adverse conditions (as opposed to financial loss arising from physical loss or damage to property, or injury or illness); ➢ human attack with weapons. • Losses from both natural and man-made catastrophes should include non-modelled risks. N~~n~~on-modelled risks ~~(column C212)~~ are the losses that stem from catastrophe events but are not accounted within the catastrophe models used by firms to assess their financial impacts (eg losses not allowed in an external vendor model). ~~all the meteorological or geological events in aggregate that are within the~~

		~~scope of the firm's catastrophe risk modelling, for which losses are not obtained from an external vendor model (eg AIR, RMS). An event~~ financial loss that is 'within scope of the firm's catastrophe risk modelling' is a loss ~~an event~~ that is covered in the catastrophe risk part of the firm's internal model and is not covered within the modelling of attritional or large losses in the premium risk part of the firm's model. • Where possible, losses from man-made catastrophes should be split between terrorism, cyber and other. If this split is not available at present, total man-made losses should be entered in the "other" column *(C303). • all amounts are to be reported undiscounted.
CAT202 to CAT204, CAT301 to CAT302, CAT304 to CAT311	Catastrophe risk model output relating to specific cat perils	Firms are expected to report model outputs for each of the following perils: i. All catastrophe perils / territories in aggregate (natural and man-made catastrophe perils) (*column C101*) ii. All natural catastrophe perils in aggregate (*column C102*) iii. All man-made catastrophe perils in aggregate (*column C103*) iv. US Hurricane, including Gulf of Mexico and Caribbean (*column C201*) v. US Earthquake (*column C202*) vi. US Convective Storm (*column C203*) vii. Japanese Typhoon (*column C204*) viii. Japanese Earthquake (*column C205*)

		ix. Australian Windstorm (*column C206*) x. European Windstorm (*column C207*) xi. European Earthquake (*column C208*) xii. UK Flood (*column C209*)

		xiii. South American Earthquake (*column C210*) xiv. All other natural catastrophe perils in aggregate ~~'Non-modelled' natural catastrophe perils in aggregate~~ (*column C212*) • if any of the perils to be reported in columns C201 to ~~C211~~ C210 are not applicable to a firm, the firm should ~~enter 'n/a' in row CAT201 and~~ leave the column for that peril ~~and leave the rest of the column~~ blank. • In 'Description of other perils' (cell R0010/C0010), firms should provide details of what have been included in the 'all other natural perils in aggregate' (Column C212). • The outputs for each of the perils listed in (i) to (xiv) above should include all losses that may arise from the peril regardless of whether the losses are or are not explicitly covered by the firm's use of existing catastrophe models. ~~non-modelled risks (column C212) are all the meteorological or geological events in aggregate that are within the scope of the firm's catastrophe risk modelling, for which losses are not obtained from an external vendor model (eg AIR, RMS).~~ Additional columns C301, C302 and C303 are included to capture man-made cat losses split between terrorism, cyber and other perils.
CAT202	Commercially available vendor model used for each catastrophe peril (if applicable)	This row is not applicable for columns C101 to C103, nor for columns C212 or C301 to C303 For each peril select from the drop down box the commercially available vendor model used to model the peril. The commercial vendor models available for selection in the row are: Fathom; Impact Forecasting; JBA; KatRisk; KCC; RMS; Verisk; Blended, OTHER; N/A ~~AIR; EQECAT; RMS; Blended, OTHER; N/A~~. If a firm uses combinations or blends of vendor models ~~AIR EQECAT or RMS~~, or 'OTHER', an explanation of the combination or blended approach or the "OTHER" model used should be provided in CAT203.

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CAT203	Commercially available vendor model name and version used (if applicable)	This row is not applicable for columns C101 to C103, nor for columns C212 or C301 to C303 For each peril report in this row the commercially available vendor model name and version used to model the peril, and details of any deviations from or adjustments to proprietary version. Example: RMS version<xx>, <undertaking's own view of hazard frequency or vulnerability>; ~~AIR~~ Verisk version<xx>; Corelogic ~~EQECAT~~ version<xx>.
CAT204	Summary of adjustments made to the vendor model (including selection of options and switches)	This row is not applicable for columns C101 to C103, nor for columns C212 or C301 to C303 For each peril report any adjustments or changes made by the firm to default options set in the vendor model and version specified in row CAT203. Report both the option in question and what the adjustment or change is. Examples of default options that could be changed by a user, and what the change might be, are: Demand Surge switched from on to off, Storm Surge switched from on to off, Post Loss Amplification switched from on to off, EU WS Clustering switched from on to off, Fire Following switched from on to off, Hurricane Rates Catalogue frequency ~~(RMS)~~ from long term rate to short / medium / other rate, Warm Sea Surface Temperature Catalogue ~~(AIR)~~ from long to short / medium /other, or any others.
CAT301 to CAT311 / C101 to C103, C201 to C211, C301 to C303	Model Outputs for each peril relating to property and non-property business in aggregate	For each peril specified measures of the following output distributions produced by the model are expected to be provided: • gross occurrence loss to all business – ie insurance and reinsurance business in aggregate (*column C<xxx>.5*), • gross aggregate loss to all business (*column C<xxx>.6*), • net occurrence loss to all business (*column C<xxx>.7*), • net aggregate loss to all business (*column C<xxx>.8*). (*Where column C<xxx> refers to the peril in question – eg column C202 is the US Earthquake peril, column C301 is the first of the 'own defined' natural catastrophe perils.*) The specified measures are: mean; standard deviation; 90th, 96th, 98th, 99th, 99.5th, 99.6th, 99.8th, 99.9th percentiles.
ITEM		**INSTRUCTIONS**
		Occurrence loss is the largest loss from a single future occurrence of the peril that impacts policies that have been written by the balance sheet date or are planned to be written in the 12 months following the balance sheet date. Aggregate loss is the sum of all losses from future occurrences of the peril that impacts policies that have been written by the balance sheet date or are planned to be written in the 12 months following the balance sheet date.

		The model outputs, which relate to aggregate business, can allow for diversification between property and non-property within the peril.
~~C601 to C616~~ CAT601 to CAT615	Split of business between geographic territories	The total gross written premium income and total insured value split by territory. It is acknowledged that not all of these exposure measures relate specifically to cat exposed business. Where there is exposure to more than one peril in any such region, gross premium income should be the total for all perils, and total insured value should be for the peril with the largest exposure figure. Premiums and sums insured are split between a list of broad-based regions in which the risk lies, including 4 US regions which are used by EIOPA. The regions used are: UK, Europe ex UK, North East US, South East US, Mid-West US, Western US, Caribbean, South America, Australia, Rest of World, and a catch-all “unallocated” category for premiums and insured values which cannot be allocated to any of the other regions. Because reinsurance contracts may cover a number of regions, the split of premiums and total insured value for inward reinsurance business is broader still, with allocation between five regions: UK, Europe ex UK, North America, Rest of World, and a catch-all unallocated. Total gross written premium (ie the sum of items in C601 to ~~C616~~C615) should be consistent with the totals shown on the template ‘IM.03.03.01 Premium Risk’.
~~C701 to C703~~ CAT701 to CAT703	Split of business between direct insurance, reinsurance and retrocession	Approximate split of gross written premium income between these three types of business. Proportions can be rounded to nearest 1% or nearest 10%.

Catastrophe Risk Templates, Ultimate (MO.03.05.01)

ITEM	INSTRUCTIONS
General comments	As per template ‘IM.03.05.01’ but on an ultimate time horizon basis. If one – year and ultimate losses are stated to be the same as IM.03.05.01 (R0010/C0010), this template need only be completed for man-made cat losses.