

# LCM FORECAST RETURNS 2024

Guidance & Instructions

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# 1 Executive Summary

## 1.1 Background

This document contains guidance and instructions for the three Lloyd's Catastrophe Model forecast returns for 2024 Capital & Planning. These are:

- LCM Forecasts
- LCM/LCR Analysis of Change
- Catastrophe Risk Sensitivity Test

## 1.2 Changes to requirements

No changes proposed for 2024.

## 1.3 Reporting details

### 1.3.1 Return deadlines

For 2024, the Capital and Business Planning process will be phased, with each phase having its own SBF and LCR deadline. The reporting deadlines for the LCM forecast returns align to the SBF and LCR as follows:

- With SBF: LCM Forecasts, War & NCBR exposures
- With LCR: Cat Risk Sensitivity Test, LCM/LCR Analysis of Change

### 1.3.2 Return methods

Templates should be returned directly to Exposure Management via Secure Share: -  
Secure Share -> "Catastrophe Risk Returns" -> "2024 CPG"

Any questions about access to Secure Share folders should be addressed to the Aggregation team (contact details on page 2).

Please do not attach these returns to Form 990 of the SBF or LCR.

### 1.3.3 Templates

The **LCM Forecast** should be submitted:

- Using the template *LCM\_Forecast\_2024\_EM456\_Synd0000\_v1*.
- Accompanying ELTs / YLTs using the relevant csv template (*ELT\_2024Forecast\_SY0000.csv* and *YLT\_2024Forecast\_SY0000.csv*)

The **LCM/LCR Analysis of Change** should be on the template *LCM\_LCR\_AOC\_EM457\_Synd0000\_v1*.

The **Cat Risk Sensitivity Test** should be on the template *Cat\_Sensitivity\_2024\_EM458\_Synd0000\_v1*.

In all cases, '0000' in the filename should be replaced with the syndicate number. For example, s987 would be *LCM\_Forecasts\_2024\_EM456\_Synd0987\_v1*.

### 1.3.4 Return basis

The **LCM Forecast** is a compulsory return. Syndicates with no material exposure to natural catastrophe risk, and no catastrophe element in their SCR, should make a Nil Return.

The **LCM/LCR Analysis of Change** and the **Cat Risk Sensitivity Test** are required unless the syndicate has made a Nil Return for the LCM Forecast.

## 2 LCM Forecast – Introduction

### 2.1 Purpose

**During the business planning and capital setting process, Lloyd's requires a clear understanding of projected catastrophe risk for the forthcoming calendar year at both syndicate and market levels.**

The Lloyd's Catastrophe Model Forecast Return is the primary means of gaining this understanding.

There are two elements:

- **for the LCM5 region/perils** – forecast ELTs / YLTs and summary information.
- **for all other region/perils** – points on a combined projected AEP curve for natural catastrophe losses in the rest of the world.

#### 2.1.1 Use of results

The core use of LCM forecasts is to monitor and assess market-level catastrophe risk for the purposes of business planning, capital modelling and monitoring risk appetite.

In addition to providing a holistic view of catastrophe risk across return periods, the market-level catastrophe risk profile produced by the LCM forms an integral part of Lloyd's Internal Model (LIM) under Solvency II. The LCM forecasts also inform the process for member capital-setting.

#### 2.1.2 Consistency

All forecast projections of syndicate estimated losses into the prospective calendar year should be consistent across the LCM forecast returns, Syndicate Business Forecast (SBF), Lloyd's Capital Return (LCR) and the Internal Model.

## 3 LCM Forecasts – LCM5 Region/Perils

### 3.1 Projected ELTs / YLTs

Forecast ELTs / YLTs take the same structure as in-force reporting, however rather than reflecting in-force exposures, forecast ELTs / YLTs will represent a calendar year view of risk, consistent with the Internal Model.

Where there is a material change in planned catastrophe risk for 2024 at any time after the first SBF submission, managing agents should submit revised forecasts along with a revised SBF and (if applicable) a revised LCR. This applies throughout the 2024 year with syndicates expected to monitor 2024 in-force returns against approved plan. Please contact your Exposure Management Manager if you'd like to discuss further.

### 3.2 Regions and perils

Projected ELTs / YLTs should be submitted for the following regions and perils.

#### 3.2.1 Atlantic basin tropical cyclone, including the Caribbean, Canada and Mexico

Region code = US, Peril code = WS

Excluding losses arising from:

- Winter storm and tornado/hail
- Offshore exposures located in the Gulf of Mexico (these losses are captured separately)
- Exposures located in Hawaii
- Exposures in Canada and Mexico

Losses should *include* flooding as a result of Tropical Cyclone Induced Precipitation (TCIP).

#### 3.2.2 Gulf of Mexico tropical cyclone

Region code = GM, Peril code = WS

For losses arising purely from Gulf of Mexico Offshore Energy exposures.

#### 3.2.3 US & Canada earthquake

Region code = UC, Peril code = EQ

Including losses arising from exposures located in the US (incl. Hawaii) and Canada.

#### 3.2.4 Europe windstorm

Region code = EU, Peril code = WS

Should include losses arising from exposures located in all affected countries.

#### 3.2.5 Japan earthquake

Region code = JP, Peril code = EQ

#### 3.2.6 Japan tropical cyclone

Region code= JP, Peril code = WS

If a managing agent cannot separate out any of the excluded components of loss, then details should be provided in the comments.

### 3.3 Classes of business

To reflect the significant differences in tail risk characteristics, projected ELTs / YLTs submitted for each region/peril should be segmented into the following five broad class of business categories:

- TR - Property Treaty
- DF - Property Direct & Facultative Open Market
- BR - Property Binding Authorities & Lineslips
- EN - Energy
- OT – all other classes of business

For guidance, we suggest allocating Lloyd's Risk Codes within the five categories as follows.

#### 3.3.1 TR – Property Treaty

Including Risk XL and Retro.

Code	Description
XA	NM PROPERTY OR PECUNIARY LOSS WHOLE ACCOUNT XOL IN USA
XC	PER RISK EXCESS OF LOSS PROP PECUNIARY LOSS REINS
XJ	NM PROPERTY OR PECUNIARY LOSS WHOLE ACCOUNT IN JAPAN
XU	NM PROPERTY OR PECUNIARY LOSS WHOLE ACCOUNT IN ALL OF EUROPE INCL UK
XR	NM PROPERTY OR PECUNIARY LOSS WHOLE ACCOUNT XOL REST OF THE WORLD
X3	NM PROPERTY OR PECUNIARY LOSS XOL ON XOL RETROCESSION
TR	ALL PHYSICAL RISKS OR LOSS DAMAGE DIRECT PPNL RI

#### 3.3.2 DF – Property Direct & Facultative – Open Market

Code	Description
P2	PHYS DAMAGE FOR PRIM LAYER PPTY IN USA EXCL BINDERS
P3	PHYS DAMAGE FOR PRIM LAYER PPTY EXCL USA EXCL BINDERS
P4	PHYS DAMAGE FOR FULL VALUE PPTY IN USA EXCL BINDERS
P5	PHYS DAMAGE FOR FULL VALUE PPTY EXCL USA EXCL BINDERS
P6	PHYS DAMAGE FOR XS LAYER PPTY IN USA EXCL BINDERS
P7	PHYS DAMAGE FOR XS LAYER PPTY EXCL USA EXCL BINDERS
DC	DIFFERENCE IN CONDITIONS

#### 3.3.3 BR – Property Binding Authorities & Lineslips

Code	Description
B2	PHYS DAMAGE BINDER FOR PRIVATE PPTY IN USA
B3	PHYS DAMAGE BINDER FOR COMMERCIAL PPTY IN USA
B4	PHYS DAMAGE BINDER FOR PRIVATE PPTY EXCL USA
B5	PHYS DAMAGE BINDER FOR COMMERCIAL PPTY EXCL USA
HP	UK HOUSEHOLD BUSINESS



### 3.3.4 EN – Energy

<b>Code</b>	<b>Description</b>
EF	ENERGY ONSHORE PROPERTY
EM	ENERGY SEARCH PROD VSSLS AND OFFSHORE PROP GOM WIND EXCL WRO EXCL CONSTRUCTION
EN	ENERGY SEARCH PROD VSSLS AND OFFSHORE PROP EXCL GOM WIND EXCL WRO EXCL CONSTRUCTION
EY	ENERGY OPERATORS XTRA EXPENSES AND CONTROL OF WELL GOM WIND
EZ	ENERGY OPERATORS XTRA EXPENSES AND CONTROL OF WELL EXCL GOM WIND
XE	ENERGY ACCOUNT XOL INCL WAR
EC	ENERGY CONSTRUCTION OFFSHORE PROP AND SEARCH VSSLS EXCL WRO

### 3.3.5 OT – Other

All other modelled Risk Codes.

## 4 LCM Forecast – Additional Information

### 4.1 Return instructions

#### 4.1.1 Summary information (LCM5)

This tab assists Lloyd's in managing the Catastrophe Risk Appetite and provides early visibility of likely in-force positions through 2024.

##### (1) Forecast 2024 LCM5 / Catastrophe Risk Appetite

**LCM5:** This refers to the calendar year 1-in-200 AEP Final Net Loss for the LCM5 region-perils combined.

**Indicative ECA:** The syndicate's expected ECA, based on the soon-to-be-submitted LCR. i.e. estimate of what  $1.35 * \text{Total Ultimate SCR}$  (from the Headline Figures in LCR form 309) will be.

The indicative ECA will only be used in an early assessment of the Catastrophe Risk Appetite. Once the LCR has been submitted, this will supersede the indicative ECA.

**Profit:** The Ultimate expected profit from the Syndicate Business Forecast.

##### (2) Estimated 2024 in-force LCM5

Where possible, syndicates are asked to estimate the LCM5 1-in-200 AEP Final Net Loss value as at the four in-force reporting dates through 2024. Lloyd's is particularly interested if the in-force value is expected to be larger than the calendar year figure *at any point* during 2024. At a minimum, this must be flagged and explained in the comments. These figures will be consulted when reviewing in-force vs forecast LCM reporting throughout the year.

#### 4.1.2 Forecast EP curve (NonLCM5)

The 'Rest of World' or 'Non LCM5' EP curve should contain estimates of syndicates' annual aggregate Gross Losses and Final Net Losses for all natural catastrophe exposures that are not covered by one of the LCM5 region/perils. This would include US inland flood, Australia cyclone, and South American earthquake, for example.

This should be on a forecast 2024 calendar year basis and should be consistent with the 'All Non-LCM' fields in Form 313 of the LCR. Please note it should only include claims arising from natural catastrophe risk, not man-made catastrophe risk (e.g. terrorism, cyber).

#### 4.1.3 Worldwide All Perils 1-in-200 TVaR

The aggregate tail value at risk (TVaR) for all region-perils at the 1-in-200 return period should be reported both Gross and Final Net. Lloyd's will use these metrics in calculating Natural Catastrophe Materiality under the new Principles for Doing Business.

The 1-in-200 aggregate TVaR can be calculated as the average of simulated losses above the 1-in-200 return period.

## 5 LCM/LCR Analysis of Change

### 5.1 Purpose

There should be consistency of method between syndicates' calendar year forecasts of catastrophe risk in the LCM and those in the LCR.

However, there are a number of legitimate reasons why the LCM Forecast may diverge in practice from LCR Form 313 (One-Year basis). For example, there are elements of syndicates' catastrophe forecasts that are difficult or impossible to represent fully in the LCM, including allocation of some complex reinsurance structures.

The LCM/LCR Analysis of Change allows Lloyd's to identify material differences and the reasons for them.

**Please note that discounting for 'recognition' of catastrophe risk in the One-Year view is not permitted under any circumstances.**

### 5.2 Return instructions

#### 5.2.1 Net losses

The LCM/LCR Analysis of Change relates to the One-Year view for Net Losses – *not Final Net*. This is because the catastrophe elements of the Lloyd's Capital Return are on a Net Loss basis.

The 'starting-point' should be consistent with the ELTs/YLTs provided for the LCM Forecast.

The 'end-point' should be the number in LCR Form 313, section 3, column G (see Figure 1).

3. Insurance Risk Including Catastrophe Claims

	One Year			Ultimate		
	Net Mean	Net 99.5th	Post diversified claims 99.5th	Net Mean	Net 99.5th	Post diversified claims 99.5th
	F	G	G(i)	H	I	I(i)
<b>1 total: Catastrophe Claims</b>						
1a split: Non-Natural Catastrophe Claims						
1b split: Natural Catastrophe Claims						
2 split: Catastrophe Losses - LCM Region-Perils & Classes Only						
3 split: Catastrophe Losses - All Non-LCM						
4 Premium Risk Claims - Excluding Natural Catastrophe Claims						
4a Premium Risk Claims - Excluding All Catastrophe						
5 Reserving Risk Claims						
6 TOTAL						
7 Diversified Credit - Between Risk Categories						
8 DIVERSIFIED TOTAL						

Figure 1

#### 5.2.2 One-year – not ultimate

The LCM/LCR Analysis of Change relates to the One-Year view.

#### 5.2.3 Return

Syndicates should specify:

- 1) **the 'starting-point'**, LCM 2024 forecast view for Net Losses for the 5 region/perils combined;
- 2) material differences between LCM and LCR views due to reinsurance not represented in the LCM
- 3) provisions for unearned premium
- 4) other (syndicate to specify)
- 5) other (syndicate to specify)
- 6) **the 'end point'**, being the Net 99.5<sup>th</sup> One-Year for 'LCM Region-Perils & Classes only' in the LCR Form 313, section 3, column G (see Figure 1).

## 6 Cat Risk Sensitivity Test - Introduction

### 6.1 Purpose

**Lloyd's must consider how uncertainty within syndicate models may affect the representation of catastrophe risk within Lloyd's Internal Model (LIM).**

The Catastrophe Risk Sensitivity Test is intended to assess the impact of greater-than-expected natural catastrophe losses on syndicates' capital positions, taking into account potential reinsurance recoveries and the effects of diversification in syndicates' own Internal Models.

### 6.2 Note on methodology for users of external cat models

The 'ideal' sensitivity test would start by increasing Ground Up loss estimates by the required factor. Policy terms and conditions (including limits, deductibles and excess points) would then be applied to the inflated Ground Up losses to arrive at a Gross Loss position. Finally, the outwards reinsurance structure would be applied to give a Net view.

Some vendor cat model platforms are not structured to allow the 'ideal' test, because application of policy terms and conditions is an inseparable part of the initial loss calculation process. Therefore, there may be no way to inflate Ground Up loss outputs and re-run through the financial module.

Other platforms do specifically allow inflation of Ground Up losses, although with some limitations.

With this in mind, users of model platforms that do not allow for the inflation of Ground Up losses should inflate Gross cat model outputs by an appropriate percentage. The potential impact of policy terms and conditions – for both insurance and inwards reinsurance – should be considered when deciding upon this percentage, and should be commented upon in the submission. Please see section 8.3 for examples. Where the impact is material, supporting commentary should be proportionately detailed and specific.

Exposures should stay the same – please do not inflate exposures as a proxy for increased losses.

Users of model platforms that do allow for the inflation of Ground Up losses, thus providing a closer approximation of the 'ideal' test, should see section 7.1.2.

## 7 Cat Risk Sensitivity Test - Instructions

### 7.1 Return instructions

Two sensitivity tests are to be performed against the base-run for this exercise: -

- 1) Uniform 25% increase to US Windstorm losses, including Gulf of Mexico and Caribbean exposures
- 2) Uniform 25% increase of the most material region/peril other than US Windstorm

All relevant natural catastrophe losses represented in the Internal Model are to be uplifted, whether derived from probabilistic catastrophe models or other methods.

All other parameters and data in the Internal Model (including the original exposures modelled) should stay the same.

#### 7.1.1 Definition of most material region/peril other than US WS

Syndicates should uplift Ground Up losses for the largest region/peril (or country/peril) contributor to the diversified natural catastrophe 1-in-200 FNL forecast for 2024, other than US Windstorm.

The method of determining and ranking the respective region/peril (or country/peril) contributions to overall natural catastrophe at 1-in-200 FNL should be consistent with the syndicate's Internal Model risk ranking methodology.

Syndicates that group countries into correlated region/perils within the Internal Model – for example, 'South America EQ' rather than Chile EQ, Colombia EQ etc – may report at region/peril level. Otherwise, the analysis should be for a single country/peril.

Where the 'next most material' region/peril (or country/peril) is not one of the other LCM5, syndicates should report:

- its diversified percentage contribution to overall forecast natural catastrophe 1-in-200 FNL<sup>1</sup>;
- its undiversified forecast AEP 1-in-200 for FNL

#### 7.1.2 Uplift methodology for users of cat models

**Users of cat modelling platforms which do not allow inflation of Ground Up losses** should increase Gross Losses by an appropriate percentage. The limitations of this method regarding policy terms and conditions – for both insurance and inwards reinsurance – should be specifically considered and commented upon in the submission. Please see section 8.3 of this document for further guidance.

**Users of cat modelling platforms which do allow inflation of Ground Up losses** should uniformly increase Ground Up losses by applying a factor of 1.25, and take the resulting Gross Loss outputs as the basis of the return. The limitations of this method regarding inwards reinsurance policy terms and conditions should be considered and commented upon where material in the submission.

#### 7.1.3 Base-run benchmark

Managing agents should take the Internal Model run used to generate the latest 2024 Lloyd's Capital Return [LCR] submission as the base-run for this exercise.

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<sup>1</sup> We can derive this ourselves for LCM5 region/perils.

## 7.2 Results

### 7.2.1 Base-run benchmark

Results are to be provided on an Ultimate basis from both the base-run and the sensitivity-test runs. The results required are:

- 1) Mean result
- 2) Return-periods: 10, 30, 100, 200, 250, 500 years

Note the 200-year return period for the base-run should be the same result as the headline Ultimate SCR calculation submitted via LCR form 310.

## 8 Cat Risk Sensitivity Test - FAQs

### 8.1 General

*Q1 Should losses be entered as GBP units in the same way as they are in the LCR i.e. rounded (44,100,000 not 44,100,035)?*

A1: Yes please.

*Q2 Does the Catastrophe Risk Sensitivity Test apply to natural catastrophe risk only, or all risks that my syndicate categorises as Cat?*

A2: The test applies to natural catastrophe risk only.

### 8.2 New syndicates

*Q1: Do new syndicates which don't yet have their own Internal Models need to provide this?*

A2: Syndicates with capital that is modelled using the Lloyd's benchmark process, and that do not submit an LCR, need not complete the Cat Risk Sensitivity Test.

### 8.3 Uplifting losses

*Q1 Should syndicates uplift both the mean and standard deviation by the specified percentages?*

A1 Yes please.

*Q2 What is an example of losses being overstated by uplifting Gross Losses, rather than Ground Up?*

A2 A primary insurance risk or low-level treaty layer will cap-out catastrophe losses at a low level, when the contract is a total loss. Uplifting the Gross Loss to that contract will overstate the potential claim.

*Q3 What is an example of losses being understated?*

A3 A high excess layer may not be triggered at a given level of Ground Up losses – the Gross Loss is zero. If uplifting Ground Up losses resulted in the layer being triggered, this would not be shown by uplifting Gross Losses – the claim to the contract would still show as zero.

*Q4 What if uplifting Gross Losses would definitely lead to material over- or under-statement?*

A4 Managing agents for whom this is true should make appropriate adjustments to the Gross Losses resulting in an appropriate percentage being applied. Adjustments can be based on general reasoning. However, both the amount of any adjustments and the reasoning behind them must be explicitly reported to Lloyd's in the Commentary as part of the return. If you need more space for this information, please upload a separate document (MS Word or pdf). Please note that any commentary is considered part of the formal return, and is covered by the sign-off.

*Q5 If catastrophe losses are increased, should we reflect an overall increase in the modelled claims, or adjust the attritional losses to maintain the same modelled loss ratio?*

A5 Increased catastrophe losses must not be "balanced out" by reducing attritional losses.

*Q6 Can I uplift exposures and then re-model them? This may give a truer picture of sensitivity than uplifting Gross Losses in the cat model.*

A6 No. The intention is for all parameters and data in the Internal Model other than modelled catastrophe losses to stay the same. This includes the exposures originally modelled. If this is problematic, please contact us to discuss.