

## The Make-up of the ‘Litmus Ratings Review’ (‘LRR’) Cohorts

The three cohorts covered within the LRR are chosen to provide a representative picture of the credit profile of the international large commercial, reinsurance & specialty lines sectors. As the LRR is a ratings-focussed publication the nature of each group’s business profile as that relates to ratings plays a role in its inclusion overall and the cohort it is assigned to.

### The ‘Commercial Majors’

Groups with substantial international commercial lines operations, typically active in providing ‘global programs’.

### The ‘Reinsurance Majors’

Either non-life reinsurance groups that we regard as inherently global (including those who also write material amounts of life reinsurance business) or those globally active primary groups with material ‘third-party’ reinsurance operations.

### The ‘L-Zebedees’

Either groups whose operations are highly orientated to the kind of reinsurance and specialty business written in the major hubs of London, Zurich, Bermuda, Dublin or Singapore OR sub-groups who fit this profile and who appear operationally or financially discrete from the total group profile (Odyssey Re and Sirius International being examples of the latter).

## The LRR Tables Explained

1. The ‘Litmus Composite Score’ (LCS) is our proprietary method of averaging the ratings of the major rating agencies, (including their different rating scales and reflecting the rating ‘outlooks’, which have proven to be an important indicator, in the LCS outcome). See an explanation of the methodology used below.

Why use an average rating? Used in isolation, individual ratings can lead to some market volatility – a downgrade of just one notch from one rating agency can have a material impact. Taken as an average (where there is more than one rating), the potential volatility is in theory reduced; instead of a single opinion, we are looking at a broader range.

The inclusion of outlooks also helps reduce the volatility, and we include our ‘resilience indicator’ to add further granularity to the LCS.

2. As part of translating the ratings into a single scale we use the ‘issuer credit’ ratings for the AM Best ratings, as they do themselves, in order to match their ‘financial strength’ ratings (FSRs, initially published in their unique rating scale) to the standard rating scales used by Fitch and S&P. AM Best’s ‘issuer credit’ ratings cover the situation whereby one AM Best’s FSR equates to two different points on the S&P/Fitch scale.
3. To calculate the LCS we use ‘solicited’ ratings where they exist. Where only one solicited rating exists no LCS is calculated. Where there are no solicited ratings but one or more ‘full’ (meaning presented using the full rating scale) ‘unsolicited’ ratings exist then we have used these as a substitute. ‘Pi’

ratings (which are based purely or largely on public information and do not use the full rating scale) are referenced where they exist but not used to calculate an LCS.

4. The LCS outlook is determined by using our 'resilience indicators' (RIs); LCSs having RIs of 5 and above are given a 'positive' outlook; 3 and below are 'negative'. RIs of 4 have a 'stable' outlook (or 'developing' if the rating has a developing outlook or watch).
5. 'LUCID' is a unique referencing system which enables users to accurately identify the specific carrier being referenced and to track ownership. The LUCID Library is a growing database of over 5,000 insurers globally, incorporating name standardisation, tracking names changes and ownership through time.

Free access to the LUCID Library online will shortly be available. For details, contact Litmus Analysis.

## Litmus Composite Score (LCS) Methodology

### Overview

The LCS is a method of averaging the ratings from a number of rating agencies. Please note that it is not a rating and involves no rating analysis from Litmus; we simply provide the averaging methodology.

We begin by producing the Litmus Score (LS). This translates each agency's Financial Strength Rating (FSR) on the quoted carrier to a numerical score. The exact score assigned reflects both the rating and the rating outlook. As AM Best uses a different rating scale from the other rating agencies for their FSRs, we use the AM Best issuer credit rating (ICR) assigned to the carrier (and its outlook).

Where ratings from more than one agency exist we then produce the Litmus Composite Score (LCS) and map that back to the rating scale used by Fitch and S&P.

In the event that the LCS comes out at a point equidistant from the relevant ratings scale mappings (e.g., as with an LCS outcome of 86 being two points away from both the AA- and A+ mappings), and hence there is no clear ratings scale mapping outcome for the LCS, we apply our 'tiebreak' criteria (see below).

### The Litmus Score (LS)

The LS is calculated out of 100. Each notch on the standard rating scale is covered by 4 points on the LS scale. For example, a AA- rating with a stable outlook is assigned an LS of 88, whereas an A+ rating with a stable outlook is assigned 84.

A positive/negative outlook respectively increases/decreases the LS relative to that for the stable outlook by one point.

### The Litmus Composite Score (LCS)

The LCS is the arithmetic mean of the LS outcomes. Where the named carrier has only one rating an LCS is not assigned; instead we quote its LS and indicate the single rating agency as the source.

### Tiebreaks

As the LCS is the average of individual ratings and their outlooks the LCS outcome can fall exactly between two different rating levels (eg, where an insurer has two ratings, one at A and the other at A-, both with a stable outlook). In these circumstances, when mapping the LCS to the rating scale we apply the following 'tiebreak' methodology to decide whether the higher or lower mapping option should be selected:

First, where a majority of the individual (solicited\*) ratings are above/below the LCS then the higher/lower rating average is selected. If that does not discriminate:

The level of the S&P (solicited\*) rating for insurance groups domiciled outside the Americas\*\* and the AM Best (solicited\*) rating for insurance groups domiciled in the Americas\*\* (including Bermuda and the Cayman Islands) is used. In the absence of one of these the other is used\*\*.

If neither an S&P nor an AM Best (solicited\*) rating is available then the lower of the Fitch or Moody’s rating is used\*\*\*.

A ‘positive’ tiebreak means the selection of the higher option and is identified in the tiebreak column as ‘P/T’.

A ‘negative’ tiebreak is identified as ‘N/T’.

\*An LCS is only calculated using full ‘unsolicited ratings’ where no solicited ratings exist. In that event the same process is applied as above using the full ‘unsolicited’ ratings. (‘pi’ ratings are not used for LCS calculations).

\*\*This reflects the fact that these agencies have generally the widest solicited ratings coverage in these areas.

\*\*\*Selection of the lower option is purely a prudential choice and does not imply Litmus considers the lower rating to have more merit.

### Litmus Composite Score (LCS) Resilience Indicator (RI) and Outlook

RI Code		Distance from rating median	LCS Outlook	LCS Mapping Description
R7	Highest	2	Positive	Reflects application of negative tiebreak (N/T)
R6	High	1.0 to less than 2.0		Materially above the median score for the rating level
R5	Moderately High	0.5 to less than 1.0		Somewhat above the median score for the rating level
R4	Average	Less than 0.5 to more than (0.5)	Stable	At or near the median score for the rating level
R3	Moderately Low	(0.5) to less than (1.0)	Negative	Somewhat below the median score for the rating level
R2	Low	(1.0) to less than (2.0)		Materially below the median score for the rating level
R1	Lowest	(2.0)		Reflects application of positive tiebreak (P/T)
The LCS resilience indicator highlights how close the LCS outcome is to a rating scale mapping below its current level				