ESMA registers: New CEREP

Publication – Help file
**Document History**

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Section / Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0.0</td>
<td>08/05/2023</td>
<td>1st version published (Go-live of the System)</td>
</tr>
<tr>
<td>1.3.0</td>
<td>01/09/2023</td>
<td>Chapter 3.2: Update the description of the advanced filtering functionality in order to reflect the changes introduced through ‘New CEREP 3.0.4’ system version</td>
</tr>
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1 Introduction

In 2009, the CESR Plenary approved the implementation of a Central Repository (CEREP) for historical performance data of CRAs in order to enhance transparency and comparability among CRAs by collecting centrally the reports characterising all CRA’s active ratings. Based on this dataset CEREP calculates in an exactly specified manner the different performance statistics and discloses the results for public access.

CEREP constitutes a centralised repository which makes available standardised performance data of CRAs and in this way contributes to reduce the information costs (for searching and processing the data) for both market participants and regulators. Reduced information costs create an incentive for market participants to conduct more comprehensive analyses of a CRAs rating performance. This should help them to better assess the reliability of credit ratings (and CRAs) and thereby assist them when taking investment decisions.

The data used for computing statistics is based on a stock concept model, so that intra-period rating activity is derived from a comparison of ratings at the beginning and the end of a period. ESMA does not disclose any individual rating information to the public but publishes aggregated statistics only.

The existing system generates four types of CRAs statistics:

• Rating activity
• Defaults
• Transition Matrices - Defaults
• Rating transition matrices

In 2022 a new web interface (the New CEREP Public interface) has been implemented and has been incorporated at ESMA Registers Publication interface in order to host the CEREP statistics.

Please note that the screenshots of this Help file are indicative since the system under its scope is under maintenance and slight deviations at the interface may be introduced.
2 Definitions

This section includes a set of terms that are frequently used in this document, and it aims to facilitate the understanding of CEREP statistics.

<table>
<thead>
<tr>
<th>CRAs (Credit Rating Agencies):</th>
<th>The agencies responsible for assigning ratings and submitting such ratings to ESMA.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating actions:</td>
<td>A rating may include one or more rating actions. All characteristics and changes of a rating are reported through separate rating actions. Examples of rating actions are: New, Outstanding, Upgrade, Downgrade, Default and Withdrawal. The lifecycle of a rating always commences with a New or Outstanding action.</td>
</tr>
<tr>
<td>Rating info:</td>
<td>Rating info provides general information regarding a rating, such as the rating type, the time horizon and other. The Rating info is submitted through specific rating actions (Outstanding and New Rating actions, meaning at the beginning of a Rating lifecycle). The rating info can be updated and/or corrected. The public user can filter the ratings based on information available at the Rating info (see CEREP Statistics Filters).</td>
</tr>
<tr>
<td>Cohort:</td>
<td>The set of ratings that already exist in the selected beginning of period and have Rating info properties equal to the values selected in the CEREP Statistics filters at the date that is selected in the 'Beginning of period' filter.</td>
</tr>
<tr>
<td>Rating scale:</td>
<td>The rating scale is an established and defined ranking system of rating categories used to issue credit ratings. CRAs do not use harmonized rating scales – these might differ with respect to both the nomenclature of rating categories and number of rating categories, i.e., the granularity of creditworthiness assessments. Most CRAs differentiate further within a rating category by including notches, as indicated in the example below:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rating scale</th>
<th>Category</th>
<th>Notch</th>
</tr>
</thead>
<tbody>
<tr>
<td>RST</td>
<td>A</td>
<td>A+</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>B+</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B-</td>
<td></td>
</tr>
</tbody>
</table>

CRAs may use different rating scales for different types of issuers and/or instruments. For example, usually different rating scales are used for short-term and long-term ratings, but also for structured finance instruments. Therefore, the CEREP does not display rating activity and
rating performance statistics for the whole universe of ratings issued by a CRA, but the user has to specify the scope by providing the statistics period, rating type and time horizon first.

| Statistics rating scale: | Through the different rating scales that a CRA has for a specific statistics period, rating type and time-horizon combination and for a specific validity period, the CRA has defined a unique Statistics rating scale. All other Rating scales for the same rating type and time-horizon combination and for the specific validity period are mapped to the Statistics rating scale so that the calculations of the statistics can use only the Statistics rating scale for all ratings.

In case where a CRA’s Statistics rating scale changes (this may happen because the CRA changes their rating scales or their methodology) for a given scope, New CEREP will not be able to calculate statistics that are based on ratings scales’ categories and notches for periods that include both rating scales. A message informing the user that the statistics cannot be calculated is presented instead.

The statistics that are not affected from a statistics rating scale change are the following statistics of the Rating Activity page:
- Ratings BOP
- Ratings EOP
- New ratings
- Reinstatements
- Withdrawals (all reasons included)
- Defaults |

| Statistics period: | The time period that is defined by the date values selected in the ‘Beginning of period’ (BOP) and ‘End of period’ (EOP) filters accordingly. The statistics period can be no less than 6 months and can cover up to the latest full semester before the last Publication date. |
3 CEREP Statistics Filters

3.1 The filtering section

A filtering section is available, allowing the user to define the scope of the statistics they want to access:

**CRA:** The user may filter CEREP statistics by specifying the CRA name. A single value can only be selected in this filter.

**Beginning of period:** The user may filter CEREP statistics by specifying the beginning of period the statistics will represent. A single value can only be selected in this filter.

**End of period:** The user may filter CEREP statistics by specifying the end of period the statistics will represent. A single value can only be selected in this filter.

**Rating type:** The user may filter CEREP statistics by specifying the rating type. A single value can only be selected in this filter. The user may filter CEREP statistics by selecting one of the available Rating types:

(i) Corporate,

(ii) Covered bond,

(iii) Sovereign and public finance,

(iv) Structured finance

**Time horizon:** The user may filter CEREP statistics by specifying the rating type. A single value can only be selected in this filter. The user may filter CEREP statistics by selecting one of the available Time horizons:

- Long-term,
- Short-term

**Geographical area:** The user may filter CEREP statistics by specifying the geographical area. Multiple values can be selected in this filter. The user may filter CEREP statistics by selecting one of the available Geographical areas:

(i) Africa,

(ii) America,

(iii) Asia,

(iv) Europe,

a. “EU members” option will be displayed if “Europe” is selected as Geographical Area
(v) International,
(vi) Oceania

**Country:** The user may filter CEREP statistics by specifying the country of issuance. Multiple values can be selected in this filter. This filter is visible only if Geographical area is selected.

**Industry:** The user may filter CEREP corporate rating statistics by specifying the industry. Multiple values can be selected in this filter. The user may filter CEREP statistics by selecting one of the available Industries:

(i) Corporate institution,
(ii) Financial institution,
(iii) Insurance institution

The filter is available only for Rating type = Corporate

**Sector:** The user may filter CEREP sovereign and public finance rating statistics by specifying the sector. Multiple values can be selected in this filter. The user may filter CEREP statistics by selecting one of the available Sectors:

(i) International financial institution,
(ii) Public,
(iii) Regional or local authority,
(iv) State rating,
(v) Supranational Organizations

The filter is available only for Rating type = Sovereign and public finance.

**Asset:** The user may filter CEREP structured finance rating statistics by specifying the asset. Multiple values can be selected in this filter. The user may filter CEREP statistics by selecting one of the available Assets:

(i) Asset Backed Securities,
(ii) Asset Backed Commercial Paper,
(iii) Collaterised Debt Obligation,
(iv) Commercial Mortgage Backed Securities
(v) Residential Mortgage Backed Securities,
(vi) Other.
The filter is available only for Rating type = Structured.

**Sub-asset:** The user may filter CEREPE structured finance rating statistics in more detail by specifying the sub-asset. Multiple values can be selected in this filter. The user may filter CEREPE statistics by selecting one of the available Sub-assets:

- Auto loan backed securities,
- Cash flow and hybrid CDOs/CLOs
- Consumer loan backed security
- Credit card receivable backed securities
- Derivative product companies,
- Home equity loans,
- Insurance-linked securities,
- Leases to individual or business backed security,
- Market value CDOs,
- Non-prime RMBS,
- Other,
- Prime RMBS,
- Small and medium sized enterprises loan backed securities,
- Structured covered bonds,
- Structured investment vehicles,
- Synthetic CDOs/CLOs,
- Not available (corresponds to the case where there is no reported Sub-asset value)

The filter is available only for Rating type = Structured and for Asset = Asset Backed Securities / Residential Mortgage Backed Securities / Collaterised Debt Obligation / Other

More specifically, the relation between Asset and possible Sub-asset options can be found in the following table:

<table>
<thead>
<tr>
<th>Selected Asset value</th>
<th>Sub-asset value options</th>
</tr>
</thead>
</table>
Asset Backed Securities
- Auto loan backed securities
- Consumer loan backed security
- Small and medium sized enterprises loan backed securities
- Leases to individual or business backed security
- Other
- Credit card receivable backed securities

Residential Mortgage Backed Securities
- Home equity loans
- Prime RMBS
- Non-prime RMBS
- Other

Collaterised Debt Obligation
- Cash flow and hybrid CDOs/CLOs
- Synthetic CDOs/CLOs
- Market value CDOs
- Other

Other
- Structured investment vehicles
- Derivative product companies
- Structured covered bonds
- Other

**Vintage year:** The user may filter CEREP structured finance rating statistics by specifying the vintage year. Multiple values can be selected in this filter. The vintage year corresponds to the year of issuance of the selected Instrument for the ratings included in the statistics. The value ‘Not-available’ is also available, for ratings without a reported Vintage year.

The above set of filters is called General filters. They apply to all Statistics pages that are going to be presented later in this document and they filter out the scope of the statistics according to the user’s selection.

The filters ‘CRA’, ‘Beginning of period’, ‘End of period’, ‘Rating type’ and ‘Time horizon’ (marked with an asterisk) are mandatory filters, meaning that if a value is not selected for any of them, no statistics can be produced.

Along with the General filters, there is a special filter that belongs to the same filtering section as General filters, but serves the purpose of changing the format of the data that has already been filtered out through the previous set of filtering criteria. The Format filter only applies in the following Statistics pages: Transition matrices – Defaults and Transition matrices. The Format filter remains ‘frozen’ in Rating activity page – meaning that its value does not affect the Rating activity results and when in the specific Statistics page its value cannot be changed.

The Format filter currently is the following:
**Number/Percentage:** The user may filter CEREP statistics and have them displayed in either number or percentage format. The default value for this filter is ‘Number’. If the user changes the value to ‘Percentage’, and selects the ‘Search’ button, the statistics will be displayed in percentage format.

### 3.2 Advanced Filtering Functionality

The values of any drop-down filter are affected by the user’s selection at other filters, based on the data available in the system.

For example, for a CRA that has only ratings with Corporate rating type, if this CRA is selected, then only the Corporate value will be displayed in the Rating type filter.

Furthermore, the values that are made available at the filters after filling the ‘Beginning of period’ filter abide by the following rules:

1. If the ‘Beginning of period’ filter is filled-in, then the values returned at the rest of the filters should exist at the period starting with the selected semester for ratings that exist in the cohort of the selected ‘Beginning of period’. The ‘End of period’ filter does not affect the available options for the rest of the filters.

2. As the search progresses and more filters are getting filled-in, the values, available in the rest of the filters, correspond to ratings that fulfil the selected criteria.

For example, for the CRA ‘Kroll Bond Rating Agency’:

- Structured finance ratings start on 01/01/2012
- Sovereign and public finance ratings start on 01/07/2012
- Corporate ratings start on 01/01/2013

If the user selects ‘Beginning of period’ equal to ‘01/01/2012’, as presented in the screenshot below, the only available option in the ‘Rating type’ filter will be ‘Structured finance’, given that this is the only value that is available for ratings existing in the cohort of the selected BOP.
If, however, the user selects first the CRA ‘Kroll Bond Rating Agency’ and then ‘01/07/2012’ in the Beginning of period filter, the available Rating type options are “Sovereign and public finance” and “Structured finance”, given that both Rating type values are available for ratings existing in the cohort of the selected BOP.
All available dates, in the 'Beginning of period' filter, concern ratings that exist at the cohort (in detail, ratings for which there is a NW (New) / OR (Outstanding) rating action the validity date of which is before the selected BOP value). Consequently, it is not expected to have zero ratings at BOP in the displayed search results. In this way, the System can calculate the statistics related to the cohort (e.g. ‘Transition Matrices’, ‘Default Rates’, etc).

After a search provides results, the user can select “Clear”, and perform a new search selecting different options.

In that case, the search filters will be reset, and the values of the drop-down filter will be affected by the user’s new selections.

### 4 CEREP Statistics Page

#### 4.1 Rating Activity Page

In this Statistics page the users can have access to the following statistics. All statistics of Rating Activity Statistics page are displayed in number (column ‘Number of ratings’) and percentage (column ‘Percentage of ratings’) format:

<table>
<thead>
<tr>
<th>Name</th>
<th>Number of ratings</th>
<th>Percentage of ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ratings BOP</td>
<td>The number of ratings belonging in the initial cohort of ratings at the date selected in the 'Beginning of period' filter. The initial cohort is the set of ratings that already exist and fulfil the rating info conditions of the filter values at the date selected in the 'Beginning of period' filter.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Number of ratings EOP</td>
<td>The number of ratings that exist at EOP having the rating info characteristics, as defined in the General filters values selection at the date selected in the 'End of period' filter.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>New ratings</td>
<td>The number of ratings that were first issued during the statistics period, having the rating info characteristics, as defined in the General filters’ values selection at their first issuance.</td>
<td>Number of unique ratings that were first issued during the statistics period divided by the number of ratings BOP.</td>
</tr>
<tr>
<td></td>
<td>Description</td>
<td>Formula</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Reinstatements</strong></td>
<td>The number of reinstatements that happened during the statistics period, for ratings belonging in the initial cohort of ratings for the General filters' values selection or, for ratings not belonging in the initial cohort, having the rating info characteristics as defined in the rating definition section.</td>
<td>Number of unique ratings that include a reinstatement during the statistics period divided by the number of ratings BOP.</td>
</tr>
<tr>
<td><strong>Withdrawals, discontinuations</strong></td>
<td>The number of withdrawals that happened during the statistics period, for ratings belonging in the initial cohort.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal during the statistics period divided by the number of ratings BOP.</td>
</tr>
<tr>
<td><strong>Withdrawals due to incorrect/insufficient information</strong></td>
<td>The number of withdrawals that happened during the statistics period due to incorrect/insufficient information for ratings belonging in the initial cohort.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to incorrect/insufficient information during the statistics period divided by the number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td><strong>Withdrawals due to bankruptcy/debt restructuring</strong></td>
<td>The number of withdrawals that happened during the statistics period due to bankruptcy/debt restructuring for ratings belonging in the initial cohort of ratings at the date selected in the 'Beginning of period' filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to bankruptcy/debt restructuring during the statistics period divided by the number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td><strong>Withdrawals due to reorganization of rated entity</strong></td>
<td>The number of withdrawals that happened during the statistics period due to reorganization of rated entity for ratings belonging in the initial cohort of ratings at the date selected in the 'Beginning of period' filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to reorganization of rated entity during the statistics period divided by the number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td><strong>Withdrawals due to maturity of the debt obligation</strong></td>
<td>The number of withdrawals that happened during the statistics period due to maturity of the debt obligation for ratings belonging in the initial cohort of ratings at the date selected in the 'Beginning of period' filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to maturity of debt obligation during the statistics period.</td>
</tr>
<tr>
<td>Category</td>
<td>Formula</td>
<td>Notes</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>Withdrawals due to business model</td>
<td>The number of withdrawals that happened during the statistics period due to business model for ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to business model during the statistics period divided by the Number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td>Withdrawals due to shareholders</td>
<td>The number of withdrawals that happened during the statistics period due to shareholders for ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to shareholders during the statistics period divided by the Number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td>Withdrawals due to client’s request</td>
<td>The number of withdrawals that happened during the statistics period due to client’s request for ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to client’s request during the statistics period divided by the Number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td>Withdrawals due to other reasons</td>
<td>The number of withdrawals that happened during the statistics period due to other reasons for ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Number of unique ratings that belong to the initial cohort and include a withdrawal due to other reasons during the statistics period divided by the Number of withdrawals, discontinuations.</td>
</tr>
<tr>
<td>Withdrawals, for ratings that do not exist at BOP</td>
<td>The number of withdrawals that happened during the statistics period for ratings not belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Defaults</td>
<td>The number of defaults that happened during the statistics period for ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter.</td>
<td>Number of unique ratings that contain at least one default during the statistics period divided by the number of ratings BOP.</td>
</tr>
<tr>
<td><strong>Upgrades</strong></td>
<td>The number of ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that are rated with a higher notch at the end of the selected period than the beginning of it.</td>
<td>Number of upgraded ratings divided by the Number of number of ratings at BOP.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>Downgrades</strong></td>
<td>The number of ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that are rated with a lower notch at the end of the selected period than the beginning of it.</td>
<td>Number of downgraded ratings divided by the Number of number of ratings at BOP.</td>
</tr>
<tr>
<td><strong>Upgrade/downgrade ratio</strong></td>
<td>Not applicable.</td>
<td>The ratio between the number of ‘Upgrades’ and the number of ‘Downgrades’ as calculated previously.</td>
</tr>
<tr>
<td><strong>Average number of notches for upgrades</strong></td>
<td>For the ratings calculated in the ‘Upgrades’ statistic, the average number of notches between the start and the end of the selected statistics period (sum of the difference between Notch value at BOP and Notch Value at EOP, divided by the number of upgrades).</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Average number of notches for downgrades</strong></td>
<td>For the ratings calculated in the ‘Downgrades’ statistic, the average number of notches between the start and the end of the selected statistics period (sum of the difference between Notch value at BOP and Notch Value at EOP, divided by the number of downgrades).</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>

The statistics of Rating Activity Statistics page are displayed in the following format:
In case we have of change in the statistics rating scale during the statistics period, then only a part of the rating activity statistics will be calculated. The statistics of the Rating Activity page that are not affected from a statistics rating scale change are the following:

- Ratings BOP
- Ratings EOP
- New ratings
- Reinstatements
- Withdrawals (all reasons included)
- Defaults

### 4.2 Defaults Rate Page

This Statistics page presents metrics about the ratings belonging to the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that also have one or more defaults happening during the statistics period. The statistics period is the period defined by the values selection in the ‘Beginning of period’ and ‘End of period’ General filters.

In case the statistics rating scale has changed midst-statistics period, a message informing the user that the statistics rating scale has changed is displayed and the Defaults Rate results are not calculated:
The statistics of this page are the following:

**Number of defaults**: The number of defaults that happened to ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that were also rated with the Category of the table line at the date selected in the ‘Beginning of period’ filter.

**Defaults rate**: The distinct number of ratings included in the ‘number of defaults’, as defined previously, divided by the total number of ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that were also rated with the Category of the table line at the date selected in the ‘Beginning of period’ filter (regardless of whether they include a default or not).

For the purposes of reporting into the CEREP, no deterministic definition of a default event has been set up. Therefore, the definitions might differ for various CRAs, and users are strongly suggested to refer to the Qualitative information provided by each CRA.

Indicatively, if a statistics rating scale comprises the categories A and B, the Defaults rate statistics would be interpreted as follows:

<table>
<thead>
<tr>
<th></th>
<th>Number of defaults</th>
<th>Defaults rate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>Number of defaults that happened during the statistics period for ratings of the initial cohort that were rated with category A at BOP.</td>
<td>Number of unique ratings of the initial cohort that were rated with category A at BOP and contain at least one default during the statistics period, divided by the total number of ratings rated with category A at BOP. The result is displayed as a percentage.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>Number of defaults that happened during the statistics period for ratings of the initial cohort that were rated with category B at BOP.</td>
<td>Number of unique ratings of the initial cohort that were rated with category B at BOP and contain at least one default during the statistics period, divided by the total number of ratings rated with category A at BOP. The result is displayed as a percentage.</td>
</tr>
</tbody>
</table>

The Statistics page is as follows:
4.3 Transition Matrices – Defaults Page

The goal of the Transition Matrices – Defaults page is to display the category that a rating was rated with when it had a default event, in combination with the category of the rating at the beginning of the statistics period (BOP). The first column shows the category of the rating at the BOP, while the first row shows the category of the rating at the placement of the default event.

In case there are multiple default events in a statistics period, all default events will be counted (according to rating’s value at BOP and the rating’s value at the placement of each default event).

This Statistics page includes statistics on ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that also have one or more defaults happening during the statistics period. The statistics period is the period defined by the values selection in the ‘Beginning of period’ and ‘End of period’ General filters.

The displayed results are affected by the value selection in the ‘Number/Percentage’ format filter. The user can select between displaying results according to either the number or percentage format.

In case the statistics rating scale has changed midst-statistics period, a message informing the user that the statistics rating scale has changed is displayed and the Transition matrices - Defaults results are not calculated:
Number of defaults: The number of defaults that happened to ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, were rated with the Category of the table line at the time the default happened and were also rated with the Category of the table column at the date selected in the ‘Beginning of period’ filter.

Defaults rate: The ‘number of defaults’, as defined previously, divided by the total number of ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, that were also rated with the Category of the table line at the date selected in the ‘Beginning of period’ filter (regardless of whether they include a default or not).

Indicatively, if a statistics rating scale comprises the categories A and B, the Transition Matrices - Defaults (Number) statistics would be interpreted as follows:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Number of defaults that were rated with A and belong to ratings of the initial cohort that were rated with A at BOP.</td>
<td>Number of defaults that were rated with B and belong to ratings of the initial cohort that were rated with A at BOP.</td>
</tr>
<tr>
<td>B</td>
<td>Number of defaults that were rated with A and belong to ratings of the initial cohort that were rated with B at BOP.</td>
<td>Number of defaults that were rated with B and belong to ratings of the initial cohort that were rated with B at BOP.</td>
</tr>
</tbody>
</table>

Accordingly, if a statistics rating scale comprises the categories A and B, the Transition Matrices - Defaults (Percentage) statistics would be interpreted as follows:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Number of defaults that were rated with A and belong to ratings of the initial cohort that were rated with A at BOP divided by the number of ratings of the initial cohort rated with category A at BOP.</td>
<td>Number of defaults that were rated with B and belong to ratings that were rated with A at BOP divided by the number of ratings rated with category A at BOP. Ratings should be part of the initial cohort.</td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>----</td>
<td>------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>B</td>
<td>Number of defaults that were rated with A and belong to ratings</td>
<td>Number of defaults that were rated with B and belong to ratings</td>
</tr>
<tr>
<td></td>
<td>that were rated with B at BOP divided by the number of ratings</td>
<td>that were rated with B at BOP divided by the number of ratings</td>
</tr>
<tr>
<td></td>
<td>rated with category B at BOP. Ratings should be part of the</td>
<td>rated with category B at BOP. Ratings should be part of the</td>
</tr>
<tr>
<td></td>
<td>initial cohort.</td>
<td>initial cohort.</td>
</tr>
</tbody>
</table>

The Statistics page when ‘Number’ is selected in the ‘Number/Percentage’ format filter:

![](/path/to/image)

The Statistics page when ‘Percentage’ is selected in the ‘Number/Percentage’ format filter:
4.4 Transition Matrices Page

Transition matrices display the number of transitions from one category value to another over the selected statistics period or whether a rating of the initial cohort is withdrawn at the end of the statistics period. The first column shows the category of the rating at the beginning of the statistics period, while the first row shows the category of the rating at the end of the statistics period. This Statistics page includes statistics on ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, and presents the state of the rating at the date selected in the ‘Beginning of period’ filter, as opposed to the state of the rating at the date selected in the ‘End of period’ filter. More specifically, it illustrates the Category the rating had at the selected beginning of statistics period and the Category the rating had at the selected end of statistics period. In case the rating is withdrawn at the selected end of statistics period, this information is also included in the same Statistics page.

The displayed results are affected by the value selection in the ‘Number/Percentage’ format filter. The user can select between displaying results according to either number or percentage format.

In case the statistics rating scale has changed midst-statistics period, a message informing the user that the statistics rating scale has changed is displayed and the Transition matrices - Defaults results are not calculated:

The rating scale of the Credit Rating Agency selected has changed during the period selected. No statistics are available.
The statistics of this page are categorized according to the user’s selection in the Number/Percentage filter and are the following:

**Number of transitions:** The number of ratings belonging in the initial cohort of ratings at the date selected in the ‘Beginning of period’ filter, were rated with the Category of the table line at the date selected in the ‘Beginning of period’ filter and rated with the Category of the table column at the date selected in the ‘End of period’ filter. If the rating is withdrawn at the end of the statistics period, it is included in the ‘Withdrawals’ column according to the Category it was rated with at the start of the statistics period. If a rating belongs in the initial cohort, is withdrawn and then reinstated in the statistics period, then it is included in the table column that corresponds to the Category it was rated with at the end of the selected statistics period.

**Transition rate:** The ‘number of transitions (categories)’, as defined previously, to the total number of ratings belonging in the initial cohort of ratings and rated with the Category of the table row at the start of the statistics period. If the rating is withdrawn at the end of the statistics period, it is included in the ‘Withdrawals’ column according to the Category it was rated with at the start of the statistics period. If a rating belongs in the initial cohort, is withdrawn and then reinstated in the statistics period, then it is included in the table column that corresponds to the Category it was rated with at the end of the selected statistics period.

Indicatively, if a statistics rating scale comprises the categories A and B, the Transition Matrices (Number) statistics would be interpreted as follows:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>Withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>Number of ratings of the initial cohort that were rated with A at BOP and A at EOP.</td>
<td>Number of ratings of the initial cohort that were rated with A at BOP and B at EOP.</td>
<td>Number of ratings of the initial cohort that were withdrawn at EOP, while being rated with A at BOP.</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>Number of ratings of the initial cohort that were rated with B at BOP and A at EOP.</td>
<td>Number of ratings of the initial cohort that were rated with B at BOP and B at EOP.</td>
<td>Number of ratings of the initial cohort that were withdrawn at EOP, while being rated with B at BOP.</td>
</tr>
</tbody>
</table>

Accordingly, if a statistics rating scale comprises the categories A and B, the Transition Matrices - Defaults (Percentage) statistics would be interpreted as follows:
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Withdrawals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of ratings of the initial cohort that were rated with A at BOP and A at EOP divided by the total number of ratings of the initial cohort that were rated with A at BOP.</td>
<td>Number of ratings of the initial cohort that were rated with A at BOP and B at EOP divided by the total number of ratings of the initial cohort that were rated with A at BOP.</td>
<td>Number of ratings of the initial cohort that were rated with A at BOP and are withdrawn at EOP divided by the total number of ratings of the initial cohort that were rated with A at BOP.</td>
</tr>
<tr>
<td>Number of ratings of the initial cohort that were rated with B at BOP and A at EOP divided by the total number of ratings of the initial cohort that were rated with B at BOP.</td>
<td>Number of ratings of the initial cohort that were rated with B at BOP and A at EOP divided by the total number of ratings of the initial cohort that were rated with B at BOP.</td>
<td>Number of ratings of the initial cohort that were rated with B at BOP and are withdrawn at EOP divided by the total number of ratings of the initial cohort that were rated with B at BOP.</td>
</tr>
</tbody>
</table>

The Statistics page when ‘Number’ is selected in the ‘Number/Percentage’ format filter is as follows:
The Statistics page when ‘Percentage’ is selected in the ‘Number/Percentage’ format filter is as follows:

5 Multi-year statistics and Comparability

The user can select a statistics period that can vary from 6 months to multiple years in the CEREP Publication page. For the correct interpretation of the produced statistics, the user should take into consideration that for the majority of statistics the concept of the initial cohort applies. This means that for the majority of statistics and especially the Default rates, Transition matrices – Defaults and Transition matrices, no statistics are included for ratings that do not belong in the initial cohort of ratings.

Specifically, when the user selects a multi-year statistics period, there will be a significant number of ratings that are first reported after the start of the statistics period, thus not included in the displayed statistics.

Regarding the comparability between statistics results of different CRAs, it is important to note that there is no necessary common practice when CRAs define their rating scales to be used in the ratings, so there is no measure when comparing rating scales. Additionally, a CRA may use separate rating scales for ratings, based on their rating type. A CRA may even have multiple rating scales for the same rating type. As a result, comparing results that are based on different rating scales is not a recommended practice.

6 Impact of Rating info changes on the statistics
RADAR reporting system allows a CRA to modify the Rating information of a submitted rating (through update submissions and reinstatements). For example, the CRA may change the rating type, the geographical area, the industry, the sector, the asset, the sub-asset, the vintage year and the country of a rating.

In the context of the CEREP statistics, this change may occur within a statistics period and as a result the rating will have different information compared to the information it has at the beginning of the statistics period (BOP). Such changes impact the calculation of the statistics since a rating that is counted in the Number of ratings BOP (because, at BOP, it meets the search criteria provided from the user at New CEREP statistics page) may not be counted in the Number of ratings EOP (because it does not meet the same criteria at EOP).

Therefore, when comparing the ratings at BOP and EOP, the user must always consider that a rating may not be counted at EOP not only because the rating was withdrawn (and not reinstated), but also because the rating information may have changed.

For example, for a given set of filters:

For a CRA who has no changes at the information of their ratings (in the statistics period defined by the filters), the following formula will return 0:

Statistics error = EOP – BOP – NW – RS + WD (in BOP) + WD (not in BOP)

Where:
EOP: Number of ratings EOP
BOP: Number of ratings BOP
NW: New ratings
RS: Reinstatements
WD (in BOP): Withdrawals, discontinuations for ratings that exist at BOP
WD (not in BOP): Withdrawals for ratings that do not exist at BOP

For a CRA who has 1 rating that changes rating information (in the statistics period defined by the filters), the same formula will return -1, i.e., one rating does not fulfil the conditions of the filters anymore at the end of the statistics period and therefore it is not counted in the ‘Number of ratings EOP’.

This behaviour is expected and aims to highlight changes and updates in the rating info of ratings that fulfil the filter criteria at the beginning of period, while still being alive at the end of the statistics period.
Default rates, Transition matrices – Defaults and Transition matrices statistics pages are not affected by potential changes in the rating information that may happen during the selected statistics period, since they present statistics only on the ratings that belong in the initial cohort.

For example, for a CRA who has 1 rating that changes rating information (in the statistics period defined by the filters), the rating will still be included in the Transition Matrices, in the table cell that corresponds to the Categories it was rated with at the beginning and the end of the selected statistics period.

### 7 Access the CRAs Page

The user can access the CRAs information page through the dedicated European Rating Platform – Credit rating Agencies Register at the ESMA Registers portal:
At the European Rating Platform – Credit Rating Agencies Register the user can find general information for a CRA, information of the CRA policies and rating scales:
8 Additional Information

Last publication date per CRA: The last date and time that the CEREP publication data were refreshed for the selected CRA.

The data refresh is executed every 6 months by ESMA.

Export of Results:

The CEREP statistics can be exported in csv and pdf format. The exported file only includes the results that are displayed in the interface at the time and is dependent to the values selected by the user in the General and Format filters of the page. The structure and content of the exports respect the format of the statistics interface.

The interface includes the following buttons, along with their function:

Export to CSV: The statistics are exported in a csv format. The statistics labels and content follow the interface equivalent labels and content. The exported file can be edited further in the software tool that the export is saved in.

Print: The statistics are exported in a pdf format. The statistics labels and content follow the interface equivalent labels and content. The exported file cannot be edited.

9 Tracking of System versions

The following table summarizes the changes that are introduced with every new system release, focusing on the differences in relation to previous system versions. The table will be updated with every new system version that is made available at Publication.
<table>
<thead>
<tr>
<th>New CEREP System Version</th>
<th>Date in production</th>
<th>Description</th>
</tr>
</thead>
</table>
| 3.0.3                    | 07/07/2023         | - The advanced filtering functionality considers the full period defined by the BOP and EOP filters.  
- The generated statistics are expected to return zeros when a value selected in a filter (e.g. Rating type=Corporate) does not exist at the BOP semester (but exists in a semester in the period defined by BOP and EOP). |
| 3.0.4                    | 01/09/2023         | - The advanced filtering functionality considers the options that are available at the selected BOP value  
- No zero values (for ratings at BOP) are expected as results, considering that the system ensures that a NW/OR action exists before/after BOP at all times. |