Limited Assurance Audit Report on the Data Quality Rating Method used by the Confederation of European Paper Industries on a selection of indicators

We have been engaged by the Confederation of European Paper Industries ("CEPI") to issue a limited assurance statement on the data quality rating method ("DQR") CEPI applies on a selection of indicators published in the 2015 CEPI annual statistics report ("the Report"). The indicators covered by our assurance statement and the detailed DQR made by CEPI can be found on the CEPI website (www.cepi.org/members/statistics/annual-statistics). The DQR method applied by CEPI is based on Product Footprint Category Rules (PFCR) for paper, developed by the European Commission's DG Environment (see Appendix to our report).

Limitations in our scope

The scope of our assurance engagement as described above does not include an assessment of the selected indicators nor the reliability of the underlying data provided to CEPI by the CEPI member associations, from individual companies or based on estimates provided by paper industry consultants.

Management's Responsibility

The management of CEPI is responsible for the preparation of the indicators and their data quality assessment based on the information received directly from the CEPI member associations, from individual companies or based on estimates provided by paper industry consultants.

The Auditor's Responsibility

As defined by the International Federation of Accountants ("IFAC"), our review was designed to obtain a limited level of assurance. Procedures to obtain limited level of assurance are less extensive in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks, than those for a reasonable level of assurance and therefore less assurance is provided.

It is our responsibility, based on our limited assurance review procedures, to express an opinion regarding the data quality rating method applied by CEPI. We conducted our procedures in accordance with the international standard as defined in ISAE 3000 (International Standard for Assurance Engagements, December 2003). With respect to independence rules, these are defined by the respective legal and regulatory texts as well as by the professional code of ethics, issued by the IFAC.

Nature and scope of the procedures

We performed the following procedures to support our conclusion:

- Obtaining an understanding of the data quality rating formula and assessment of the suitability of the applied methodology by CEPI. Based on the recommendation of the EY DQR audit in 2014, CEPI changed its data quality rating methodology and considers separately the Data Delivery Quality Rating (DDQR) to assess the quality of data delivery by the National Associations towards CEPI, as well as the Data Quality Rating (DQR) to assess the quality of the statistical data itself. Both ratings methods have been explained in further detail in the Appendix to this Assurance Statement.

- Challenging the data quality rating made by CEPI at consolidated level. Both DDQR and DQR methods have been challenged throughout our procedures.
  The DDQR ratings are based on four criteria as they are defined :
  - ➢ Completeness (C), has been checked by verifying if all the figures have been sent by the National Associations and whether the appropriate action has been taken in case of a lack of figures from a National Association.
  - ➢ Time-related representativeness (TiR), has been checked by verifying if the received figures related to the appropriate reporting year and if, in case of extrapolation, the correct quality assumption has been systematically performed.
  - ➢ Geographical representativeness (GR), has been checked by reviewing the weighing factor used for the various members according to the CEPI assumption.
  - ➢ Parameter uncertainty (P2), has been checked by verifying the consolidation of the figures sent by the National Associations in the CEPI reporting and, in case of difference or assessment by CEPI, by checking the impact on the data delivery quality rating performed by CEPI.
  The DQR ratings are based on the following criteria as they are defined :
  - ➢ Parameter uncertainty (P1), has been checked by verifying the consolidation of the figures sent by the National Associations in the CEPI reporting and, in case of modification by CEPI, by checking the impact on the data quality rating performed by CEPI.
- Assessing the adequacy of the documentation and "audit trail";
- Conducting interviews with CEPI responsible company staff, mainly for the purpose of assessing the understanding of the data quality rating methodology and assumptions made ;

Conclusion

Based on our procedures performed with respect to the financial year 2015, nothing has come to our attention that causes us to believe that the data quality rating method performed by CEPI, based on the European methodology for the calculation of environmental footprints of products and available on the CEPI website (www.cepi.org/members/statistics/annual-statistics), has not been done in line with the accepted procedure.

Gent, 21 June 2016

EY Assurance Services, represented by:

Christoph Vanderstricht
Partner

Appendix: CEPI data quality rating methodology

Ernst & Young Assurance Services CVBA
Moutstraat 54
B-9000 Gent

Tel: +32 (0)9 242 51 11
Fax: +32 (0)9 242 51 51
ey.com

Appendix: CEPI data quality rating methodology

The European methodology for the calculation of environmental footprints of products has been altered to be used as a quality assessment tool on a larger variety of indicators than only environmental footprint indicators. CEPI has decided to remove the following two parameters: (i) Technological representativeness and (ii) the Methodological appropriateness and to split the data quality rating methodology in 1) Data Deliver Quality (DDQR: assessment of the quality of data delivery by the National Associations towards CEPI) and 2) Data Quality Rating (DQR: assessment of the quality of the statistical data published towards stakeholders).

CEPI data delivery quality rating formula:

$$DDQR = \frac{GR + TiR + C + P2}{4}$$

C – Completeness

The completeness is calculated as follows: figures that have not been received by the National Associations are deleted from the total to obtain a total B.
The percentage of this total B compared to the total is considered:
≥ 90% = 1
≥ 80% and < 90% = 2
≥ 70% and < 80% = 3
≥ 50% and < 70% = 4
< 50% = 5

TiR – Time related representativeness

Annual figures reported to CEPI by the National Associations are one year old. When a figure is estimated by CEPI or the National Association, the age of the basis year for estimation is considered (2 years, 3 years, etc…). A total B is calculated by multiplying for each country the data figure received with the "year number".
The ratio between total B and total is considered:
≤ 1 = 1
≤ 2 and > 1 = 2
≤ 3 and > 2 = 3
≤ 4 and > 3 = 4
> 4 = 5

GR – Geographical representativeness

The geographical representativeness is calculated as follows: geographical representativeness is considering paper & board production + market pulp production for each country. Paper & board production + market pulp production of countries without any figure received is deleted from the total to obtain a total B.

Ernst & Young Assurance Services CVBA
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The percentage of this total B compared to the total is considered:

≥ 95% = 1

≥ 85% and < 95% = 2

≥ 75% and < 85% = 3

≥ 50% and < 75% = 4

< 50% = 5

P2 – Parameter uncertainty

Through a survey, the National Associations have provided CEPI with a "reliability factor" for each core data: (1) high - (2) satisfactory - (3) can be further improved - (4) low indicating the quality of data reported by the Producers to the National Associations.

Figures to be estimated or overruled by CEPI are given factor (5) by default.

A total B is calculated by multiplying for each country the data figure received with a specific percentage for each factor: (1) =100% - (2) = 75% - (3) = 50% and (4) or (5) = 25%.

The percentage of this total B compared to the total is considered:

≥ 90% = 1

≥ 80% and < 90% = 2

≥ 70% and < 80% = 3

≥ 50% and < 70% = 4

< 50% = 5

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Building a better
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Ernst & Young Assurance Services CVBA
Moutstraat 54
B-9000 Gent

Tel: +32 (0)9 242 51 11
Fax: +32 (0)9 242 51 51
ey.com

CEPI data quality rating formula:

$$DQR = P1$$

P1 – Parameter uncertainty

Through a survey, the National Associations have provided CEPI with a "reliability factor" for each core data: (1) high - (2) satisfactory - (3) can be further improved - (4) low indicating the quality of data reported by the Producers to the National Associations.

To ensure the 'P1' parameter is used here to measure Data Quality towards stakeholders, in case CEPI decided to estimate itself or overrule the figure received from the National Associations to make it more qualitative, CEPI makes itself an assessment of a "reliability factor" for the data they enter: (1) high - (2) satisfactory - (3) can be further improved - (4) low. Scores (1)-(4) should be attributed based on the reliability of the source.

Corresponding guidance has been drawn up:

(1) Not possible in case CEPI needs to complete or estimate the data itself based on alternative sources;

(2) The data has not been estimated by CEPI itself but has been found through others sources (Companies data, Eurostat, RISI mill database) and refers to the current year.

(3) The data has been estimated by CEPI based on data received from the National Associations relating to the last 3 years OR based on relevant data found through other sources on the previous year, AND takes into account the trends in production and other KPIs within the country.

(4) The data has been estimated by CEPI based on data received from the National Associations which is older than relating to the last 3 years OR based on relevant data found through other sources which is older than the previous year OR the data of previous year(s) received from the National Associations has just been re-used without investigating trends in production and other KPIs OR any other estimation or data has been used.

A total B is calculated by multiplying for each country the data figure received with a specific percentage for each factor: (1) =100% - (2) = 75% - (3) = 50% and (4) or (5) = 25%.

The percentage of this total B compared to the total is considered:

≥ 90% = 1
≥ 80% and < 90% = 2
≥ 70% and < 80% = 3
≥ 50% and < 70% = 4
< 50% = 5

In this approach 'P1' is used differently than 'P2' for Data Deliver Quality. It provides a real indication of the quality of data reported towards stakeholders and takes into account partly time-related representativeness (TiR) (score depends partly on recentness of data) and geographical representativeness (GR) (score per country is multiplied with the data figure replied by the country).

Data Quality – CEPI Statistics

Over the years, the amount of the statistics collected and released has increased to meet members and stakeholders needs, and improved substantially their quality to better communicate on the European pulp and paper industry.

However, there is no place for complacency: progress is needed and achievable. The need for relevant and robust statistics is higher than ever, particularly in the context of the CEPI 2050 Roadmap.

To reach new heights in the field of statistics, CEPI has adopted a new strategy for the 2013-2016 period, concentrating on data quality, wood use and resource efficiency as well as new business areas. It has decided to work with EY Belgium during this period of time to facilitate CEPI in addressing the data quality aspect.

To check data quality, CEPI has decided to focus on a few key performance indicators - see the list below, and has been using a data quality assessment formula. This formula was developed by the Joint Research Centre of the EU Commission when setting the Product Footprint Category Rules for Intermediate Paper Products. This step constitutes a pre-assessment of the key performance indicators quality. EY Belgium has issued a limited assurance statement on the data quality assessment that has been performed. This development constitutes a first step to further improve data quality. In the years to come, CEPI will enlarge the list of the core data and report on the progress achieved in a transparent way.

The meaning of the Joint Research Centre of the EU Commission's rating is as follow:

Rating	Result
< or = 1	"Excellent quality"
> 1 to < or = 2	"Very good quality"
> 2 to < or = 3	"Good quality"
> 3 to < or = 4	"Fair quality"
> 4	"Poor quality"

Results of the CEPI data quality rating

	DQR		DDQR	
Industry Structure				
Number of companies	1.0	Excellent Quality	1.0	Excellent Quality
Number of pulp mills	1.0	Excellent Quality	1.0	Excellent Quality
Number of P&B mills	1.0	Excellent Quality	1.0	Excellent Quality
Number of paper machines	2.0	Very Good Quality	1.5	Very Good Quality
Paper & board capacity	3.0	Good Quality	2.5	Good Quality
Pulp capacity	2.0	Very Good Quality	1.8	Very Good Quality
Paper & board production	1.0	Excellent Quality	1.0	Excellent Quality
Market pulp production	1.0	Excellent Quality	1.5	Very Good Quality
Paper & board consumption	2.0	Very Good Quality	1.3	Very Good Quality
Pulp consumption	1.0	Excellent Quality	1.0	Excellent Quality
Paper & board exports	1.0	Excellent Quality	1.3	Very Good Quality
Pulp exports	1.0	Excellent Quality	1.0	Excellent Quality
Paper & board imports	2.0	Very Good Quality	1.3	Very Good Quality
Pulp imports	2.0	Very Good Quality	1.3	Very Good Quality
Employment	2.0	Very Good Quality	1.8	Very Good Quality
Turnover	3.0	Good Quality	2.3	Good Quality
Raw Materials				
Wood consumption	1.0	Excellent Quality	1.8	Very Good Quality
Collection of Paper for Recycling	3.0	Good Quality	1.5	Very Good Quality
Utilisation of Paper for Recycling	1.0	Excellent Quality	1.0	Excellent Quality
Utilisation of Paper for Recycling by sector	2.0	Very Good Quality	1.5	Very Good Quality
Exports of Paper for Recycling	3.0	Good Quality	1.5	Very Good Quality
Imports of Paper for Recycling	3.0	Good Quality	1.5	Very Good Quality
Non-fibrous materials consumption	3.0	Good Quality	2.0	Very Good Quality

* DQR = Data Quality Rating
DDQR = Data Delivery Quality Rating
(see Ernst & Young Limited Assurance Audit Report)