

10 April 2024 – Neuss, Germany

## Rating Action / Update:

**Creditreform Rating has affirmed the unsolicited corporate issuer rating of BASF SE at A. The outlook has been adjusted to negative from stable**

Creditreform Rating (CRA) has confirmed the unsolicited, public corporate issuer rating of BASF SE and BASF Finance Europe N.V. – together referred as Company or the Company, as well as the unsolicited corporate issue rating of long-term local currency senior unsecured notes issued by Company at A. The outlook has been changed to **negative** from **stable**. Additionally, CRA has set the initial short-term rating of BASF SE and BASF Finance Europe N.V. at **L2**.

## Current relevant factors for the rating

The following considerations were of specific relevance for the rating assessment:

- + Despite weak development in 2023 financial year, stronger operating cash flow following the targeted working capital management
- + Solid equity, well-balanced assets and financing structure, with comfortable debt maturity profile
- + Adequate liquidity underpinned by sufficient unused financing facilities, and proven access to capital markets
- + Comprehensive cost-saving measures for European business developed and partially implemented, including a package of improvements for the Verbund site in Ludwigshafen in order to respond to structural changes due to heightened energy prices in Europe
- + Global outlook for the chemical industry slightly above the still subdued economic outlook for 2024
- + Signing of the agreement to combine business operations of Wintershall Dea and Harbour Energy, which is subject to the approval of the authorities, with expected closing and cash consideration of USD 1.56 billion by the fourth quarter 2024
- + Expected lower pressure on cash funds after the completion of construction works at the new Verbund site in Zhanjiang
  
- Weak development in the 2023 financial year, with plummeting earnings from operations due to decrease in demand and prices in almost all business divisions, enhanced by negative currency effects
- Increased cost burden and weakened margins, especially in Europe, due to the high energy prices and worsening capacity utilization rates
- Substantial one-off effects connected to impairments and restructuring measures
- Despite weak operating results in 2023, and significant investments, relatively high dividend payments above free cash flow level
- Dampened outlook for 2024, with only slight increase in EBITDA before special items and a low expected free cash flow level against the backdrop of considerable investments, in particular related to the construction of the Verbund site in China
- With a view to the dividend policy of BASF and its major investments, we see an extension of debt by the end of 2024 as likely. This, combined with continuing weak expected development in 2024, could lead to a further deterioration of key financials

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**ESG factors** are factors related to environment, social issues, and governance. For more information, please see the section "Regulatory requirements". CRA generally takes ESG relevant factors into account, when assessing the rating object and discloses them when they have a significant influence on the creditworthiness of the rating object, leading to a change in the rating result or the outlook.

#### ESG-criteria:

CRA generally takes ESG factors (environment, social and governance) into account within its rating decisions. In the case of BASF SE we have not identified any ESG factors with significant influence.

Based on the Company's business model, BASF is exposed to environmental risks. The Company's production is considered to be highly energy-intensive, which is why BASF may be particularly affected by the transition to a low-emission economy. Against this backdrop, particular reference should be made to the plans of the European Union (EU), which envisage a reduction in CO<sub>2</sub> emissions of at least 55% by 2030 compared to 1990 levels. The far-reaching decarbonization of the economy required for this may pose a relevant risk for BASF, as the energy used by the Company stems largely from non-renewable sources.

Nonetheless, BASF is aware of this risk and has anchored the reduction of CO<sub>2</sub> emissions within its strategy, objectives and corporate management. By 2030, BASF plans to reduce the Company's CO<sub>2</sub> emissions by 25% compared to 2018 (corresponding to a 60% reduction compared to 1990), and by 2050, CO<sub>2</sub> emissions are to be reduced to net zero. The Company's targets are therefore in line with the Paris climate targets and the European emission reduction targets. In order to achieve these goals, CO<sub>2</sub> emissions are a "key performance indicator" for BASF in corporate management, and are also taken into account in the remuneration of the Board of Executive Directors.

To achieve the emission reduction targets, a new corporate unit was set up at the beginning of 2022, and five levers were defined which BASF can use to reduce CO<sub>2</sub> emissions. These include that electricity has to originate from renewable sources, and new, electricity-based production processes are to be used in which fossil fuels are replaced by electricity generated from renewable sources. This will result in very high demand for renewable energy, which BASF plans to cover by operating its own wind farms, among other measures. The resulting restructuring of the Company and its production processes may entail risks for BASF - however, the company has already initiated appropriate measures and firmly anchored the aforementioned goals within its corporate management; hence, we consider these risks to be manageable.

Overall, BASF can be assessed as moderately positive from an ESG perspective. The Company has set itself specific targets, particularly in the area of CO<sub>2</sub> emissions, and has anchored these targets and corresponding measures within its corporate management. Nevertheless, the transition to a low-carbon economy represents a potential risk for BASF, which we will analyze and take into account in future ratings.

A general valid description of Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

## Rating result

Please note:

The scenarios are based on information available at the time of the rating. Within the forecast horizon, circumstances may occur that could lead to a change of the rating out of the indicated range.

The current rating of **A** attests BASF SE as having a high level of credit worthiness and a low default risk.

Our rating is based on the Company's worldwide leading market position and technological expertise, its excellent geographical and product diversification, as well as its robust financial position. In the 2023 financial year, against the backdrop of the overall subdued economic sentiment and weak demand for chemical products along with a resulting drop in volumes and prices, BASF saw a substantial slump in its revenues and earnings, demonstrating its somehow softened resilience against economic cycles. and was unable to achieve its targets. Poor capacity utilization and structural changes on energy markets had a dampening effect on its margins, especially in Europe. Considerable one-off charges in connection with impairments and restructuring measures, as well as negative currency effects and an increased interest burden, placed additional strain on the Company's operating performance in 2023. However, in contrast with Germany and its biggest Verbund site in Ludwigshafen, which was most severely affected by soaring energy prices, other markets made a positive contribution to the annual result. BASF has announced a raft of measures aimed at improving its cost structure and capacity usage, including measures adopted especially for Ludwigshafen, some of which have already been realized. As a result of steps taken to optimize working capital, the Company was able to significantly extend its cash flow from operations and stabilize its financial debt. A well-balanced asset and financing structure with very solid equity and optimized debt maturities, along with BASF's adequate liquidity and sufficient available credit facilities, underpin our decision to affirm the rating.

## Outlook

The one-year outlook of the rating is **negative**. With a view toward the expectation of slow global economic growth in 2024, and continuing subdued demand, heightened interest rates, and elevated energy prices, BASF has published a cautious outlook for 2024, with only a slight increase in its operating results. Necessary restructuring expenses related to its reorganization measures put additional pressure on the Company's earnings in the short-term. Against the backdrop of ongoing major investments in China, the Company expects low free cash flow levels in 2024. This, combined with BASF's progressive dividend policy, increases the likelihood of a substantial extension in debt in 2024 in our view. Structural changes in the global energy supply, and the necessity of comprehensive restructuring measures in order to optimize its production processes, impair the Company's resilience against economic cycles, and may lead to sustained negative changes in the results of our financial figures analysis. This expectation is affirmed by the Company's recent earnings position, which has become noticeably more volatile since the 2020 financial year.

### Best-case scenario: A

In our best-case scenario, we assume a rating of A. In view of the challenging and uncertain market conditions and the envisaged cautious outlook regarding earnings and free cash flow for the 2024 financial year which results from intensive investments, combined with a possible increase in debt, we do not expect a significant improvement in BASF's financial figures which would lead to an upgrade within the period of one year.

#### Worst-case scenario: A-

In our worst-case scenario for one year, we assume a rating of A-. The overall restrained economic prospects, along with structural changes in the global energy supply, have a negative impact on the Company's resilience against economic fluctuations, putting pressure on its profitability. In the event of a further deterioration of profitability in the course of the 2024 financial year, and/or in the event of a substantial increase in debt due to continuing high dividend payments and investments, incommensurate with the Company's earnings, the rating could be subject to a verification and possible downgrade.

### Business development and outlook

Against the backdrop of the overall subdued economic sentiment in the 2023 financial year resulting from persistently high inflation and interest rates worldwide, continuing high energy prices, especially in Europe, as well as uncertainty due to persistent geopolitical tensions, BASF saw a significant decline in demand for its products and was unable to meet its main sales and earnings targets in 2023. Unfavorable currency effects contributed to weak performance.

Table 1: Financials of BASF SE | Source: BASF Report 2023

BASF SE Selected key figures of the financial statement analysis Basis: Consolidated Financial Statements (IAS)	CRA standardized figures <sup>1</sup>	
	2022	2023
Sales (EUR million)	87,324	68,902
EBITDA (EUR million)	9,973	5,780
EBIT (EUR million)	6,145	1,983
EAT (EUR million)	-391	379
EAT after transfer (EUR million)	-627	225
Total assets (EUR million)	80,132	73,004
Equity ratio (%)	49.09	48.12
Capital lock-up period (days)	35.25	35.71
Short-term capital lock-up (%)	8.23	7.35
Net total debt / EBITDA adj. (factor)	3.70	5.38
Ratio of interest expenses to total debt (%)	1.87	2.22
Return on Investment (%)	0.01	1.41

Sales plummeted by 21.1% to EUR 68,902 million (2022: EUR 87,327 million), driven by a substantial decrease in volumes (-8.4%) due to lower demand from the majority of the Company's customers, and by the decrease in prices (-10%), especially against the backdrop of lower raw material prices. Currency effects, in particular regarding the renminbi, accounted for 2.5% of the decrease in sales. No major portfolio effects occurred in 2023. EBITDA declined by 42% to EUR 5,780 million (2022: EUR 9,973 million), and EBIT was significantly lower at EUR 1,983 million (2022: EUR 6,145 million). The Company's reported income from operations (EBIT) before special

<sup>1</sup> For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. For example, when calculating the analytical equity ratio, deferred tax assets, goodwill (entirely or partly), and internally-generated intangible assets are subtracted from the original equity, whilst deferred tax liabilities are added. Net total debt takes all balance sheet liabilities into account. Therefore, the key financial figures shown often deviate from the original values of the company.

items (including income from integral companies accounted for using the equity method) declined by 44% to EUR 3,806 million (2022: EUR 6,878 million).

Table 2: The business development of BASF SE | Source: BASF Report 2023, reported information

BASF SE				
In EUR million	2022	2023	Δ	Δ %
Sales revenue	87,327	68,902	(18,425)	(21)
Income from operations (EBIT) before special items	6,878	3,806	(3,072)	(44)
Income from operations (EBIT)	6,548	2,240	(4,308)	(66)
Net income from shareholdings	-4,939	-200	4,739	--
Financial result	-418	-620	(202)	(48)
Income before income taxes	1,190	1,420	230	19
Income after taxes	-391	379	750	--

The substantial decline in EBIT before special items was in particular due to the considerably lower contribution from the Chemicals and Materials segments. In the Chemicals Segment, the decline in EBIT before special items was due to a deterioration in margins, along with lower volumes, as well as due to a lower contribution by at-equity shareholdings. In the Materials segment, lower polyamide and ammonia margins were the main reasons for the contraction in earnings. Industrial Solutions and Nutrition & Care also saw a reduction in volumes and margins. The slight earnings growth in the Surface Technologies segment was attributable to the considerably higher EBIT before special items in the Coatings division due to price and volume increases, which more than compensated for the significant decline in earnings in the Catalysts division. The Agricultural Solutions segment was able to achieve higher prices, and showed increased EBIT before special items. EBIT before special items attributable to Other improved as well, largely as a result of higher income from other businesses and lower research costs.

Table 3: The development of corporate divisions in 2023 | Source: BASF Report 2023

BASF SE according to individual corporate divisions								
in EUR million	Sales		EBITDA before special items		EBIT before special items		EBIT	
	2022	2023	2022	2023	2022	2023	2022	2023
Chemicals	14,865	10,369	2,774	1,167	1,956	361	1,758	364
Materials	18,443	14,149	2,686	1,650	1,840	826	1,776	378
Industrial Solutions	9,992	8,010	1,437	965	1,091	625	1,097	660
Surface Technologies	21,283	16,204	1,464	1,520	902	938	612	366
Nutrition & Care	8,066	6,858	1,067	565	618	107	605	119
Agricultural Solutions	10,280	10,092	1,927	2,270	1,220	1,563	1,221	1,131
Other	4,368	3,220	-594	-466	-749	-614	-523	-778
Total	87,327	68,902	10,762	7,671	6,878	3,806	6,548	2,240

With the exception of Germany, all the significant markets of BASF contributed positively to the development of EBIT before special items. In Germany, against the background of weak demand

affecting volume development in both the upstream and downstream businesses, combined with higher production costs, in particular due to the heightened energy prices which predominantly affected the upstream business, earnings were negative, especially for the Company's biggest production site in Ludwigshafen. BASF initiated a raft of cost-saving measures, with the first package announced in October 2022 and the second one in February 2023, in order to adapt to structural changes in the European energy market and improve its cost structure, in Germany as well as in Europe as a whole. According to BASF, total annual cost savings from all the elaborated measures are expected to reach EUR 1.1 billion by the end of 2026. An annual cost reduction run rate of roughly EUR 600 million had already been achieved as of the end of 2023, with another EUR 500 million annual savings to be achieved by 2026. With regard to Ludwigshafen, the Company is in the process of elaborating a new production concept for this site, with further expected savings of up to EUR 1.0 billion per year, which is to be achieved by the end of 2026. This restructuring program includes enhancing efficiency in the Company's structures, and adapting production capacities to market demand, aimed at reducing variable costs, as well as the redesigning of production processes to optimize utilization levels. The detailed reorganization concept for Ludwigshafen is to be presented in the second half of 2024.

BASF reported income from operations (EBIT) of EUR 2,240 million, a substantial decline compared to 2022 (EUR 6,548 million), which was, along with negative price and volume effects, influenced by non-recurring negative effects. These special items totaled EUR -1,566 million (2022: EUR -330 million), of which EUR 1.1 billion in charges due to impairments in the Segments Surface Technologies, Agricultural Solutions and Materials. The initiated cost saving measures led to restructuring costs of EUR 396 million (2022: EUR 249 million).

Net income before income taxes edged up from the previous year, amounting to EUR 1,420 million (2022: EUR 1,190 million). This was materially influenced by the substantial increase in net income from shareholdings (EUR -200 million; 2022: EUR -4,939 million), which in 2022 saw massive charges (EUR 6.3 billion) regarding its investment in Wintershall Dea, primarily due to the termination of its activities in Russia. The positive development of net income before income taxes was partly offset by the EUR 202 million decrease in the financial result (EUR -620 million; 2022: EUR -418 million), due to increased interest rates and in connection with additional interest expenses arising from the hedging of debt in foreign currencies.

Due to cash inflow from net working capital, especially the reduction in inventories in 2023, with a resulting cash release of EUR 1.9 billion, the cash flow from operating activities amounted to EUR 8.1 billion, an improvement of 5.2% (2022: EUR 7.7 billion). Investments in property, plant and equipment increased by over 20% to EUR 5,864 million, of which 43% was allocated to the Asia Pacific region, followed by Europe at 39%. According to segment divisions, 46% of investments were allocated to the Chemicals segment, reflecting the building of the new Verbund plant in Zhanjiang and the further expansion of the other Chinese Verbund site in Nanjing. Due to these investment activities, the free cash flow declined to EUR 2,715 million (2022: EUR 3,333 million).

Net debt increased marginally, standing at EUR 16,590 million (2022: EUR 16,268 million). Total financial indebtedness remained largely at the previous year's level (EUR 19,268 million vs. EUR 19,016 million), whereby long-term financial debt increased to EUR 17,085 million (2022: EUR 15,171 million) following the issue of three Eurobonds with a nominal value totaling EUR 1.5 billion, and loans amounting to EUR 1.8 billion, offset by the reclassification of part of the long-term debt to current debt. The short-term financial debt was reduced to EUR 2,182 million (2022: EUR 3,844 million), mainly as a result of a scheduled repayment of bonds. Following the decrease in the amount of total assets, largely due to the contraction of current assets resulting



from active working capital management, the CRA's adjusted equity ratio edged only slightly down to 48.12% (2022: 49.09%). The absolute amount of reported equity decreased to EUR 36,646 million (2022: EUR 40,923 million) and adjusted equity to EUR 35,133 million (2022: EUR 39,333 million), largely due to the dividend payments and negative currency effects combined with low annual result. The stable liquidity position as of 31 December 2023, with EUR 2.6 billion cash and cash equivalents (2022: EUR 2.5 billion), was underpinned by a broad range of financing facilities, including a debt issuance program for long-term financing, a commercial paper program of up to USD 12.5 billion, and a syndicated committed credit line of EUR 6.0 billion. For the construction of the Verbund site in the Chinese province of Guangdong, BASF signed a syndicated banc term loan facility of 40 billion renminbi for 15 years, of which 1.0 billion had been drawn (EUR 127 million) as of 31 December 2023.

Taking into consideration the subdued economic sentiment also in 2024, BASF forecasts EBITDA before special items of EUR 8.0 to 8.6 billion, slightly over the result of 2023 financial year (EUR 7.7 billion), which is to be driven largely by growth in China. The free cash flow is expected to lie between EUR 0.1 and 0.6 billion, due to increased cash outflow in connection with the investments in China (EUR 6.6 to 7.1 billion).

BASF's business development in 2023 reflects the overall subdued global economic sentiment on the one hand, and structural changes on the global energy market, with substantial increase in energy prices in Europe as compared to other regions, on the other. This demonstrates, in our opinion, the Company's overall softened resilience against economic fluctuations. These circumstances have forced BASF to initiate a range of cost-saving measures, reorganize parts of its upstream production, and to partly relocate this to other regions, which are affected by shifts in the global energy supply market to a lesser extent. In the medium-term prospective, the restructuring measures introduced will contribute to the improvement of the Company's cost intensity and to a stabilization of earnings. BASF's strategy focuses on concentrating capacities close to its major demand hubs, which is the main reason for intensified investments in China over recent years. The Company's cautious outlook for 2024 is justified, in our view, based on the overall dampened economic development and uncertainty resulting from persistent geopolitical tension in Europe and the Middle East, which could impact energy prices and global economic growth. Due to the substantial investment burden and envisaged low free cash flow in 2024, combined with declining profitability and the considerable dividend payments to date, as well as pressure resulting from the necessary restructuring measures, we expect a further deterioration of BASF's financial metrics, which could negatively influence our rating assessment. Currently, the Company demonstrates a sound financing structure featuring solid equity and stable financial debt with comfortable maturity profile, which, along with its proven access to financial markets, is a stabilizing factor for the rating.

### Further ratings

In addition to the rating of BASF SE the following Issuer and its issues (see below), have been rated.

- BASF Finance Europe N.V.

Due to the corporate, strategic, liability, financial, economic and performance-related interdependencies of BASF Finance Europe N.V. (a wholly owned subsidiary of BASF SE, which has been consolidated into the group annual accounts) we derive the unsolicited issuer ratings of this subsidiary from the unsolicited issuer rating of BASF SE and set it equal to its rating of **A / negative**.

Based on the long-term issuer rating and taking into account our liquidity analysis, the short-term rating of BASF SE and BASF Finance Europe N.V. was set at **L2** (standard mapping), which corresponds to a high level of liquidity.

The rating objects of the issue ratings are exclusively long-term senior unsecured issues, denominated in euro, issued by BASF SE and BASF Finance Europe N.V., which are included in the list of ECB-eligible marketable assets.

BASF SE is guarantor in respect of the issues that have been issued by BASF Finance Europe N.V. under the Debt Issuance Program (DIP), with the last basis prospectus of 12 September 2023.

We have provided the long-term local currency senior unsecured notes issued by BASF SE and BASF Finance Europe N.V. with an unsolicited rating of **A / negative**. The ratings are based on the (respective) corporate issuer ratings.

Long-term local currency senior unsecured notes issued by BASF SE and the above-mentioned subsidiary, which have similar conditions to the current DIP, denominated in euro and included in the list of ECB-eligible marketable assets, generally receive the same ratings as the current LT LC senior unsecured notes issued under the DIP. Notes issued in any currency other than euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Table 4: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date of rating committee	Rating
BASF SE	10.04.2024	<b>A / negative / L2</b>
BASF Finance Europe N.V.	10.04.2024	<b>A / negative / L2</b>
Long-term Local Currency (LC) Senior Unsecured Issues issued by BASF SE	10.04.2024	<b>A / negative</b>
Long-term Local Currency (LC) Senior Unsecured Issues issued by BASF Finance Europe N.V.	10.04.2024	<b>A / negative</b>
Other	--	<b>n.r.</b>



## Appendix

### Rating history

The rating history is available under the following [link](#).

Table 5: Corporate Issuer Rating of BASF SE

Event	Rating created	Publication date	Result
Initial rating	18.01.2017	24.01.2017	A+ / stable

Table 6: Corporate Issuer Rating of BASF Finance Europe N.V.

Event	Rating created	Publication date	Result
Initial rating	19.10.2018	26.10.2018	A+ / stable

Table 7: LT LC Senior Unsecured Issues of BASF SE

Event	Rating created	Publication date	Result
Initial rating	19.10.2018	26.10.2018	A+

Table 8: LT LC Senior Unsecured Issues of BASF Finance Europe N.V.

Event	Rating created	Publication date	Result
Initial rating	19.10.2018	26.10.2018	A+

Table 11: Short-term issuer ratings of BASF SE and BASF Finance Europe N.V.

Event	Rating created	Publication date	Result
Initial rating	10.04.2024	<a href="http://www.creditreform-rating.de">www.creditreform-rating.de</a>	L2

### Regulatory requirements

The rating<sup>2</sup> was not endorsed by Creditreform Rating AG (Article 4 (3) of the CRA-Regulation).

The present rating is, in the regulatory sense, an unsolicited rating that is public. The analysis was carried out on a voluntary basis by Creditreform Rating AG, which was not commissioned by the Issuer or any other third party to prepare the present rating.

The rating is based on the analysis of published information and on internal evaluation methods for the assessment of companies and issues. The rating object was informed of the intention of creating or updating an unsolicited rating before the rating was determined.

<sup>2</sup> In these regulatory requirements the term "rating" is used in relation to all ratings issued by Creditreform Rating AG in connection to this report. This may concern several companies and their various issues.

The rating object participated in the creation of the rating as follows:

With Rated Entity or Related Third Party Participation	No
With access to Internal Documents	No
With Access to Management	No

A management meeting did not take place within the framework of the rating process.

The documents and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies.

The rating was conducted based on the following rating methodologies and the basic document.

Rating methodology	Version number	Date
<a href="#">Corporate Ratings</a>	2.4	July 2022
<a href="#">Corporate Short-Term Ratings</a>	1.0	June 2023
<a href="#">Non-financial Corporate Issue Ratings</a>	2.0	March 2024
<a href="#">Rating Criteria and Definitions</a>	1.3	January 2018

The documents contain a description of the rating categories and a definition of default.

The rating was carried out by the following analysts:

Name	Function	Mail-Address
Elena Damijan	Lead-analyst	E.Damijan@creditreform-rating.de
Artur Kapica	Analyst	A.Kapica@creditreform-rating.de
Liudmyla Iuzhda	Analyst	L.Iuzhda@creditreform-rating.de

The rating was approved by the following person (person approving credit ratings, PAC):

Name	Function	Mail-Address
Stephan Giebler	PAC	S.Giebler@creditreform-rating.de

On 10 April 2024, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 11 April 2024. There has not been a subsequent change to the rating.

The rating will be monitored until Creditreform Rating AG withdraws the rating. The rating can be adjusted as part of the monitoring, if crucial assessment parameters change.

In 2011, Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on this registration, Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

### ESG-factors

You can find out whether ESG factors were relevant to the rating in the upper section of this rating report "Relevant rating factors".

A general valid description for Creditreform Rating AG, as well as a valid description of corporate ratings for understanding and assessing ESG factors in the context of the credit rating process, can be found [here](#).

### Conflict of interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or in approving credit ratings and rating outlooks.

Creditreform Rating AG ensures that the provision of ancillary services does not present conflicts of interest with its credit rating activities and discloses in the final ratings reports any ancillary services provided for the rated entity or any related third party. The following ancillary services were provided for the rated entity or for third parties associated with the rated entity:

Credit Service ancillary services for the rated entity.

For the complete list of provided rating and credit service ancillaries please refer to the Creditreform Rating AG's [website](#).

### Rules on the presentation of credit ratings and rating outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our "Rating Committee Policy", all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, Creditreform Rating AG has used following substantially material sources:

#### Corporate issuer rating:

1. Annual report
2. Website
3. Internet research

#### Corporate issue rating:

1. Corporate issuer rating incl. information used for the corporate issuer rating
2. Documents on issues / instruments

There are no other attributes and limitations of the credit rating or rating outlook other than those displayed on the Creditreform Rating AG website. Furthermore, Creditreform Rating AG considers as satisfactory the quality and extent of information available on the rated entity. With

respect to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the time of disclosure of the credit rating to the rated entity and the public disclosure, no amendments were made to the credit rating.

The Basic Data Information Card indicates the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description.

In cases where the credit rating is based on more than one methodology or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating report and indicates how the different methodologies or other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings and best-case scenario credit ratings are explained.

The date at which the credit rating was initially released for distribution and the date when it was last updated, including any rating outlooks, is indicated clearly and prominently in the Basic Data Information Card as a "rating action"; initial release is indicated as "initial rating", other updates are indicated as an "update", "upgrade" or "downgrade", "not rated", "confirmed", "selective default" or "default".

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the Basic Data Information Card.

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009, a registered or certified credit rating agency shall make available, in a central repository established by ESMA, information on its historical performance data including the rating transition frequency and information about credit ratings issued in the past and on their changes. Requested data are available at the [ESMA website](#).

An explanatory statement of the meaning of Creditreform Rating AG's default rates are available in the credit rating methodologies disclosed on the website.

### Disclaimer

Any rating performed by Creditreform Rating AG is subject to the Creditreform Rating AG Code of Conduct, which has been published on the web pages of Creditreform Rating AG. In this Code of Conduct, Creditreform Rating AG commits itself – systematically and with due diligence – to establish its independent and objective opinion as to the sustainability, risks and opportunities concerning the enterprise or the issue under review.

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