

16 December 2022 – Neuss, Germany

Rating Action / Update:

Creditreform Rating has affirmed the unsolicited corporate issuer rating of Telefónica S.A. at **BBB-** / **stable**

Creditreform Rating (CRA) has affirmed the unsolicited, public corporate issuer rating of Telefónica S.A. (hereinafter also referred to as Telefónica, the Group, or the Company), along with Telefónica Emisiones S.A.U., Telefónica Europe B.V., and the unsolicited corporate issue ratings of the long-term local currency senior unsecured notes issued by Telefónica Emisiones S.A.U., and Telefónica Europe B.V., at **BBB-**. The outlook is **stable**.

Analysts

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Current relevant factors for the rating

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

- Strong market position in Europe and Latin America (market leader or one of the top providers) and a high degree of geographical diversification
- Customer base expanded in all segments, due to higher broadband and mobile access; however, this has been offset by declining revenue per access
- Significant reduction in debt levels contributed to improvement of credit metrics in 2021
- Cost synergies from recent M&A transactions and continued efforts to increase efficiency will likely support operating results
- High investment requirements to expand infrastructure for high-speed connectivity and for 5G fiber network
- Sale of non-core Hispanic businesses in Latin America will reduce the Company's exposure to more volatile markets
- Good access to capital markets; solid liquidity profile

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 Telefónica S.A., we have not identified any ESG factors with significant influence.

The telecommunications sector has higher exposure to social risks, including data privacy and security. On the other hand, the industry also entails many opportunities to exert a positive influence on the society, being the enabler of digital transformation (smart cities, smart homes) and playing a key role in digital inclusion. By 2024, Telefónica aims to achieve 90-97% mobile broadband coverage in rural areas in Brazil, Germany and Spain.

The environmental risk of the telecommunication sector should not be underestimated, especially due to the growing demand for connectivity and digital services, resulting in an exponential rise in data traffic and, consequently, higher energy consumption and CO2 emissions. On the other hand, this will be mitigated in the future by efficiency gains from high-speed connectivity and more automated processes.

Since 2015, Telefónica reduced its electricity and fuel consumption by 7.2% despite an increase of more than 6.7x in the data traffic managed in its network. In 2021, the Company reduced its

carbon emissions (Scope 1 + 2) by 70.4% compared to 2015, and has set itself the goal of becoming carbon-neutral by 2040. To achieve its goals, carbon reduction targets are part of the variable remuneration of its employees, including the Board of Directors. Nearly 20% of the Company's total debt is composed of ESG financing instruments. In 2020, Telefónica was also the first telecom company to issue Green and Sustainability Hybrid notes for EUR 1.8 billion, with the proceeds used to finance the replacement of the old copper network in Spain with fiber optic, which is 85% more energy-efficient. By offering high quality connection and digital solutions (IoT, big data), Telefónica helped customers save 8.7 million tons in CO₂ emissions (equivalent to the carbon absorbed by 143 million trees).

Governance issues more likely arise with companies operating in emerging markets, due to less regulation and higher political instability. Telefónica has repeatedly made use of anticompetitive practices in order to protect its presence in key markets, and has recently had a lawsuit filed against it by the Brazilian Competition Authority (Cade) in BRL 121 million (EUR 21 million) for cartel arrangements with two other mobile operators. Nevertheless, Telefónica claims to follow the best standards of corporate governance, with the board of directors largely composed of independent members; a high level of transparency of financial information; disclosure of formal policies concerning remuneration and appointment of senior executives and board members; existence of additional committees (Nominating, Compensation, Corporate Governance; Audit and Control; Sustainability; Strategy and Innovation; Regulation and Institutional Affairs).

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

The current rating of **BBB-** attests a highly satisfactory level of creditworthiness to Telefónica, S.A., representing a low to medium default risk.

The rating result of Telefónica, S.A. is based on its large scale and high degree of diversification, its leading position in many of its key markets, as well as its good liquidity profile and proven access to financial markets. Despite rising market volatility, with disruptions across global supply chains, inflationary pressure on raw materials and rising interest rates, Telefónica delivered stable operating performance and positive developments in key financial indicators during the first nine months of 2022. Telefónica's recent business divestitures strengthened its balance sheet position, with proceeds being directed mostly to repay financial debt outstanding; joint venture investments and strategic new acquisitions are set to boost future growth.

Our assessment, however, is partially offset by continued political instability and economic weaknesses in Latin America, resulting in exchange rate volatility. An additional constraint is the high capex requirement to expand infrastructure assets (especially related to 5G network expansion) and to invest in the new joint ventures in the coming years, which could put pressure on Telefónica's financial performance. A dampening effect was also caused by the adjustment of the industry assessment in the course of applying the "Corporate Ratings"-methodology Version 2.4". Nevertheless, as a leading telecommunications company in its core markets, we believe Telefónica is strongly positioned to withstand potential operational and financial challenges and to manage capex prudently, ensuring both competitiveness and generation of positive free cash flows.

Outlook

The outlook for the ratings remains **stable** based on our expectation that Telefónica will withstand the increasing competitiveness of the sector by focusing its investments in key markets in order to reduce complexity of operations and maximize efficiency gains, thus resulting in overall stable performance over the coming 12 months. Telefónica strengthened its financial profile after significant deleveraging in 2021 and is now in better position to overcome potential economic slowdown and increased market volatility during 2023.

Best-case scenario: BBB-

In our best-case scenario for one year, we assume a rating of BBB-. This is based on our expectation that the Company will sustain leverage at lower levels, while strategic new acquisitions will strengthen its business model, preserving its presence in its mains markets. However, a rating upgrade is constrained by the Company's low level of key financial ratios, especially the analytical equity ratio.

Worst-case scenario: BB+

In our worst-case scenario for one year, we assume a rating of BB+. This could be the case if operations deteriorate significantly due to a potential economic slowdown and further currency depreciations in the Company's main operating markets, as well as due to fierce competition in the industry. In this scenario, we also consider a reversal in the path towards deleveraging, and a certain deterioration in the Company's internal cash generation.

Business development and outlook

Telefónica's leading position in its main operating markets, as well as its efforts to streamline operations and increase efficiencies, supported stable earnings results during 2021 and in the first nine months of 2022. Accordingly, revenues and reported OIBDA, in organic terms, grew by 4.1% and 2.9% in the 9M 2022, respectively, and profitability faced a soft deterioration against the backdrop of intensifying competition in the sector and sequential declines in revenue per access over the last years. Nevertheless, Telefónica achieved significant expansion of its customer base, with accesses increasing by 21.4 million since beginning 2021, from 362.2 million to 383.5 million at September 2022, driven by faster growth in high-speed connectivity and mobile services.

Taking into consideration the Company's recent asset divestitures, consolidated net revenues amounted to EUR 39,277 million in 2021, falling by 8.8% compared to one year earlier, largely explained by the deconsolidation of the O2 business in the UK from June 1, 2021 onwards. Reported OIBDA saw extraordinary growth by 62.9% in 2021, significantly boosted by capital gains on asset sales in the amount of EUR 11 billion, and was partially offset by the deconsolidation of O2 UK business and other non-recurring restructuring costs.

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.

Table 1: Financials of Telefónica S.A. | Source: Telefónica S.A. Annual report 2021, standardized by CRA

Telefónica S.A. Selected key figures of the financial statement analysis Basis: Annual accounts and report of 31.3. (IAS, Group)	CRA standardized figures ¹	
	2020	2021
Sales (million EUR)	43,076	39,277
EBITDA (million EUR)	13,680	22,033
EBIT (million EUR)	4,321	13,636
EAT (million EUR)	1,957	10,717
EAT after transfer (million EUR)	1,582	8,137
Total assets (million EUR)	87,579	93,586
Equity ratio (%)	0.72	13.77
Capital lock-up period (days)	50.96	67.08
Short-term capital lock-up (%)	6.87	7.71
Net total debt / EBITDA adj. (factor)	5.38	6.18
Ratio of interest expenses to total debt (%)	2.78	2.51
Return on Investment (%)	4.22	12.96

In Spain, higher margin services, namely broadband and mobile contracts, have grown at a slower pace compared to other regions, resulting in a slight deterioration in profitability over time: OIBTDA margin declined to 36.7% in the nine months up to September 2022, compared to 38.4% in the same period of the previous year. Nevertheless, this segment continues to be the Group's largest cash flow generator, with respective OIBTDA representing 30% of the total. In both, fixed broadband (FBB) and mobile services categories, Telefónica's market position has been in decline over the past few years (FBB: from 40.4% in 2018 to 35.3% in 2021; Mobile: from 29.7% in 2018 to 27.6% in 2021).

In Germany, operating activities have been performing more favorably with organic revenues and OIBDA generation increasing by 5.7% and 4.7% year-over-year, respectively, in the nine months up to September 2022, largely due to the appeal of the O2 brand, which boosted sales and growth in the customer base (from 48.3 million access in 2019 to 51.5 million at September 2022). This growth, however, occurred at a slower pace than the market in general, resulting in a small drop in market share over the past few years in the mobile segment (from 36.7% in 2018 to 34.9% in 2021).

Brazil is a key market for Telefónica, with operating activities in this region being the most profitable, representing 24% of the Company's reported OIBDA generation. Operating performance in Brazil is growing at a faster pace during 2022 compared to other segments, largely based on the appreciation of Brazilian real against the euro, which increased OIBDA by EUR 470 million in the 9M 2022, as well as by the Oi's mobile assets in April 2022 (fourth-biggest player in the Brazilian mobile market). Telefónica paid EUR 1.1 billion to acquire part of its asset base, increasing its market share to 38% from 33% at the end of 2021 and supporting double digit growth in customer accesses (+14.6% in 9M 2022). The remaining assets of Oi Group were acquired by the

¹ 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.

second- and third-largest mobile operators, which together have captured 98% of the Brazilian market, which will provide them with greater pricing power against the backdrop of high inflation rates in the country.

The conclusion of the Virgin Media O2 joint venture in June 2021 created the second-largest telecommunications company in the UK, and has since been deconsolidated from Telefónica's financials, operating as an independent company with its own organizational structure, financial reporting and management team. The consumer base has been expanding in this segment, but is offset by lower subscription prices, stabilizing net revenue generation. The new company is still in the process of integrating operations and capturing synergies, with a sequential growth in operating margins (34.7% in 2021 to 36.8% in 9M 2022)

Hispanam businesses have been struggling amidst political turbulences and prolonged economic deterioration, and despite a mild growth in the segment's customer base, profitability declined significantly in 9M 2022, to 22.7% from 27.0% in previous year. This segment, which in the past was expected to achieve a major share of the Group's results, has been strongly affected by currency depreciation, and today represents only 14% of total OIBDA. The vast geographic territory adds to high operational complexity, requiring high investments in the 5G network; therefore, Telefónica decided to reduce its exposure in the Latin America by selling assets in Guatemala, El Salvador, Panama, Costa Rica, Nicaragua, Chile and Colombia.

Since the beginning of 2021, Telefónica has undergone a deep restructuring of its asset base, selling off non-core business activities, forming new partnerships and acquiring strategic companies with the aim of strengthening its balance sheet, consolidating market position in key markets of operations and accelerating the expansion of its fiber infrastructure and 5G network. In 2021, Telefónica's divestiture program reached EUR 13.4 billion, which includes proceeds from the JV with Liberty Global (EUR 6.2 billion), the sale of telecommunications towers in Europe (Spain and Germany) and in Latin America (Brazil, Peru, Chile and Argentina) for EUR 7.7 billion, disposal of Costa Rica (EUR 425 million), and the sale of a 60% stake in InfraCo Chile and Fibrasil for EUR 800 million. Throughout 2021, Telefónica used these funds to reduce gross financial debt by EUR 8.1 billion, representing 16% of total outstanding debt at the end of previous year, and improved analytical equity ratio to 13.8% from 0.7% a year earlier.

Table 2: Telefónica's business development | Source: Interim results 9M 2022, reported information

Telefónica S.A.				
In million EUR	9M 2021	9M 2022	Δ	Δ %
Sales	29,603	29,793	+190	+0,6%
Operating Income	14,326	2,923	-11,403	-80%
OIBDA	20,620	9,593	-11,027	-53%
EBT	13,330	2,011	-11,319	-85%
EAT	11,776	1,695	-10,081	-86%

In the nine months up to September 2022, the downward trend on Telefónica's net financial leverage reversed moderately, with net debt increasing by EUR 2.9 billion, mainly due to the FX appreciation on debt denominated in Brazilian real, as well as due to business acquisitions (Oi's mobile assets, BE-terna and Incremental for a total amount of EUR 1.8 billion), and extraordinary outlays related to labor payment commitments. Nevertheless, other non-recurring cash inflows

in the amount of EUR 2.2 billion are expected for the fourth quarter, which will contribute to reducing net financial debt again at the end of the year.

Telefónica continues to benefit from a solid liquidity profile, with EUR 10.3 billion in liquid funds plus EUR 11.8 billion in undrawn committed credit facilities at the end of September 2022, which is sufficient to cover all financial debt maturing within the next three years. Despite a steady decrease in cash flows from operations over the past few years, Telefónica has also gradually reduced its capital expenditures, thus preserving its track record of positive free cash flow generation, which provides additional buffer to withstand periods of economic slowdowns.

As the telecommunications sector becomes more and more saturated, the ability to differentiate and improve customers' digital experience will become a key competitive advantage. In our view, Telefónica's future performance will depend on how rapidly the Company is able to adjust its business model to the surge of disruptive technologies and fast-changing consumer trends, and will require continued high amounts of investment. Thus, organic operating results growing above market-average, resulting in a reversal of the company's market share decline, along with the maintenance of a good level of creditworthiness, could exert a positive influence on the ratings.

Issue rating

Further issuer ratings

In addition to the rating of Telefónica, S.A., the following Issuers and their issues (see below), have been included in this rating report.

Telefónica Emisiones S.A.U.

Telefónica Europe B.V.

Telefónica, S.A. is guarantor of the companies listed above and of the notes that have been issued under the Euro Medium Term Note (EMTN) program of Telefónica Emisiones S.A.U., with the last base prospectus of 06.04.2022 and with the latest supplement of 04.11.2022, and the Issue of Telefónica Europe B.V. – with the last prospectus of 19.03.2019.

Telefónica Emisiones S.A.U. and Telefónica Europe B.V. are direct wholly-owned subsidiaries of Telefónica, S.A. and are consolidated into the Group's annual accounts. As directly wholly-owned subsidiaries and financing vehicles of Telefónica, S.A. the activities of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. are directly related to the financing needs of the Company, which in turn depend on the development of the operating business and the investments in the Group. Additionally, the business development of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. relies on the ability of Telefónica, S.A. to service the payment obligations arising from inter-company loans granted by the subsidiary to the parent company. Overall, the future development of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. will be determined by the business development, strategy, and capital and investment needs of the parent company, taking into account its specific and general business risks. In this respect, we consider a consolidated view of the business development and outlook for the rating assessment of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. as appropriate. Based on these economic, financial and liability relationships between Telefónica, S.A., Telefónica Emisiones S.A.U., and Telefónica Europe B.V., we have set the rating of Telefónica Emisiones S.A.U. and Telefónica Europe B.V.

equal to the rating of Telefónica, S.A.. Hence, the rating for Telefónica Emisiones S.A.U and Telefónica Europe B.V. is **BBB- / stable**.

Issue rating details

The rating objects of this issue rating are exclusively the long-term senior unsecured issues, denominated in euro, issued by Telefónica Emisiones S.A.U. and Telefónica Europe B.V. and unconditionally and irrevocably guaranteed by Telefónica S.A., which are included in the list of ECB-eligible marketable assets. The ECB list of eligible marketable assets can be found on the website of the ECB.

As mentioned above, the notes of Telefónica Emisiones S.A.U. have been issued within the framework of the Euro Medium Term Note (EMTN) program, of which the latest base prospectus dates from 6 April 2022. The note of Telefónica Europe B.V. has been issued with the prospectus dates from 19 March 2019.

The notes under consideration are senior unsecured, and rank at least pari passu among themselves and with all other present and future unsecured obligations of the issuers. Additionally, the notes benefit from a negative pledge provision and a cross default mechanism.

Result corporate issue rating

We derive the unsolicited corporate issue ratings of the EUR-denominated debt securities of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. from the unsolicited corporate issuer ratings of the issuers, using our rating methodology for non-financial corporate issues. The bond conditions / issue prospectuses did not give rise to any extraordinary reason for applying notching to the issuer rating. In the present case, we have set the unsolicited corporate issue ratings as equivalent with the unsolicited corporate issuer rating of Telefónica Emisiones S.A.U. and Telefónica Europe B.V. (**BBB-**). The outlook is also **stable**.

Other types of debt instruments or issues denominated in other currencies by the issuers have not been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Overview

Table 3: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date	Rating
Telefónica S.A. (Guarantor)	16.12.2022	BBB- / stable
Telefónica Emisiones S.A.U. (Issuer)	16,12.2022	BBB- / stable
Telefónica Europa B.V. (Issuer)	16,12.2022	BBB- / stable
Long-term Local Currency (LC) Senior Unsecured Issues of Telefónica Emisiones S.A.U and Telefónica Europe B.V.	16,12.2022	BBB- / stable
Other	--	n.r.

Table 4: Overview of 2022 Euro Medium Note Program | Source: Base Prospectus dated 06.04.2022

Overview of 2022 EMTN Program			
Volume	EUR 40,000,000,000	Maturity	Depending on respective bond
Issuer / Guarantor	Telefónica Emisiones S.A.U. (Issuer) Telefónica, S.A. (Guarantor)	Coupon	Depending on respective bond
Arranger	BNP Paribas	Currency	Depending on respective bond
Credit enhancement	none	ISIN	Depending on respective bond

Table 5: Overview of EUR 500 million issue due 2033 | Source: Prospectus dated 19.03.2019

Overview of EUR 500 million issue due 2033			
Volume	EUR 500,000,000	Maturity	2033
Issuer / Guarantor	Telefónica Europe B.V. (Issuer) Telefónica, S.A. (Guarantor)	Coupon	5,875%
Arranger	--	Currency	EUR
Credit enhancement	none	ISIN	XS0162869076

All future LT LC senior unsecured Notes that will be issued by Telefónica Emisiones S.A.U. and Telefónica Europe B.V. and that have similar conditions to the current EMTN program, denominated in Euro and included in the list of ECB-eligible marketable assets will, until further notice, receive the same ratings as the current LT LC senior unsecured Notes issued under the EMTN program. Notes issued under the program 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. For the time being, other emission classes or programs (such as the Commercial Paper Program) and issues that do not denominate in euro will not be assessed.

Appendix

Rating history

The rating history is available under:

<https://www.creditreform-rating.de/en/ratings/published-ratings.html>

Table 6: Corporate issuer rating of Telefónica S.A. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	18.04.2018	20.04.2018	28.11.2019	BBB- / stable

Table 7: Corporate issuer rating of Telefónica Emisiones S.A.U. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	18.04.2018	20.04.2018	28.11.2019	BBB- / stable

Table 8: Corporate issuer rating of Telefónica Europe B.V. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	18.04.2018	20.04.2018	28.11.2019	BBB- / stable

Table 9: LT LC senior unsecured issues by Telefónica Europe B.V. | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	18.04.2018	20.04.2018	28.11.2019	BBB- / stable

Table 10: LT LC senior unsecured issues by Telefónica Emisiones S.A.U | Source: CRA

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	18.04.2018	20.04.2018	28.11.2019	BBB- / stable

Regulatory requirements

The rating² 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.

² 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 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
Corporate Ratings	2.4	July 2022
Non-financial Corporate Issue Ratings	1.0	October 2016
Rating Criteria and Definitions	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
Artur Kapica	Lead-analyst	A.Kapica@creditreform-rating.de
Sabrina Mascher de Lima	Analyst	S.Mascher@creditreform-rating.de

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

Name	Function	Mail-Address
Philipp Beckmann	PAC	P.Beckmann@creditreform-rating.de

On 16 December 2022, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 19 December 2022. 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.

In the event of providing ancillary services to the rated entity, Creditreform Rating AG will disclose all ancillary services in the credit rating report at this point:

No ancillary services in the regulatory sense were carried out for this rating object.

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.

Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. This rating is therefore no statement of fact, but an opinion. For this reason, Creditreform Rating AG cannot be held liable for the consequences of decisions made on the basis of any of their ratings. Neither should these ratings be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings are not meant to be used as substitutes for one's own research, inquiries and assessments.

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