

3 March 2023 – Neuss, Germany

## Rating Action / Update:

### Creditreform Rating has confirmed the unsolicited corporate issuer rating of TotalEnergies SE at **A+ / stable**

Creditreform Rating (CRA) has confirmed the unsolicited, public corporate issuer ratings of TotalEnergies SE (hereinafter also referred to as 'TotalEnergies' or 'the Company'), TotalEnergies Capital S.A. and TotalEnergies Capital International S.A., as well as the unsolicited corporate issue ratings of long-term local currency senior unsecured notes issued by TotalEnergies Capital S.A. and of TotalEnergies Capital International S.A. at **A+** with a **stable** outlook. We also refer to the previous year's report dating from 19 May 2022, which contains further essential information regarding TotalEnergies SE.

### Current relevant factors for the rating

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

- Strong global market position, significant scale and good geographical diversification
- Strong business performance in 2022
- Increase in oil and gas prices in 2022 compared to the previous year supports profitability and overcompensates adjustment items amounting to USD -15.7 billion, of which USD -14.8 billion is attributable to its Russian business
- Excellent cash flow generation, reduction of net debt
- Substantial dividend payments and cash outflows related to the share buyback program
- Increasing regulatory restrictions for the oil and gas industry, windfall tax
- Ongoing geopolitical risks and further possible impairment losses on the assets in Russia
- Continuing global economic uncertainty and generally increasing (geo-)political risks

### ESG-criteria:

CRA generally considers ESG factors (environment, social and governance) within its rating decisions. In the case of TotalEnergies, we have identified ESG factors with significant influence on the following categories, which is described in the sections below.

(E) Environment  (S) Social  (G) Governance

- (E): Significant share of fossil energy sources and production materials
- (E): Risks of impairments (stranded asset risk) in the short to medium term as a result of changes in the market and regulatory environment especially in Europe
- (E): Mid- to long-term risks for the business model of the oil and gas industry, as well as to financing e.g. related to EU-Taxonomy

We estimate that TotalEnergies' business model will be adversely affected in the medium to long term due to social and political changes with regard to fossil fuels, based on European and international environmental and climate protection targets. This already manifested in 2020 as impairment charges of a significant magnitude on oil production assets. Global and especially European efforts towards decarbonization lead us to expect possible shifts in the demand for fossil fuels in the medium to long term, which could have a direct material influence on the Company's activities, e.g. in the form of restrictions, costs for CO<sub>2</sub> certificates, environmental protection measures, recultivation expenses, as well as on its investment behavior in the form

#### Analysts

Natallia Berthold  
Lead Analyst  
N.Berthold@creditreform-rating.de

Christian Konieczny  
Co-Analyst  
C.Konieczny@creditreform-rating.de

Neuss, Germany

**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.

of redesigning the product portfolio and investments in technologies aiming to limit CO<sub>2</sub> emissions.

Nevertheless, we assume that oil and gas will continue to play an important role in the energy business and in industrial production in the long term, whereby the share of energy production should decrease. As of the beginning of February 2022, the European Commission classified natural gas to be sustainable under certain conditions, regarding natural gas as an essential part of the energy mix in the long term and as a transitional technology. In line with the Paris Agreement, the Company's strategy aims to achieve the fundamental goal of complete climate neutrality (Scope 1, 2 and 3) by 2050. Within this time frame, the Company intends to generate 50% of its electricity from renewable sources, 25% from biomass (biofuels, biogas) or renewable electricity (hydrogen, e-fuels) and 25% from hydrocarbons (oil and gas), whose remaining Scope 3 emissions from its customers of around 100 Mt /year are to be fully captured, recycled or offset.

On the whole, we see that TotalEnergies has an integrated ESG culture and considers the transformation of its business model to be sustainable in terms of future prospects. Nevertheless, the industry is subject to environmental regulations as well as technologically disruptive processes that could have a significant impact on TotalEnergies' financials. Due to the Company's concrete goals and active measures to improve sustainability, we currently see the negative impact of ESG factors as limited to one notch with regard to the current business model risk.

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 unsolicited corporate issuer rating of **A+** attests TotalEnergies SE a high level of creditworthiness, representing a low default risk. Despite difficult market conditions, high volatility in commodity prices and increased regulatory risks related to windfall taxes, as well as significant negative exceptional items over USD 15 billion, TotalEnergies showed strong operating performance in FY 2022 as compared to 2021. However, risks from exogenous factors remain high in the current year 2023 in view of the tense (geo-)political situation worldwide. In addition, the Company's dependency on global economic cycles, volatile oil and gas prices over which it has no influence, and volatile refinery margins, have a dampening effect on TotalEnergies' rating.

## Outlook

The one-year outlook for the rating is **stable**. Our assessment is based on the assumption of a moderate recovery in global oil and gas demand, driven by pent-up demand in China. On the oil price, we continue to expect a degree of volatility in 2023 and assume that the price will remain at a higher level in a multi-year comparison, albeit possibly below last year's level. Against this background, and taking into account the improved business situation of TotalEnergies, in particular its strong cash flow generation and reduced net financial debt, we think that the Company will be able to maintain its rating within one year and withstand possible economic fluctuations. The outlook may be revised if the risk of a downturn of the global economy,

resulting from the tense geopolitical situation and paired with a global energy and raw material supply crisis, should materialize.

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.

**Best-case scenario: AA-**

In our best-case scenario for one year, we assume a rating of AA-. In this scenario, global economic growth remains relatively stable in 2023 and 2024, benefiting earnings and enabling the Company to generate improvement in its financials, which would need to be above pre-crisis levels for an upgrade. The Company continues to pursue its transformation strategy and operational efficiency measures in its exploration and production activities, and financial discipline without disruptive events impacting its business development. However, exogenous risks stemming e.g. from a further pandemic wave and the ongoing Russia-Ukraine war, are dampening factors that may hinder an upgrade.

**Worst-case scenario: A**

In the worst-case scenario for one year, we assume a rating of A. This scenario reflects the economic and geopolitical risks described above, which could have a significant negative impact on the business development of TotalEnergies and could therefore lead to less favorable results in the analysis of financial indicators.

**Business development and outlook**

Despite a challenging macroeconomic environment particularly impacted by heightened geopolitical tensions following Russia's invasion of Ukraine, high inflation and the impact of the coronavirus pandemic, TotalEnergies continued its positive sales and earnings performance in 2022 compared to the previous year. As of 31 December 2022, the Company recorded a strong increase in revenues from sales of 42.6% to USD 263,310 million (2021: USD 184,634 million). EBITDA grew significantly by 54.1% to USD 58,279 million (2021: USD 37,821 million), as well as EBIT by 93.4% to USD 46,058 million (2021: USD 23,817 million) and EBT by 66.8% to USD 43,286 million (2021: USD 25,953 million). Likewise, consolidated net income also increased considerably from USD 16,366 million to USD 21,044 million, an increase of 28.6% (s. Table 1 below).

Table 1: The development of business of TotalEnergies SE | Source: Unaudited fourth quarter 2021 and full-year 2022 results, reported information

TotalEnergies SE				
In MM USD	2021	2022	Δ	Δ %
Sales	184,634	263,310	78,676	42.6
EBITDA	37,821	58,279	20,458	54.1
EBIT	23,817	46,058	22,241	93.4
EBT	25,953	43,286	17,333	66.8
EAT	16,366	21,044	4,678	28.6

Based on the latest statements of TotalEnergies, this positive business development was mainly driven by the performance of the Company's globally integrated LNG portfolio, which benefited from a generally favorable market environment, with a further increase in the average oil price

in 2022 to USD 101/barrel<sup>1</sup> compared to USD 71/barrel in the previous year, as well as the growing contribution of Integrated Power (covers the electricity/renewables business) activity. Therefore, for the purpose of better reflecting the development of the profitable growth strategy of the Integrated LNG and Integrated Power activities, the iGRP's<sup>2</sup> results will report the contributions of these businesses separately from the first quarter of 2023 onwards.

Table 2: Business segment information of TotalEnergies SE | Source: Unaudited fourth quarter 2021 and full-year 2022 results

Business segments <sup>3</sup>	Revenues from sales		Operating income		Net operating income	
	2021	2022	2021	2022	2021	2022
In MM USD						
Integrated Gas, Renewables & Power	34,964	55,753	3,350	8,580	5,493	9,634
Exploration & Production	42,142	65,132	16,310	32,496	8,044	5,108
Refining & Chemicals	114,129	166,738	3,564	8,308	3,014	6,649
Marketing & Services	60,618	85,142	2,359	2,363	1,729	1,556
Corporate	279	273	-761	-1,194	-564	-625
Intercompany	-67,498	-109,728	-	-	-	-
<b>Total</b>	<b>184,634</b>	<b>263,310</b>	<b>24,822</b>	<b>50,553</b>	<b>17,716</b>	<b>22,322</b>
Net cost of net debt					-1,350	-1,278
Non-controlling interests					-334	-518
<b>Net income – TotalEnergies share</b>					<b>16,032</b>	<b>20,526</b>

In 2022, all four business segments contributed to the Company's sales and operating income growth (s. Table 2). However, the decline in net operating income in the Exploration & Production and Marketing & Services divisions, which was negatively influenced by impairments and extraordinary provisions, as well as the development of the euro-dollar exchange rate, was over-compensated by the successful development in the iGRP and Refining & Chemicals segments. Overall, in 2022 there were adjustments items related to non-recurring and valuation effects of USD 15,671 million (2021: USD 2,028 million) which negatively impacted the Group's net income. These adjustments were mainly linked to impairment and extraordinary provision of USD 14.8 billion related to the Russian business (deconsolidation of the Company's 19.4% stake in PAO Novatek), as well as USD 1.0 billion in connection with the withdrawal from the North Platte project in the USA, the impacts of the European Solidarity Contribution, the Energy Profits Levy in the UK, and the electricity generation infra-marginal income contribution in France of USD 1.7 billion. These were partially offset by capital gains from the partial sale of SunPower shares and the revaluation of the retained and consolidated shares of USD 1.4 billion, and fair value change effects of USD 1.1 billion.

TotalEnergies also saw significant favorable development in terms of cash generation in 2022. According to preliminary reporting, the Group recorded cash flow from operating activities of

<sup>1</sup> Unit of measurement of volume of crude oil equal to 42 US gallons or 159 liters.

<sup>2</sup> Integrated Gas, Renewables & Power

<sup>3</sup> Original values of TotalEnergies SE without analytical adjustment by CRA

USD 47,367 million, corresponding to an increase of 55.8% compared to the previous year. Net cash flow was recorded at USD 29,426 million (+85.9%). Despite a cash flow from financing activities of USD 19,272 million, including USD 10,522 million for dividends and USD 7,711 million for purchase of treasury shares, cash and cash equivalents increased by USD 12,979 million. Cash and cash equivalents amounted to USD 33,026 million (+54.7%) at the end of financial year 2022. Due to TotalEnergies' dynamic sales and earnings performance in the 2022 financial year, the result of the financial ratios based on the unaudited consolidated figures indicates an improvement compared to the previous year, but does not reach the pre-COVID crisis level, nevertheless underpinning an A+ rating and a stable outlook for the Company.

Given the strong operating cash generation, the Company intends to continue distributing 35-40% of its net cash flow to shareholders in 2023. In addition, share buybacks of USD 2 billion are planned for the first quarter of 2023. Total net investments for 2023 are expected to be USD 16-18 billion, including USD 5 billion for low-carbon energy.

The global energy crisis triggered by Russia's invasion of Ukraine has led to new highs commodity prices, and to a tight market in 2022. As a result of global recessionary trends and in response to rising Corona figures in China, the oil price dropped at the end of 2022. It is difficult to estimate how oil prices will develop in 2023, as this depends on several factors. Firstly, it is not currently foreseeable whether a global recession can be avoided and, if not sufficiently, how severe it would be. The Chinese government's COVID policy is also significant. A renewed strict zero-COVID policy with associated lockdowns could slow down the Chinese economy and consequently reduce demand for oil. Among other factors, the production targets of the OPEC+ countries have a major influence on oil prices. Furthermore, the duration of the Russia-Ukraine war and Western sanctions against Russia will continue play a major role. All of these factors may strongly influence future oil price developments and thus also the further business development of TotalEnergies for 2023. We rather expect oil prices to remain volatile and at high levels, albeit possibly below last year's levels. Nevertheless, we see good opportunities for the Company to either mitigate or partially offset the risks associated with highly volatile commodity prices thanks to its integrated business model, which covers the entire oil, gas and power generation value chain. In addition, the company's increasing involvement in power and LNG helps to ensure sustainable growth and profitability in both the medium and long term.

## Issue rating

### Further issuer ratings

In addition to the rating of TotalEnergies SE, the following issuers and their issues have been rated.

- TotalEnergies Capital S.A.
- TotalEnergies Capital International S.A.

### Issuer rating of TotalEnergies Capital S.A.

TotalEnergies Capital S.A. ("the issuer") is a wholly-owned subsidiary (with the exception of six shares held by directors of TotalEnergies Capital S.A.) of TotalEnergies SE, which was incorporated in France on 15 December 1999, and is governed by French law. The issuer's principal business is to act as a finance Company on behalf of the TotalEnergies Group by issuing debt securities and commercial paper. The development of the business of TotalEnergies Capital S.A. is largely determined by the financial requirements of the Group's companies, both in France

and abroad. As a wholly-owned subsidiary of TotalEnergies SE, the issuer is dependent on the performance of the Group and the ability of its members to generate sufficient income to satisfy its payment obligations to other capital market participants. The payment of all amounts due to in relation to notes issued by TotalEnergies Capital S.A. under the EUR 40 billion EMTN Programme are irrevocably and unconditionally guaranteed by TotalEnergies SE. The issuer's financial statements are fully consolidated in the financial statements of the Group. For these reasons, we derive the unsolicited corporate issuer rating of TotalEnergies Capital S.A. from the unsolicited corporate issuer rating of TotalEnergies SE, **A+** with **stable** outlook.

#### **Issuer rating of TotalEnergies Capital International S.A.**

TotalEnergies Capital International S.A. ("the Issuer") is a wholly-owned subsidiary (with the exception of five shares held by directors of TotalEnergies Capital International S.A.) of TotalEnergies SE, which was incorporated in France on 13 December 2004 and is governed by French law. The issuer's principal business is to act as a finance company on behalf of the TotalEnergies Group by issuing debt securities. The development of the business of TotalEnergies Capital International S.A. is largely determined by the financial requirements of the Group's companies both in France and abroad. As a wholly-owned subsidiary of TotalEnergies SE, the Issuer is dependent on the performance of the Group and the ability of its members to generate sufficient income to satisfy its payment obligations to other capital market participants. The payment of all amounts due to in relation to notes issued by TotalEnergies Capital International S.A. under the EUR 40 billion EMTN Programme are irrevocably and unconditionally guaranteed by TotalEnergies SE. The issuer's financial statements are fully consolidated in the financial statements of the Group. For these reasons, we derive the unsolicited corporate issuer rating of TotalEnergies Capital International S.A. from the unsolicited corporate issuer rating of TotalEnergies SE, **A+** with **stable** outlook.

#### **Issue rating details**

The rating objects of this issue rating are exclusively the long-term senior unsecured Notes, denominated in euro, issued by TotalEnergies Capital S.A., and TotalEnergies Capital International S.A. (Issuers), 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.

The Notes were issued under the EMTN Programme with its latest prospectus of 9 June 2020 and the supplements from 13 August 2020, and from 12 November 2020. This EMTN Programme amounts to EUR 40 billion. The Notes and coupons under the EMTN Programme constitute unsubordinated, unsecured obligations of the issuers, and rank at least *pari passu* among themselves and all other present and future unsecured obligations of the issuers.

#### **Corporate issue rating result**

We have provided the debt securities issued by TotalEnergies Capital S.A. and TotalEnergies Capital International S.A. with a rating of **A+ / stable**. The decision is based on the corporate rating of TotalEnergies SE, respectively TotalEnergies Capital S.A. and TotalEnergies Capital International S.A., and takes into account the specific characteristics of the notes, namely the guarantee of TotalEnergies SE, which has unconditionally and irrevocably guaranteed the due payment of all sums expressed to be payable by TotalEnergies Capital S.A. and TotalEnergies Capital International S.A. under the notes, receipts and coupons. Other types of debt instruments or issues denominated in other currencies than EUR 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
TotalEnergies SE (Issuer)	02.03.2023	A+ / stable
TotalEnergies Capital S.A. (Issuer)	02.03.2023	A+ / stable
TotalEnergies Capital International S.A. (Issuer)	02.03.2023	A+ / stable
Long-term Local Currency (LC) Senior Unsecured Issues	02.03.2023	A+ / stable
Other	--	n.r.

Table 4: Overview of 2020 Euro Medium Term Note Program | Source: Base Prospectus dated 09.06.2020

Overview of 2020 EMTN Programme			
Volume	EUR 40,000,000,000	Maturity	Depending on respective bond
Issuer / Guarantor	TotalEnergies SE (Guarantor) TotalEnergies Capital S.A. TotalEnergies Capital International S.A.	Coupon	Depending on respective bond
Arranger	Citigroup Global Markets Limited	Currency	Depending on respective bond
Credit enhancement	none	ISIN	Depending on respective bond

All future LT LC senior unsecured notes issued by TotalEnergies Capital S.A. and TotalEnergies Capital International S.A. with similar conditions to the current EMTN Programme, 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 Programme. Notes issued under the Programme in any currency other than EUR, 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 Programmes and issues not denominated in EUR, will not be assessed.



## Appendix

### Rating history

The rating history is available under:

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

Table 5: Corporate Issuer Rating of TotalEnergies SE

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	07.11.2019	15.11.2019	Withdrawal of the rating	AA- / stable

Table 6: Corporate Issuer Rating of TotalEnergies Capital S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	07.11.2019	15.11.2019	Withdrawal of the rating	AA- / stable

Table 7: Corporate Issuer Rating of TotalEnergies Capital International S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	07.11.2019	15.11.2019	Withdrawal of the rating	AA- / stable

Table 8: LT LC Senior Unsecured Issues issued by TotalEnergies Capital S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	07.11.2019	15.11.2019	Withdrawal of the rating	AA- / stable

Table 9: LT LC Senior Unsecured Issues issued by TotalEnergies Capital International S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial Rating	07.11.2019	15.11.2019	Withdrawal of the rating	AA- / stable

### Regulatory requirements

The rating<sup>4</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>4</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

The rating was conducted based on the following information.

List of documents
<b>Accounting and controlling</b>
<ul style="list-style-type: none"> <li>TotalEnergies Annual Financial Report 2021</li> <li>Unaudited fourth quarter 2021 and full-year 2022 results</li> </ul>
<b>Finance</b>
<ul style="list-style-type: none"> <li>Base Prospectus EMTN-Program dated 09.06.2020</li> </ul>
<b>Additional documents</b>
<ul style="list-style-type: none"> <li>Sustainability Report</li> <li>Press and Website</li> </ul>

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

The documents submitted 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="#">Non-financial Corporate Issue Ratings</a>	1.0	October 2016
<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
Natallia Berthold	Lead-analyst	N.Berthold@creditreform-rating.de
Christian Konieczny	Analyst	C.Konieczny@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 3 March 2023, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 3 March 2023. 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](#).

#### Conflicts of interest

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:

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 "TotalEnergies SE" or for third parties associated with the rated entity:

Credit Service ancillary services for a related third party.

For the complete list of provided rating and credit service ancillaries please refer to the Creditreform Rating AG's website: <https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html#non-core-business-activities> .

#### 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.

We have assumed that the documents and information made available to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

This report is protected by copyright. Any commercial use is prohibited without prior written permission from Creditreform Rating AG. Only the full report may be published in order to prevent distortion of the report's overall assessment. Excerpts may only be used with the express consent of Creditreform Rating AG. Publication of the report without the consent of Creditreform Rating AG is prohibited. Only ratings published on the Creditreform Rating AG web pages remain valid.

Creditreform Rating AG

### Contact information

Creditreform Rating AG

Europadamm 2-6  
D-41460 Neuss

Phone: +49 (0) 2131 / 109-626  
Telefax: +49 (0) 2131 / 109-627

E-Mail: [info@creditreform-rating.de](mailto:info@creditreform-rating.de)  
Web: [www.creditreform-rating.de](http://www.creditreform-rating.de)

CEO: Dr. Michael Munsch  
Chairman of the Board: Michael Bruns

HR Neuss B 10522