

Rating object	Rating information	
<b>TotalEnergies SE</b>  Creditreform ID: FNR000000233 Incorporation: 28 March 1924 Based in: Courbevoie, France Main (Industry): Oil and gas CEO: Patrick Pouyanné	Corporate Issuer Rating: <b>A+ / stable</b>	Type: Update Unsolicited Public rating
	LT LC Senior Unsecured Issues: <b>A+ / stable</b>	Other: <b>n.r.</b>
	Rating date: 19 May 2022 Monitoring until: withdrawal of the rating Rating methodology: CRA "Corporate Ratings" CRA "Non-Financial Corporate Issue Ratings" CRA "Rating Criteria and Definitions" Rating history: <a href="http://www.creditreform-rating.de">www.creditreform-rating.de</a>	
<u>Rating objects:</u> Long-term Corporate Issuer Rating: TotalEnergies SE Long-term Corporate Issuer Rating: TotalEnergies Capital S.A. Long-term Corporate Issuer Rating: TotalEnergies Capital International S.A. Long-term Local Currency (LT LC) Senior Unsecured Issues		

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## Summary

### Company

TotalEnergies SE (hereinafter also referred to as 'TotalEnergies' or 'the Company') is a multinational integrated energy Company headquartered in La Défense, Courbevoie – France, globally active in oil and gas exploration. With a presence in more than 130 countries on five continents, TotalEnergies is one of the 10 largest international oil and gas companies by market capitalization, as well as one of the world's leaders in liquefied natural gas (LNG) and a major player in low-carbon energies. The Company's business covers the entire oil and gas value chain and includes both upstream (exploration and production) and downstream activities (liquefaction, refining, petrochemicals, transportation and trading, as well as distribution of petroleum products to the end customer). This business model enables the Company to create synergies and to stabilize its earnings and financial position by creating additional value, which complements its upstream segment, generally vulnerable to oil prices. In May 2021, the Company changed its name from 'Total' to 'TotalEnergies' to reflect its strategy shift towards cleaner energy (decarbonization). That includes a focus on investments in renewable energy, electricity and natural gas.

In 2021, with more than 101,000 employees worldwide, TotalEnergies achieved consolidated revenues from sales of USD 184,634 million (2020: USD 119,704 million) and a consolidated net income of USD 16,366 million (2020: USD -7,336 million).

### Rating result

The current unsolicited corporate issuer rating of **A+** attests TotalEnergies SE a high level of creditworthiness, representing a low default risk. Against the background of the global market recovery and commodity prices in 2021, the rating result reflects an improved economic situation of TotalEnergies in line with our expectations. Compared to 2020, TotalEnergies showed a strong recovery in financial performance and was able to work towards pre-pandemic levels in key rating ratios for the 2021 financial year. Focus on shifting the diversified energy mix and expanding into the new business areas such as low-carbon electricity generation, renewables, energy efficiency projects and especially LNG contribute positively to the rating assessment. In addition to possible negative economic after-effects from the currently ongoing COVID-19 pandemic, we see potential burdens on the Company's further net assets, financial position and operational results as a consequence of the Russia-Ukraine conflict. In fiscal year 2021, the Company held 21% of its proven reserves and had 18% of its oil and gas production in Russia. Even

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though petroleum products, especially the Company's share of gasoil, are imported from other continents, we believe that the Russia-Ukraine war still harbors significant uncertainties and risks that restrict our current rating assessment. The Company's dependency on global economic cycles, highly volatile oil and gas prices over which it has no influence and volatile refinery margins put additional pressure on the rating of TotalEnergies SE.

### Outlook

In view of the significant improvement in revenue and earnings for the past 2021 financial year compared to the previous year, and taking into account the figures for the first quarter of 2022, which indicate stabilizing economic development in the current financial year, we consider the outlook to be **stable**. We expect the Company to be able to maintain its solid financials and implement its strategy and shareholder return policy based on further efficiency optimizations, by maintaining a solid break-even price and through controlled capital expenditure. Nevertheless, the risks from exogenous factors remain exceptionally high this year, especially in view of the tense geopolitical situation worldwide. The recent significant rise in oil and gas prices should have a positive impact on business and stabilize the rating outlook.

### Reference:

The relevant rating factors (key drivers) mentioned in this section are predominantly based on internal analyses, evaluations of the rating process and the derived valuations of the analysts participating in the rating, as well as - where applicable - other rating committee members. The fundamental external sources used are specified in the sections "Regulatory requirements" and "Rules on the presentation of credit ratings and rating outlooks".

### Excerpts from the financial key figures analysis 2021:

+ Increased sales  
+ Increased EBITDA, EBIT and EAT  
+ Improved EBIT Interest Coverage  
+ Enhanced return on investment  
+ Improved net total debt / EBITDA adj.

- Equity ratio slightly below 40%  
- Capital lock-up period still increased  
- Decrease in liquid funds to total assets

## Relevant rating factors

Table 1: Financials | Source: TotalEnergies SE Annual financial report 2021, standardized by CRA

TotalEnergies SE Selected key figures of the financial statement analysis Basis: Annual financial report of 31.12. (IFRS, Group)	CRA standardized figures <sup>1</sup>	
	2020	2021
Sales (million USD)	119,704	184,634
EBITDA (million USD)	17,023	37,821
EBIT (million USD)	-5,584	23,817
EAT (million USD)	-7,336	16,366
EAT after transfer (million USD)	-7,242	16,032
Total assets (million USD)	250,309	279,229
Equity ratio (%)	40.19	39.99
Capital lock-up period (days)	71.88	72.82
Short-term capital lock-up (%)	30.06	27.41
Net total debt / EBITDA adj. (Factor)	7.35	3.91
Ratio of interest expenses to total debt (%)	1.89	1.46
Return on investment (%)	-2.11	6.40

<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 considers all balance sheet liabilities. Therefore, the key financial figures shown often deviate from the original values of the company.

**General rating factors** summarize the key issues that – according to the analysts as per the date of the rating – have a significant or long-term impact on the rating, whether positive (+) or negative (-).

#### General rating factors

- + Strong global market position, significant scale
- + Good geographical diversification
- + Sustainable integrated business multi-energy model with diversified up- and downstream activities
- + Diversified hydrocarbon resource base
- + Sufficient amount of proved reserves
- + Clear strategy focused on maintaining solid financials and increasing focus on renewable energies
- Exposure to economic cycles
- High volatility of energy and commodity prices
- Valuation risks
- Highly competitive market
- Regulatory risks, challenges of decarbonization
- Country risks, especially in upstream activities
- High investment requirements
- Foreign exchange risks

#### Current rating factors

**Current rating factors** are the key factors which, in addition to the underlying rating factors, have an impact on the current rating.

- + Significant increase in oil and gas prices and gradual recovery in demand in 2021
- + Increase in sales and earnings, as well as strong recovery in 2021
- + Significant improvement in the results of the 2021 financial ratio analysis
- + Strong performance in Q1 2022
- + Still strong liquidity despite some reduction
- + Growing LNG and electricity business
- Impairment of USD 4.1 billion related to Arctic LNG 2 (Russia) in Q1 2022
- Substantial dividend payments and cash outflows related to the share buyback program
- Continuing economic uncertainty
- Remaining risks from the COVID-19 pandemic
- Strongly increased geopolitical risks and impairment losses on activities in Russia
- Share buybacks in 2021 und 2022

#### Prospective rating factors

**Prospective rating factors** are factors and possible events which – according to the analysts as of the date of the rating – would most likely have a stabilizing or positive effect (+) or a weakening or negative effect (-) on future ratings if they occurred. This is not an exhaustive list of possible future events with potential relevance for future ratings. Circumstances can arise that are not included in the list of prospective factors, whose effects are impossible to assess at the time of the rating, either because these effects are uncertain or because the underlying events are deemed unlikely to occur.

- + Ongoing oil and gas price increase
- + Successful implementation of the transformation strategy
- + New projects and joint ventures in renewables and green technologies
- + New business opportunities due to energy transition
- + Stabilization and improvement of the global economy and geopolitical situation
- Persistent crisis situation in related to unforeseeable economic consequences from the Russia-Ukraine war
- Ongoing uncertainty regarding the economic dislocations from the COVID 19 pandemic
- Increasing regulatory restrictions for the oil and gas industry
- Significant price declines
- Accelerated transition in energy landscape, changing market conditions
- Increase in capex

**ESG-factors**

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 are 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 in the short to medium term as a result of changes in the market and regulatory environment (stranded asset risk)
- (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 see 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 efforts towards decarbonization lead us to expect significant shifts in the demand for fossil fuels in the medium term which have a direct material influence on the Company's activities 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 of redesigning the product portfolio and investments in technologies aiming to limit CO<sub>2</sub> emissions. Current trends in automobile registrations, as a result of supply chain problems and also increased fuel prices, imply likely shifts and a general decline in demand for refined products. Moreover, these tendencies have an ever greater influence on the behavior of potential investors, and could make access to capital market resources more difficult in the future.

Nevertheless, we assume that oil and gas will continue to play an important role in the energy business and industrial production in the long term, albeit with gradually decreasing relevance. As of the beginning of February 2022, the European Commission classified natural gas to be sustainable under certain conditions, regarding gas as an essential part of the energy mix in the long term and as a transitional technology. However, the Company continues to strive to keep the methane intensity across its operated gas facilities below 0.1%. Moreover, TotalEnergies has committed to reducing methane emissions from its operated assets from 2020 levels by 50% by 2025 and 80% by 2030. 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. In this time frame, the Company, in line with society at large, intends to generate 50% of its electricity from renewable sources, 25% from new decarbonized molecules 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<sup>2</sup>/year are to be fully captured, recycled or offset.

On the whole, we see that TotalEnergies has a strongly integrated ESG culture and consider the transformation of its business model to be sustainable in terms of future prospects. Nevertheless, the industry is subject to strict 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.

<sup>2</sup> Metric tons of carbon dioxide equivalent

**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.

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](#).

#### Best-case scenario: AA-

In our best-case scenario for one year, we assume a rating of AA-. In this scenario, the economic recovery continues in 2022, benefiting earnings and enabling the Company to generate further improvement in financials, which should be above the pre-crisis level for an upgrade. The Company continues to pursue its transformation strategy and operational efficiency measures in 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, the ongoing Russia-Ukraine war, or the currently negative economic prospects, are dampening expectations and 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 worse results in the analysis of financial indicators. Furthermore, the Company's operating business in 2022 could be adversely affected by further extraordinary expenses related to activities carried out in Russia.

## Business development and outlook

After the business performance of the TotalEnergies Group in 2020 was marked by negative one-off effects totaling USD 11,301 million due to the decline in global demand for raw materials and the sharp drop in oil and gas prices related to the COVID 19 pandemic, business development in 2021 benefited from a general economic recovery, including oil and gas prices, despite the ongoing impact of the pandemic. As a result, the TotalEnergies Group achieved a considerable increase in revenues from sales by 54.2% to USD 184,634 million (2020: USD 119,704 million), as well as profuse increase of EBIT to USD 23,817 million (2020: USD -5,584 million), and more than triple the amount of EAT after transfer to USD 16,032 million (2020: USD -7,242 million). This development is founded upon the Company's globally integrated LNG portfolio, which benefits from outstanding performance in the gas and LNG trading business, as well as from a generally favorable market environment, with the rise of an average oil price in 2021 to USD 71/barrel<sup>3</sup> compared to USD 42/barrel in the previous year. Furthermore, the positive development reflects the profitable growth strategy in the renewable energy and electricity sector. All four business segments contributed to the Company's sales and earnings growth (see Table 2). However, adjustments connected with one-off and valuation effects totaling USD 2,028 million were made, which burdened the Group's net income in 2021. The adjustments were mainly related to a loss on asset sales of USD 1,726 million, restructuring charges of EUR 308 million and impairments of EUR 910 million. This was offset by a positive inventory effect of USD 1,495 million.

<sup>3</sup> Unit of measurement of volume of crude oil equal to 42 US gallons or 159 liters.

#### 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 2: Business segment information of TotalEnergies SE | Source: TotalEnergies SE Annual financial report 2021

Business segments <sup>4</sup>	Revenues from sales		Operating income		Net operating income		
	In Mio. USD	2020	2021	2020	2021	2020	2021
Integrated Gas, Renewables & Power		17,632	34,964	-527	3,350	338	5,493
Exploration & Production		23,456	42,142	-5,514	16,310	-5,025	8,044
Refining & Chemicals		71,588	114,129	-814	3,564	-1,148	3,014
Marketing & Services		45,232	60,618	1,441	2,359	963	1,729
Corporate		240	279	-901	-761	-696	-564
Intercompany		-38,444	-67,498	-	-	-	-
<b>Total</b>		<b>119,704</b>	<b>184,634</b>	<b>-6,315</b>	<b>24,822</b>	<b>-5,568</b>	<b>17,716</b>
Net cost of net debt						-1,768	-1,350
Non-controlling interests						94	-334
<b>Net income – TotalEnergies share</b>						<b>-7,242</b>	<b>16,032</b>

The **Integrated Gas, Renewables & Power** segment comprises the Group's activities in integrated gas (including LNG, liquefied natural gas) and low carbon electricity business, as well as decarbonized gas (biogas and hydrogen) activities. The business model covers the full value chain along the integrated gas (including upstream and midstream LNG activities) and power business. The segment's increases in sales and adjusted net operating income compared to the previous year were mainly driven by higher LNG prices and excellent performance of its LNG and gas/power trading activities. TotalEnergies completed a major acquisition in 2021, acquiring a 20% stake in Adani Green Energy Limited (AGEL), of India's Adani Group, the world's first solar project developer. Furthermore, a transaction was completed with GIP relating to the downstream facilities of TotalEnergies GLNG Australia's (TGA) Gladstone LNG project for consideration in excess of USD 750 million as part of the tolling agreement.

The **Exploration & Production** segment includes the exploration and production of oil and natural gas (excluding LNG) in more than 50 countries and, since September 2021, the activities of Carbon Capture and Storage and Nature-Based Solutions. The segment benefited from highly favorable market conditions in 2021. Gas and associated products (condensates and natural gas liquids) accounted for about 55% of TotalEnergies' total hydrocarbon production in 2021, while crude oil and bitumen represented 45%. In harmony with its strategy of investing in low-technical-cost and low break-even point, as well as low-emission projects, TotalEnergies has expanded its presence in Brazil by entering the large Atapu and Sépia fields, launching the Lake Albert oil resource project in Uganda. In addition, the Company has divested its stake in mature assets. As of 31 December 2021, the Group had proved reserves of 12,062 Mboe<sup>5</sup> distributed between Europe (31.4%), the Middle East and North Africa (28.2%), Africa (16.9%), the Americas (13.3%), and Asia-Pacific (10.2%).

The **Refining & Chemicals** segment comprises refining, basic petrochemicals (olefins and aromatics), polymer derivatives (polyethylene, polypropylene, polystyrene and hydrocarbon resins), including biopolymers and recycled polymers obtained from chemical or mechanical

<sup>4</sup> Original values of TotalEnergies SE without analytical adjustment by CRA

<sup>5</sup> Million barrels of oil equivalent

recycling, and biofuels from the transformation of biomass and the processing of elastomers by Hutchinson, as well as - since the beginning of 2022 - specialty fluids. TotalEnergies expects that due to technological advances and changing uses, petroleum products demand will first stagnate and then decline through 2030, before falling significantly by 2050. As a result, the Company reduced the share of petroleum products in its sales mix from 65% in 2015 to 44% in 2021. In 2030 this share should be 30%. In this way, it is intended to ensure that the Company's sales of petroleum products do not exceed its oil production before it declines after reaching its peak. As at 31 December 2021, TotalEnergies' refining capacity amounted to 1,793 kb/d<sup>6</sup>, compared to 1,967 kb/d at the end of 2020. As a consequence of the extended shutdown of the Donges refinery for economic reasons, the Grandpuits refinery in view of its conversion to a zero-oil platform, the sale of the Lindsey refinery in the UK, as well as the planned shutdown of the Leuna refinery in Germany in Q2 2021, refinery throughput decreased by 9% to 1,180 kb/d in 2021 (2020: 1,292 kb/d). Nevertheless, the segment showed a strong development in 2021. The segment's adjusted net operating profit grew by 84% to USD 1,909 million, reflecting a very strong performance in petrochemicals and improved refining margins in Europe and the Americas despite rising energy costs.

The **Marketing & Services** segment covers the global supply and marketing activities of oil products and services, low-carbon fuels and new energies for mobility. With a network of nearly 16,000 service stations in more than 70 countries under the brand of TotalEnergies, Marketing & Services is, according to its own reports, the second largest retail distribution network among the majors outside of North America. The segment supports its customers in the transition to more sustainable energy and mobility, thereby contributing to the transformation of TotalEnergies. As of 31 December 2021, it operates more than 25,000 charge points and plans to increase this number to 150,000 by 2025. In 2021, sales in this segment amounted to 1,503 kb/d, an increase of 2% (2020: 1,477 kb/d). The adjusted net operating income rose significantly by 32% to USD 1,618 million (2020: USD 1,224 million).

The Group's gross investments amounted to USD 16,589 million (2020: USD 15,534 million). Almost half of investment (44%) was related to the development of new hydrocarbon production facilities, the maintenance of existing facilities, infill well projects for assets already in production and exploration activities in the Exploration & Production segment. The second-largest portion of investments (38%) went to the construction of solar, wind and gas-fired power plants, the development of LNG production projects and projects for the production of green hydrogen in the Integrated Gas, Renewables & Power segment. Divestments in 2021 amounted to USD 2,933 million (2020: USD 2,455 million), while net investments were USD 13,307 million (2020: USD 12,989 million). In 2021, reported net cash flow totaled USD 15,833 million, allowing the Company to further reduce its net debt and repurchase USD 1.5 billion of its shares in the Q4 2021. In addition, the Company's reported net debt-to-capital ratio excluding leases was reduced from 21.7% in 2020 to 15.3% at the end of 2021.

While 2022 started with strong oil prices and a resilience of global demand to the spread of omicron variant of COVID, OPEC+ has been slow to increase the supply. The outbreak of war in Ukraine on 24 February 2022 and the resulting supply uncertainty triggered a further price increase, reaching USD 100/b by the end of February. The ongoing negotiations with Iran and rising demand concerns related to the COVID lockdown in China caused significant price volatility in March 2022, taking the Brent price to USD 130 per barrel in intraday trading. The average Brent price rose to USD 102.2/b in Q1 2022, representing an increase of 28% quarter-on-quarter (Q4 2021: USD 79.8/b) and 67% year-on-year (Q1 2021: USD 61.1/b). The outbreak of war in

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<sup>6</sup> Thousand barrels per day.

Ukraine also caused a jump in the price of natural gas. While Russian natural gas exports continued to flow, price volatility remained high due to increasing nervousness regarding the threat of a Russian supply shortfall. The new requirement to pay for Russian natural gas supplies in roubles led to renewed supply uncertainty towards the end of the first quarter 2022. On 11 May 2022, Ukraine closed one of the main entry points for Russian gas to Europe, blaming disruptions to the network by Russian forces. On the evening of the same day, Russia imposed a series of sanctions on 31 energy companies operating in Europe, causing gas prices to skyrocket in Europe the next day, and could further threaten supply. Despite all this, Gazprom has assured it would fulfil all its obligations towards its European customers. However, any shortage could cause prices to rise further.

In light of these geopolitical tensions and uncertainties and their likely intensification, TotalEnergies has agreed not to provide any further capital for the development of projects in Russia, thus gradually initiating the suspension of its activities, including the planned termination of its activities related to Russian oil and petroleum products. Given the current circumstances, we view this decision as positive despite that, as a result, a USD 4.1 billion impairment charge was taken primarily on the Arctic LNG 2 project as of 31 March 2022.

Nevertheless, TotalEnergies reported a great business performance and strong liquidity in the first quarter of 2022 (see Table 3). The main reasons for this were, in particular, increased oil and gas prices and over-performance of the trading activities for crude oil and petroleum products, as well as higher LNG prices and favorable performance of the gas, LNG and electricity trading activities.

Table 3: The development of business of TotalEnergies SE | Source: Consolidated results for 2021 and Q1 2022, reported information

TotalEnergies SE				
In million USD	2020	2021	Q1 2021	Q1 2022
Revenues from sales	119,704	184,634	38,633	63,950
Net income	-7,336	16,366	3,412	5,051
Net adj. income	4,067	18,391	3,062	9,053
Cash flow from operating activities	14,803	30,410	5,598	7,617

TotalEnergies continues its growth strategy in the electricity value chain in 2022 with USD 3.5 billion in net investments for Renewables and Electricity and plans to have more than 16 GW of renewable gross capacity in operation by the end of 2022. Competitiveness in the downstream and petrochemical sector should be strengthened and further investments should be made in new markets such as biofuels and electro-mobility. Overall, net investments in 2022 are expected to be USD 14 - 15 billion. In the context of higher oil and gas prices, and maintaining its robust balance sheet and capital discipline, the Company intends to link dividend growth to structural cash flow growth, allocate some excess cash flow from high hydrocarbon prices for share buybacks, and maintain its gearing below 20 % on a permanent basis.

In view of the increasingly aggravated geopolitical risks, especially against the background of the Russia-Ukraine conflict, its effects on the global economic situation cannot be reliably assessed at present. On one hand the ongoing war could slow down the global growth forecast and further exacerbate inflationary pressures. On the other hand the current pandemic lockdowns in China, a major oil consumer, could exacerbate demand concerns. All of this could cloud the further economic development of TotalEnergies for the year 2022. 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 covering the entire value chain of oil, gas and electricity generation. Furthermore, the Company's increasing involvement in power and LNG helps to ensure sustainable growth and profitability in the medium and long term.

### Structural risk

TotalEnergies SE is one of the largest publicly-traded integrated energy companies worldwide. Its shares are distributed between BlackRock (6.2% of share capital), Group employees (6.8%), with the rest of the shares (87.0%) representing free float shareholding.

As of 31 December 2021, the Group's structure comprised 1,140 consolidated entities, of which 160 were accounted for at-equity. TotalEnergies SE is the Group's parent company, acting as a holding company and determining the Group's strategy.

The Board of Directors approves investment or divestment operations when they exceed 3% of shareholders' equity and it is informed of those greater than 1%. The Board of Directors relies on the work of four committees: the Audit Committee, the Governance and Ethics Committee, the Compensation Committee, and the Strategy & Corporate Social Responsibility (CSR) Committee.

On an operational level, the Group's businesses are organized into four business segments: Integrated Gas, Renewables & Power; Exploration & Production; Refining & Chemicals; and Marketing & Services. The Holding's corporate entities comprise Finance, Legal, Communications, Security, and People & Social Engagement and Strategy & Sustainability divisions. From January 2022, the OneTech branch bundles all technical and R&D know-how and is at the core of TotalEnergies' transformation into a multi-energy company.

TotalEnergies operates in more than 130 countries and employs 101,309 staff. Europe has historically represented the core market of the Company, with 33% of its hydrocarbon production and approx. 31% of its proved reserves, as well as in terms of refinery throughput (64%) and marketing and services activities (55%). With 24% and 19% of hydrocarbon production and their proved reserves of 28% and 17%, the Middle East and North Africa, as well as Africa, continue to be important and well-developed regions as well. As part of its engagement to building a diversified energy mix with lower carbon emissions, TotalEnergies has been producing renewable diesel and petrochemical bio-feedstocks since 2019, primarily at the La Mède biorefinery. The prospective growth of the biofuel market is estimated at more than 10% per year. Already in 2021, TotalEnergies Group's production of biofuels was 391 kt<sup>7</sup>, an increase of 34% compared to the previous year. The Company aims to produce 2 Mt/year in 2025 and 5 Mt/year in 2030, becoming a leading supplier of renewable diesel. TotalEnergies also expects energy generation to advance at a rate of 30% by 2030 compared to 2020, from roughly 17 to 23 PJ/d (about the equivalent of 3 - 4 Mboe/d<sup>8</sup>, of which about 500 kboe/d<sup>9</sup> is electricity). Half of this increase is expected to come from electricity generation, which is mainly from renewable energy sources, and the other half from LNG. In all its business segments, the Company pursues a differentiated geographic strategy and develops along the entire value chain. The Company's geographical diversification is, on the one hand, a competitive strength of TotalEnergies, enabling availability of resources, distribution of market risks, realization of synergies, and enhancement of production efficiency. On the other hand, the widespread geographical diversification of the Group requires

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<sup>7</sup> Thousand ton

<sup>8</sup> Million barrels of oil equivalent per day

<sup>9</sup> Thousand barrels of oil equivalent per day

a high degree of organization, and entails risks associated with local legal, political, cultural and social particularities, as well as risks related to access to resources. We assume that the Group's structure supports the implementation and monitoring of its strategy in accordance with the specific legislation and regulatory frameworks in the countries in which the Group operates.

Based on publicly available information, we assume sufficiently developed structures with regard to risk management, accounting, and controlling, as well as other administrative and operationally functional areas. Noteworthy are also risks related to the Company's acquisitions, including financing risks and risks of integration of acquired companies or projects into the Group. The size of the Company and its major global position are advantages in our view, facilitating good access to financial markets and enabling the establishment of state-of-the-art technology.

### Business risk

The TotalEnergies Group's activities and results are subject to a range of risk factors, especially fluctuations in crude oil and natural gas prices, refining and marketing margins, as well as exchange rates, particularly in the value of the euro compared to the dollar and, in the medium- to long-term, the general volume of demand for fossil energy.

The Company does not have any influence on oil and natural gas prices, which are dependent on a variety of factors such as general global and regional economic developments and financial conditions, variations in supply of and demand for energy due to changes in consumer preferences or to pandemics, political circumstances in resource-producing regions, geopolitical risks, OPEC+ activities, the availability and cost of new technologies, and the regulation environment.

Generally, a decline in hydrocarbon prices has a negative effect on the Group's results due to a decrease in revenues from oil and gas production. On the other hand, higher prices could negatively impact demand for the Group's products. The impact of changes in crude oil and gas prices on downstream operations depends on the time when the prices of finished products adjust to reflect these changes. Prolonged periods of low oil and gas prices could additionally lead to a necessity of revaluation of the Group's assets and oil and gas reserves. The majority of TotalEnergies' natural gas production is sold under long-term contracts; however, most of its North American and United Kingdom production, as well as part of its production from Denmark, the Netherlands, Norway and Russia, is sold on the spot market, and is vulnerable to price volatility.

Against the background of the Russia-Ukraine war, other material financial risks could face TotalEnergies in addition to the already recognized impairments of USD 4.1 billion related to the Arctic LNG 2 project. These could arise from the potential need to honor some of the guarantees that the Company has provided to Yamal LNG in connection with its external financing. As of 31 December 2021, TotalEnergies held 21% of its proven reserves in Russia, where TotalEnergies had 18% of its combined oil and gas production in 2021. The Company is a minority shareholder in the following Russian non-state-owned companies: Kharyaga (20.0%), Novatek (19.4%), Yamal LNG (20.0%), Arctic LNG 2 (10.0%) and TernefteGaz (49.0 %). TotalEnergies condemned Russia's military aggression against Ukraine and supports the scope and strength of sanctions against Russia. The Company has announced that it will not provide any further capital for the development of projects in Russia and, since 25 February 2022, has halted all spot market trading on Russian oil and petroleum products, including spot trading in Russian natural gas or liquefied natural gas.

TotalEnergies has implemented an integrated multi-energy business model, combining upstream and downstream activities with operations along the entire energy value chain, including

hydrocarbon production, refinery of crude oil, liquefaction, production of petroleum products, as well as the sale of petroleum products through its wide network of marketing & sales stations and distribution of power and gas to end-customers. This business model facilitates the creation of synergies between different activities and of additional value, helps to generate additional cash flows from processing and hence to compensate the volatility of oil and gas prices.

TotalEnergies deploys this integrated model in the new electricity and renewable energy sectors in which it has positioned itself in recent years. Their accelerated growth has the potential to reinforce TotalEnergies' value creation model by providing more predictable cash flows, offering long-term profits and diversifying the Company's geographic risk profile.

The rapidly growing international efforts to combat climate change and generate low-carbon energy, initiatives to protect biodiversity and industrial decarbonization could lead to lower demand for TotalEnergies' products or to a tightening of regulations, which could have a negative impact on TotalEnergies' production efficiency and finances. Moreover, poor implementation, or failure to meet goals regarding the energy transition towards CO<sub>2</sub> neutrality in the countries in which the Company operates, could have a damaging effect on TotalEnergies' reputation, shareholder value and financial situation. In order to take issues related to climate change into account in its strategy, the Company is focusing its exploration investments on low-cost projects, low greenhouse gas emissions and short production times, developing the production of gas, notably of LNG-business, integrating a CO<sub>2</sub> price in its investment decisions, and developing expertise in technologies for carbon capture, use and storage. TotalEnergies has been integrating new technologies such as biomass to fuel, biomass to polymers, as well as recycling into its downstream activities and promotes hybrid solutions for end customers, combining hydrocarbons and renewables, with a gradually decreasing carbon intensity.

We consider the general market conditions from a medium-term perspective on the one hand as favorable for TotalEnergies, taking into consideration the overall high and growing demand for energy and chemical products in line with an economic recovery and global population growth, while on the other hand that the demand for petrol, diesel and fuel oil are expected to decrease in the medium-term perspective, following the electrification of mobility and the transition to environmentally-friendly heating. Simultaneously, the growing demand for natural gas as a less CO<sub>2</sub>-intensive fossil substitute for oil in the period of realignment in the global energy market supports TotalEnergies' growing perspectives. However, due to the urgency of climate change mitigation, the currently relevant regulations could change along with the technological possibilities, which could lead to further challenging issues for the Company. Nevertheless, as a large-scale Company, and thanks to its integrated business model, TotalEnergies is able to generate significant cash flows and withstand regional or global economic downturns and price volatilities, as well as to generate sufficient resources to develop new products and integrate new technologies in order to adapt to changing global market conditions. Despite the current environment of uncertainty and significant investment requirements, we view the business model as stable in light of its perspectives. The Company should thus be able to respond appropriately to changing market conditions.

### Financial risk

As of 31 December 2021, TotalEnergies SE prepares its consolidated annual statements in accordance with IFRS. For analytical purposes, CRA adjusted the original values in the financial statements in the context of its financial ratio analysis. We deducted the goodwill shown on the balance sheet from the equity by 50%, assuming a certain recoverability of goodwill.

Due to a significant recovery in oil and gas prices and a stronger trading business, the operational development of the group improved, although the result of the financial key figure analysis for 2021 is slightly still below the pre-pandemic level. As of 31 December 2021, the Creditreform adjusted equity ratio remained almost unchanged at 39.99% (2020: 40.19%), as the increase in adjusted equity was offset by the expansion of total assets, which mainly resulted from the increase in accounts payable and other operating liabilities, including derivative financial instruments. The Company reported improved earnings and debt servicing capacity with EBITDA of USD 37.821 billion in 2021 (2020: USD 17.023 billion) and cash flow from operating activities of USD 30.410 billion (2020: USD 14.803 billion), which is also reflected in its solid net total debt / EBITDA adj. of 3.91 (2020: 7.35). The ratio of interest expense to total debt also improved to a solid 1.46 (2020: 1.89).

Together with cash flow from operating activities, which is the Company's primary source of financing, TotalEnergies utilizes bond market and credit financing sources. As of 31 December 2021, non-current financial debt (excluding lease obligations) totaled USD 41.868 million, 59% of which had a maturity of over five years. Current financial debt (excluding lease obligations), which consist primarily of commercial paper, treasury bills and drawings on bank loans, amounted to USD 13,645 million. TotalEnergies uses a range of programs for the non-recourse sale of receivables with various banks. As of 31 December 2021, the net total value of receivables sold amounted to USD 8,347 million, alongside reverse factoring USD 383 million.

As of 31 December 2021, the Company had a solid cash position with USD 21,342 billion in cash and cash equivalents (31 March 2022: USD 31,276 billion) and a total amount of confirmed lines of credit granted by international banks to Total S.A. and Group companies of USD 12,314 million, of which USD 11,591 million was undrawn.

In order to manage its exposure to changes in interest rates and foreign exchange rates, TotalEnergies uses derivative instruments, mainly interest rate and currency swaps.

The general financial objectives for the 2022-2025 period include a capital investment program of USD 13-16 billion (net Capex) per year, a net-debt-to-capital ratio (net debt / shareholders' equity + net debt) below 20% on a long-term basis and maintaining of a credit rating of A. As of 31 December 2021, the net-debt-to-capital ratio amounted to 20.1%. Excluding leases, this ratio amounted to 12.5% as of 31 March 2022 (15.3% as of 31 December 2021).

TotalEnergies defined a return-to-shareholder policy for 2022, which includes a 5% increase in the interim dividend in light of the structural growth in cash flow from the LNG and electricity businesses, as well as buybacks to share the surplus cash flows from high hydrocarbon prices. The Company estimates that share buybacks will amount to up to USD 3 billion in the first half of 2022.

Despite the heightened geopolitical risks which have raised volatility and uncertainty in the oil markets to whole new levels, which are likely to remain volatile on the upside, we assess TotalEnergies' short- and medium-term financial risks as manageable and controllable. The Group has very strong liquidity, undrawn credit lines and a comfortable debt maturity profile, which gives the Company financial flexibility, together with proven capital market access. The Company's good cash flow generation enables it to make the necessary investments to unlock future growth potential as part of the Group's transformation strategy.

## 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, i.e. **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, i.e. **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 mainly 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 4: Overview of CRA Ratings | Source: CRA

Rating Category	Details	
	Date	Rating
TotalEnergies SE (Issuer)	19.05.2022	A+ / stable
TotalEnergies Capital S.A. (Issuer)	19.05.2022	A+ / stable
TotalEnergies Capital International S.A. (Issuer)	19.05.2022	A+ / stable
Long-term Local Currency (LC) Senior Unsecured Issues	19.05.2022	A+ / stable
Other	--	n.r.

Table 5: Overview of 2020 Euro Medium Term Note Program | Source: Base Prospectus dated 09.06.2020

Overview of 2020 EMTN Program			
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.

## Financial ratio analysis

Table 6: Financial key ratios | Source: TotalEnergies SE annual financial report 2021, structured by CRA

Asset structure	2018	2019	2020	2021
Fixed asset intensity (%)	65.98	66.11	67.05	59.20
Asset turnover	0.79	0.71	0.45	0.72
Asset coverage ratio (%)	98.69	95.51	93.81	98.14
Liquid funds to total assets	11.54	10.62	12.49	7.71
Capital structure				
Equity ratio (%)	47.44	45.07	40.19	39.99
Short-term debt ratio (%)	25.72	27.15	25.84	34.06
Long-term debt ratio (%)	17.67	18.07	22.71	18.11
Capital lock-up period (in days)	51.81	58.80	71.88	72.82
Trade-accounts payable ratio (%)	10.80	10.97	9.42	13.19
Short-term capital lock-up (%)	17.24	21.20	30.06	27.41
Gearing	0.86	0.98	1.18	1.31
Leverage	2.05	2.16	2.34	2.49
Financial stability				
Cash flow margin (%)	17.68	15.25	11.32	15.93
Cash flow ROI (%)	13.46	10.39	5.42	10.53
Total debt / EBITDA adj.	4.26	4.50	9.29	4.48
Net total debt / EBITDA adj.	3.32	3.63	7.35	3.91
ROCE (%)	11.25	10.11	-4.57	15.62
Total debt repayment period	3.47	5.75	7.41	6.83
Profitability				
Gross profit margin (%)	31.66	34.06	35.27	35.75
EBIT interest coverage	7.27	5.21	-1.97	9.75
EBITDA interest coverage	13.50	10.34	6.00	15.48
Ratio of personnel costs to total costs (%)	4.94	5.06	7.44	4.99
Ratio of material costs to total costs (%)	68.34	65.94	64.73	64.25
Cost income ratio (%)	91.08	90.85	104.58	87.19
Ratio of interest expenses to total debt (%)	1.79	2.19	1.89	1.46
Return on investment (%)	5.54	5.39	-2.11	6.40
Return on equity (%)	10.13	9.99	-6.42	16.02
Net profit margin (%)	6.27	6.49	-6.13	8.86
Operating margin (%)	9.01	9.21	-4.66	12.90
Liquidity				
Cash ratio (%)	44.84	38.94	48.35	22.44
Quick ratio (%)	104.31	96.99	100.42	95.88
Current ratio (%)	132.26	124.82	127.54	119.80

## Appendix

### Rating history

The rating history is available under <https://www.creditreform-rating.de/en/ratings/published-ratings.html>.

Table 7: Corporate Issuer Rating of TotalEnergies SE

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

Table 8: Corporate Issuer Rating of TotalEnergies Capital S.A.

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

Table 9: Corporate Issuer Rating of TotalEnergies Capital International S.A.

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

Table 10: LT LC Senior Unsecured Issues issued by TotalEnergies Capital S.A.

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

Table 11: LT LC Senior Unsecured Issues issued by TotalEnergies Capital International S.A.

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

### Regulatory requirements

The rating<sup>10</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>10</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:

Unsolicited Corporate Issuer / Issue Rating	
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>First Quarter 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 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>	2.3	29.05.2019
<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
Natalia 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	G.Giebler@credutreform-rating.de

On 19 May 2022, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the Company on 20 May 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](#).

### 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:

The provision of a balance sheet database and analysis tool as well as balance sheet ratings were carried out as ancillary services for an affiliated third party.

### 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.

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