Creditreform C Rating

Rating object	Rating information	
Orange S.A. Creditreform ID: 400980978	SME / Corporate Issuer Rating: BBB+ / stable	Type: Initial rating unsolicited
Incorporation: 31 December 1996 Based in: Paris, France (Main) Industry: Telecommunications CEO: Stéphane Richard	LT Senior Unsecured Issues, LC: BBB+ / stable	Other:
Rating objects: Long-term Corporate Issuer Rating: Orange S.A. Long-term Local Currency (LT LC) Senior Unsecured Issues	Rating methodology: CRA "Corpora CRA "Non-Find CRA "Rating C	f the rating form-rating.de

Summary

Content

Summary	1
Relevant rating factors	2
Business development and outlook.	4
Structural risk	6
Business risk	7
Financial risks	8
Issue rating	9
Financial ratio analysis1	1
Appendix1	2

Orange S.A. (Orange, the Company), formerly France Télécom, headquartered in Paris, France, is France's incumbent telecommunication operator, having its origins in the Ministry for Mail, Telegraphs and Telephone, and a leading multinational telecommunications group. Orange offers a broad range of services including fixed telephony, mobile telecommunications, data transmission and other value-added services, as well as mobile financial services to consumers, businesses and other telecommunications operators. Orange is also a leading provider of telecommunication services to multinational companies under the brand Orange Business Services. The Group is active in 27 countries in Europe, Africa and Middle East.

With 151,000 employees as of 31 December 2018, the Group served 264 million customers worldwide. In 2018, the Group achieved revenues amounting to EUR 41,381 million (2017: EUR 40,859 million), a reported EBITDA of EUR 11,977 million (2017: EUR 11,863 million) and an EAT of EUR 2,158 million (2017: EUR 2,040 million).

Analysts

Elena Damijan Lead Analyst E.Damijan@creditreform-rating.de

Rouven Weber Co-Analyst R.Weber@creditreform-rating.de

Neuss, Germany

Rating result

The current rating of BBB+ attests Orange S.A. a highly satisfactory level of creditworthiness, which represents a low to medium default risk.

The rating result of Orange S.A. is based on its high degree of product and geographical diversification, and its leading position in the majority of its key markets. Due to the strategy, which concentrates on convergence and development of the very high-speed broadband, the Company has managed to retain its strong market position in all relevant markets. Orange has solid liquidity reserves, a strong financial position with stable earnings capacity, which is sufficient to cover the Company's capex, dividend payments, and to implement its strategy. Due to operative optimization measures and digitization, Orange achieved significant cost savings, which has positive impact on the Group's financials.

Our assessment is dampened by the intense competition and still substantial consolidation pressure in the relevant markets, partially caused by strict regulation. The continuous necessity of high capex in order to retain and improve its market position and to keep up with the growing demand for data services, high speeds and ubiquitous connectivity in response to the trends of digitization of the economy and society, puts a strain on the Company's rating.

Creditreform C Rating

Outlook

The one-year outlook of the rating is stable. This outlook is based on our expectation of a generally stable development, with solid growth rates in Africa and Middle East and growth deceleration in Europe, resulting in an overall stable financials.

Relevant rating factors

Table 1: Financials of Orange S.A. (Group) I Source: 2018 Registration document, standardized by CRA

Excerpts from the financial key figures analysis 2018

- + increased revenues
- + improved EBITDA
- + improved net total debt / EBITDA
- increased total assets
- current ratio
- return on investments

Orange S.A.	CRA standar	dized figures ¹
Selected key figures of the financial statement analysis Basis: Annual report of 31.12. (IFRS, Group)	2017	2018
Sales (million EUR)	40,859	41,381
EBITDA (million EUR)	12,202	12,786
EBIT (million EUR)	5,336	5,683
EAT (million EUR)	2,040	2,158
EAT after transfer (million EUR)	1,843	1,954
Total assets (million EUR)	76,459	78,331
Equity ratio (%)	21.00	20.58
Capital lock-up period (days)	58.31	59.41
Short-term capital lock-up (%)	54.61	54.67
Net total debt / EBITDA adj. (factor)	4,24	4,21
Ratio of interest expenses to total debt (%)	2.85	2.24
Return on Investment (%)	4.89	4.50

Please note:

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, positive (+) as well as negative (-).

General rating factors

- + Strong market position in Europe and Africa and Middle East (market leader or one of the top providers in most of the countries), good geographical diversification
- + Leading international integrated broadband and telecommunications provider with a full range of services adequate business mix
- + State-of-the-art use of technology (fiber roll-outs, TV contents, bundled offers) and improved networks
- + Significant size and scale
- + High entry barriers in the market (licenses, concessions and permits)
- + Proven access to debt capital markets
- Dependency on economic trends
- Highly competitive markets
- Capital-intensive business with high ongoing investments (infrastructure and spectrum)
- Country risks exposure to countries with unstable economies
- Foreign exchange risks high exposure to currency fluctuations

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

Creditreform C Rating

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

- Interest rate risks
- Regulatory risk exposure in jurisdictions where the Group is active

Current rating factors (rating 2019)

- + Business development in line with objectives
- + Adequate liquidity
- + Growth of operating revenues and net profit
- + Improved competitiveness thanks to investments in network, content, and convergence
- + Cost savings
- High payout ratio
- Exceptional costs (specific labor costs and restructuring/integration costs)
- Competitive regulatory and commercial cost pressures
- Currency fluctuations

Prospective rating factors

- + Costs reductions, synergies leading to increased operating cash flow
- + Lower cash flow pressure thanks to reduced capex intensity
- + General improvement of financial ratios
- + New market opportunities connected to the introduction of 5G and further new products
- Risk of deterioration of operating performance due to increased competition
- Worsening of the economic situation and political instability
- Unexpected increase in capex

Best-case scenario

In our best-case scenario for one year, we assume a rating of A-. This could be the case if the Company generates improved and strong operative results and cash flows under current regulatory environment as well as better cost efficiency and lower capex.

Worst-case scenario

In our worst-case scenario for one year, we assume a rating of BBB. This could be the case if key financials deteriorate following an increase of debt or because of weak operative results. Any unfavorable regulatory change or poor economic conditions in Orange's key markets, which would significantly affect the market position of the Company and, as a result, the financial figures, could have a negative impact on our rating assessment.

Prospective rating factors are factors and possible events that – according to the analysts as per the date of the rating - would most likely have a stabilizing or positive effect (+) and a weakening or negative effect (-) on future ratings, if they occurred. This is not a full 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.

Best-case scenario AWorst case scenario: BBB

Please note:

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

Creditreform C Rating

Business development and outlook

During the business year 2018, despite strong competition, Orange developed in line with expectations and achieved the targets set for the year. The Group managed to generate revenues of EUR 41,381 million (2017: EUR 40,859 million), corresponding to an increase of 1.3% in reported terms. Revenues were generated in its principal business areas: France (42.6%), Spain (12.8%), Europe (13.5%), Africa and Middle East (12.0%), Enterprise (16.7%) and International Carriers (2.4%). Growth was mainly driven by higher revenues in Africa and Middle East (up 5.1%) against the background of the increased data services and mobile financial services. Growth in France (up 0.9%), Europe (up 1.7%) and Spain (up 2.2%) was particularly a result of the convergence. Overall organic growth totaled EUR 544 million. The growth in revenues was favourably influenced by changes in the scope of consolidation (EUR 167 million) in the course of acquisitions (Business&Decisions, Basefarm Holding and Enovacom), and adversely affected (EUR 189 million) by the foreign exchange fluctuations.

The Group's strategy is currently aimed at enhancing convergence (provision of integrated land-line and mobile services) and the very high-speed fixed and mobile broadband. The Company managed to enlarge its customer base in these product segments. Convergent offers increased by 5.5% to 10.9 million customers as of 31 December 2018 and SIM cards associated with convergent offers grew by 8.0% (18.7 million). Very high-speed fixed broadband grew by 33.2% (6.3 million customers as of 31 December 2018) and 4G mobile grew by 21.7% year- on- year (56 million customers as of 31 December 2018). The total mobile customer base grew by 0.6% to 203.6 million and the number of fixed broadband service customers grew by 3.9% to 20.1 million. In line with the overall trends, the number of fixed telephony customers declined by 3.6% to 40.2 million (2017: 41.7 million). Orange Bank had 248,000 customers at 31 December 2018.

Reported EBITDA amounted to EUR 11,977 million, up EUR 114 million compared with 2017 (EUR 11,849 million). The EBITDA was influenced by the positive effect of lower net expense on litigations and, with EUR 812 million, negatively affected by additional charges resulting from the extension of the French "Part-Time for Seniors" plans for the next three years. The adjusted EBITDA grew from EUR 12,660 million to EUR 13,005 million, of which EUR 13,151 million was achieved in telecoms activities (2017: EUR 12,721 million). The 3.4% growth of telecom activities was driven by solid business performance and the results of the operational efficiency programme, targeted at delivering accumulated gross savings of EUR 3.5 billion over the period 2015-2018. The ratio of adjusted EBITDA to revenue of telecoms services improved by 0.6% achieving 31.8% in 2018. The adjusted EBITDA of Orange Bank's activities was negative with EUR -147 million (2017: EUR -62 million). The development of operating income was mainly impacted by higher depreciation and amortization costs, resulting from the increased investment activities. The reported operating income approved by 1.1%, totaling EUR 4,829 million (2017: EUR 4,778 million). The Group achieved a consolidated annual result of EUR 2,158 million (2017: EUR 2,040 million), which was favoured by the lower net finance costs (EUR 1,362 million; 2017: EUR 1,715 million) and dampened by higher income tax expenses (EUR 1,309 million; 2017: EUR 1,052 million).

Creditreform C Rating

Table 2: The business development of Orange S.A. I Source: 2018 Registration document and Financial results presentation for H1 2019

Orange S.A. (reported fi	gures)			
In EUR million	2017	2018	1H 2018	1H 2019 ²
Revenue	40,859	41,381	20,262	20,573
EBITDA reported	11,863	11,977		
EBITDA adjusted ³	12,680	13,005		
Operating Income	4,778	4,829	2,350	2,388
Consolidated net income	2,040	2,158	879	1,137

CAPEX amounted to EUR 7,442 million in 2018, in line with the annual target of EUR 7.4 billion, up 3.2% compared with 2017. The ratio of CAPEX to revenue of telecoms activities increased by 0.4 points to 17.9%, reflecting the Group's focus on rolling out very high-speed fixed and mobile broadband networks.

Table 3: The development of the telecoms activities by segment in 2018 I Source: 2018 Registration document

Orange S.A. telecoms activities segments in 2018 and 2017						
In million EUR	France	Spain	Europe	Africa & Middle East	Enterprise	Interna- tional Car- riers
			2017			
Revenue	18,046	5,231	5,578	5,030	7,251	1,651
EBITDA reported	6,444	1,567	1,417	1,591	1,258	(349)
EBITDA adjusted	6,878	1,563	1,456	1,612	1,306	(78)
Operating income	3,368	555	240	522	889	(704)
CAPEX	3,451	1,115	897	1,021	382	282
2018						
Revenue	18,211	5,349	5,687	5,190	7,292	1,534
EBITDA reported	6,348	1,660	1,502	1,655	1,153	(194)
EBITDA adjusted	7,076	1,700	1,508	1,667	1,245	(45)
Operating income	3,198	555	339	659	765	(519)
CAPEX	3,656	1,120	953	1,008	353	316

The overall development of the business segments in 2018 was positive, with exception of the Enterprise and International Carriers segments, whose revenues and/or results were partially affected by the negative effects of foreign exchange fluctuations, changes in consolidation scope, and by decrease in services. Dividend payments amounted to EUR 2.106 million in 2018 (2017: EUR 1.965 million).

² The Group adopted IFRS 16 "Leases" on 1 January 2019, according to the simplified retrospective approach, without restatement of prior period comparatives. This led to adaption of new financial indicators, EBITDAaL (EBITDA after leases), among others, which are not comparable with the financial indicators of previous years.

³ The Group's adjusted EBITDA: reported EBITDA adjusted for effects of significant litigations, specific labor expenses, restructuring and integration costs as well as other specific items.

Creditreform C Rating

The strategy of Orange is primarily focused on the quality of its networks, resulting in targeted capital investments in order to increase connectivity for its customers by offering integrated services and enhancing reliability and diversification of product portfolio, as well by offering personalized services. To achieve these goals and to respond the growing demand for traffic, investments are focused on the very high-speed fixed and mobile broadband and on the modernization of existing networks. In 2018, investments in networks (besides telecommunication licenses) accounted for 62% of the Group's CAPEX. In France, Orange invested EUR 9 billion in the installation of networks between 2015 and 2018, of which EUR 3 billion was on fiber optics. The Company is also focusing on preparing for the commercial launch of 5G, and on offering an enriched content experience to its customers. Simultaneously, Orange managed to achieve gross savings of EUR 3.5 billion since 2015 through the implementation of its cost savings programme. The Company strives to achieve additional savings of one billion EUR in 2019-2020 through digitization, simplification of operations, and sharing. A further one billion EUR is targeted to be saved through controlled CAPEX by the end of 2020.

Despite the overall very competitive market, the Group managed to generate strong results and to achieve considerable growth rates in the majority of its segments. In our view, this was possible due to its forward-looking strategy, focusing on the development of the convergence and very high-speed broadband, in line with the global trend of growing demand for traffic and connectivity, and combined with realization of cost savings programmes.

Structural risk

Orange S.A., formerly France Télécom, was incorporated as a French société anonyme on 31 December 1996. The Company is headquartered in Paris (France) and registered in the Paris Trade and Companies Register under the number 380 129 866. As of 31 December 2018, the share capital of Orange S.A. was EUR 10,640,226,396, divided into 2,660,056,599 fully-paid shares. Orange has only issued ordinary shares. Orange S.A. has been listed on Euronext Paris and on the New York Stock Exchange since 1997. As of 31 December 2018, the French State held 22.95% of the share capital, either directly or jointly with BPIfrance Participations (held by French State), and 29.47% of the voting rights. In the last three fiscal years, the Company has bought and sold treasury shares, notably in June 2018 and December 2018 when it bought 4.80 million and 2.09 million treasury shares respectively as part of its 2018 share Buyback programme, aimed at fulfilling obligations related to the free share award plan and incentive plans for corporate officers. As of 31 December 2018, the Company had 0.27% of the treasury shares, whith the rest of the shares distributed between the Group's employees (5.5%) and free float (71.28%).

The Group operates in 27 countries: in France and Spain, which are reported as individual business segments, in six other countries in Europe, as well as in 19 countries in Africa and the Middle East, of which 17 where it has controlling interests.

The main governance bodies of Orange are the Board of Directors and the Executive Committee. The Board of Directors presides over all decisions relating to the Group's major strategic, economic, employment, financial, and technological policies, and monitors the implementation of these policies by the General Management. The Board of Directors of Orange comprises 15 members: the Chairman, seven independent directors, three directors representing the public sector, three directors elected by the employees, and one director representing employee shareholders. The Board of Directors is supported by the expertise from three specialized committees: the Audit Committee, the Governance and Corporate Social and Environmental Responsibility Committee, and the Innovation and Technology Committee. The Executive Committee,

Creditreform C Rating

under the authority of the Chairman and CEO, consists of fifteen members and oversees the achievement of operational, labor relations, and technical objectives, as well as the achievement of those relating to the allocation of financial resources.

Internal risk management policies limit specific risks including exchange rate, interest rate, share price, liquidity, country, and credit risks. The number of employees at the end of 2018 was of 150,711 (2017: 151,556).

Overall, we do not see any short-term structural risk at the level of Orange. The Group has managed to assert itself as a leading multinational telecommunications operator. Further international expansion, e.g. through M&A's, presents regulatory (including anti-trust regulations) and integration risks.

Business risk

The consolidation pressure in the telecommunications industry is still high. One of the reasons for this are falling revenues in the established markets, which are attributable to regulatory intervention, increasing competition and technological change. In addition, high volumes of investments for network expansion and innovations are required.

The revenues of the Group are based on traffic fees, connection fees, network usage, installation fees, interconnection revenues, sales of handsets and equipment and other digital services such as Pay TV, as well as value-added services and maintenance. These products and services are offered individually or in bundled packages.

The general business development of Orange mainly depends on overall macroeconomic conditions and more particularly on demand for connectivity and the spending of its consumers. The overall demand for high-speed broadband – over fixed and mobile networks – remains very high. However, any reduction of the buying power of its subscribers has a direct impact on the Company. The capacity of Orange to attract a high number of subscribers requires high marketing expenditures, particularly given the low degree of customer loyalty.

The Group is subject to a variety of laws and regulations, and many services provided by Orange (e.g. network operation, spectrum usage) require the granting of concessions, permits and licenses by governmental authorities. In order to maintain these licenses, the Group is obligated to make certain investments in its infrastructure or to acquire new spectrum, putting pressure on the Company's cash flow. Some wireline and wireless telephony services are to be provided under regulated rates and price systems. Any breach of concession contracts or loss of permits or licenses could negatively affect the Group's development.

In Europe, the wish to promote competition for electronic communications networks and services has resulted in new regulations on telecommunications providers (Telecoms Single Market). These regulations have been focused on reducing prices and impeding industry consolidation during the past years. With the adoption of the European Electronic Communications Code (EECC) in December 2018, the EU-Commission is trying to encourage investments in new high-capacity networks (5G and new fibre networks).

Even though competition is very high in Orange's key markets, we consider Orange as having a strong market position in the jurisdictions where the Group operates. Country risks are present in Africa and the Middle-East, and partially in Europe as Orange operates in some non-investment-grade countries that may be affected by political, economic and regulatory risks. Any

Creditreform C Rating

changes in the political or economic environment could lead to decreasing revenues and/or impairments, which could have a detrimental effect on the Group's financial ratios. These country risks have a dampening effect on the corporate rating.

In the telecommunications business, network quality and prices are key elements for remaining competitive. Furthermore, as in most European markets, there is a clear trend towards convergence and higher traffic demand. The demand for new content is continuously on the increase. These trends are forcing the Company to develop new business areas (content creation) and to invest in upgrading and distribution of its networks.

Given the steadily growing mobile penetration and broadband uptake worldwide, we see good chances that the Group will further be able to boost its growth by increasing cross-selling opportunities (bundle offers with a better margin), while continuing to invest in its network to improve coverage and/ or broadband speeds. The introduction of the 5G standard will enable a range of new services through new technologies such as IoT, virtual reality and augmented reality. In 2018, Orange carried out the first 5G technical tests in France and in Europe and stated its readiness for the commercial launch of 5G.

However, in addition to financial risks, network extensions entail execution risks. Any changes to the networks such as disruption or quality loss could affect the business of Orange. We consider the Group's strategy of business diversification as plausible; however, it entails risks of financing, of investment failure and integration risks.

Financial risks

Orange S.A. prepares its consolidated annual statements as of 31 December 2018 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%, suggesting a certain recoverability of goodwill.

The Company is capital intensive. 71.2% of the Company's balance sheet is invested in long-term assets. Creditreform adjusted equity in 2018 stood at EUR 16,123 million (2017: EUR 16,118 million), which in relative terms means 20.6% of the balance sheet (2016: 21.0%), and is adequate in our view.

Orange is subject to interest rate and foreign exchange risks, which are mitigated by the use of derivatives and natural hedging.

The Company's main sources of financing are bond issues, issues in the short-term securities markets under the NEU Commercial Paper program (Negotiable European Commercial papers), and financing through loans from multilateral or development lending institutions. Orange has a syndicated loan over EUR 6.0 billion with 24 international banks, which was extended in 2018 until December 2023.

At the end of 2018, the total financial liabilities amounted to EUR 34,019 million, of which EUR 27,070 million were bonds. As of 31 December 2018, bonds issued by the Group were redeemable at maturity, and no specific guarantee has been given in relation to their issuance. Some bonds may be redeemed in advance at the request of the issuer. Certain subsidiaries of Orange S.A. are committed to comply with certain financial ratios related to indicators defined in the contracts with the banks. The total equivalent amount of the relevant outstanding obligations was EUR 751 million. A breach of these ratios constitutes an event of default that can lead to

Creditreform C Rating

early repayment of the respective line of credit line or loan. According to annual statements, as of 31 December 2018, all covenants were met.

Orange had a strong liquidity position of EUR 13,964 million as of 31 December 2018, consisting of undrawn credit facilities (EUR 6,200 million), cash and cash equivalents (EUR 5,081 million) and investments in fair value (2,683 million), which exceeded by far the Company's repayment obligations of its gross financial debt in 2019 (EUR 7,355 million, before derivatives). The CRA's net total debt / EBITDA adj. was also adequate in our view (x4.21).

Overall, we see no significant short- or medium-term financial risks for Orange. The Group disposes of an adequate cash position, undrawn credit lines, as well as a comfortable debt maturities profile that gives the Company financial flexibility together with proven capital market access. With a reported EBITDA of approximately EUR 12.0 billion per year, Orange generates solid operating cash flows and disposes of diversified funding sources that should allow the Company to pursue its strategic plan while maintaining strict financial discipline. The Company's high payout ratio has a dampening effect on our assessment, as well as its relatively low current ratio (76.24%).

Issue rating

Issue rating details

The rating objects of this issue rating are exclusively the long-term senior unsecured issues, denominated in euro, issued by Orange S.A. (issuer) 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 issues have been issued under the EMTN programme with its latest prospectus from 26 June 2019 and supplement dated 31 July 2019. This EMTN programme amounts to EUR 35 billion. The notes and coupons under the EMTN programme constitute direct, unconditional, unsubordinated, unsecured obligations of the issuer, and rank at least pari passu among themselves and with all other present and future unsecured obligations of the issuer. Additionally, the notes benefit from a negative pledge provision and a cross default mechanism.

Corporate issue rating result

We have provided the debt securities issued by Orange S.A. with a rating of BBB+ / stable. The rating is based on the corporate rating of Orange S.A. Other types of debt instruments or issues denominated in other currencies by the Issuer 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.

Creditreform ⊆ Rating

Overview

Table 4: Overview of CRA Ratings I Source: CRA

Rating objects	Details		
rating objects	Date	Rating	
Orange S.A. (Issuer)	4 September 2019	BBB+ / stable	
Long-term Local Currency (LT LC) Senior Unsecured Issues	4 September 2019	BBB+ / stable	
Other		n.r.	

Table 5: Overview of 2019 Euro Medium Note Programme I Source: Orange S.A.

Overview 2018 EMTN Programme				
Volume	EUR 35,000,000,000	Maturity	Depending on the respective bond	
Issuer	Orange S.A.	Coupon	Depending on the respective bond	
Arrangers	BNP Paribas, BofA Merrill Lynch	Currency	Depending on the respective bond	
Credit enhancement	none	ISIN	Depending on the respective bond	

All future LT LC senior unsecured Notes that will be issued by Orange S.A. and that have 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 euro, or other types of debt instruments, have not yet been rated by CRA. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG. For the time being, other emission classes or programmes and issues that do not denominate in euro will not be assessed. For a list of all currently valid ratings and additional information, please consult the website of Creditreform Rating AG.

Creditreform C Rating

Financial ratio analysis

Table 6: Financial key ratios I Source: Orange S.A. 2018 Registration document, Consolidated financial statements structured by CRA

Asset turnover	Asset Structure	2015	2016	2017	2018
Asset coverage ratio (%) 36.54 36.03 58.87 62.75 Liquid funds to total assets (%) 8.04 10.43 11.07 10.70 Capital Structure Equity ratio (%) 20.57 21.12 21.00 20.58 Short-term-debt ratio (%) 30.24 33.91 37.85 37.77 Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.24 3.34 Leverage	Fixed asset intensity (%)	70.08	70.87	71.08	71.20
Liquid funds to total assets (%) 8.04 10.43 11.07 10.70 Capital Structure 20.57 21.12 21.00 20.58 Short-term-debt ratio (%) 30.24 33.91 37.85 37.77 Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 32.45 47.70 54.61 54.67 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Short-term capital lock-up (%) 32.41 4.32 4.62 4.61 54.67 Short-term capital lock-up (%) 32.43 3.24 3.24 3.24 3.24 Leverage	Asset turnover		0.55	0.53	0.53
Capital Structure Equity ratio (%) 20.57 21.12 21.00 20.58 Short-term-debt ratio (%) 30.24 33.91 37.85 37.77 Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.24 3.24 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 Total debt / EBITDA adj. 4.33 4.22 4.24 <	Asset coverage ratio (%)	36.54	36.03	58.87	62.75
Equity ratio (%) 20.57 21.12 21.00 20.58 Short-term-debt ratio (%) 30.24 33.91 37.85 37.77 Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability 21.44 22.36 24.36 Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.84 Net total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 <td< td=""><td>Liquid funds to total assets (%)</td><td>8.04</td><td>10.43</td><td>11.07</td><td>10.70</td></td<>	Liquid funds to total assets (%)	8.04	10.43	11.07	10.70
Short-term-debt ratio (%) 30.24 33.91 37.85 37.77 Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow ROI (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 10.00 100.00 100.00	Capital Structure				
Long-term-debt ratio (%) 5.04 4.41 20.85 24.10 Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 Total debt / EBITDA adj. 4.33 4.22 4.24 4.21 Total debt / EBITDA adj. 4.33 4.22 4.24 4.21 Total debt / EBITDA adj. 4.33 4.22 4.24 4.21 Total debt / E	Equity ratio (%)	20.57	21.12	21.00	20.58
Capital lock-up period (in days) 56.49 55.72 58.31 59.41 Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 19.07 19	Short-term-debt ratio (%)	30.24	33.91	37.85	37.77
Trade-accounts-payable ratio (%) 8.71 8.13 8.50 8.60 Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00<	Long-term-debt ratio (%)	5.04	4.41	20.85	24.10
Short-term capital lock-up (%) 32.45 47.70 54.61 54.67 Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 0.00 0.00 0.00 0.00 </td <td>Capital lock-up period (in days)</td> <td>56.49</td> <td>55.72</td> <td>58.31</td> <td>59.41</td>	Capital lock-up period (in days)	56.49	55.72	58.31	59.41
Gearing 3.47 3.24 3.24 3.34 Leverage 4.79 4.75 4.81 Financial Stability Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 <t< td=""><td>Trade-accounts-payable ratio (%)</td><td>8.71</td><td>8.13</td><td>8.50</td><td>8.60</td></t<>	Trade-accounts-payable ratio (%)	8.71	8.13	8.50	8.60
Leverage	Short-term capital lock-up (%)	32.45	47.70	54.61	54.67
Financial Stability Cash flow margin (%) Cash flow ROI (%) Cash flow ROI (%) Total debt / EBITDA adj. ROCE (%) Total debt repayment period Total debt repa	Gearing	3.47	3.24	3.24	3.34
Cash flow margin (%) 21.44 22.36 24.36 Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period - 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	Leverage		4.79	4.75	4.81
Cash flow ROI (%) 11.42 11.90 12.87 Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 100	Financial Stability				
Total debt / EBITDA adj. 4.82 4.86 4.94 4.86 Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 100.00 100.00 100.00 EBIT interest coverage 3.32 2.31 3.09 4.08 EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Cash flow margin (%)		21.44	22.36	24.36
Net total debt / EBITDA adj. 4.33 4.22 4.24 4.21 ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 2.01 9.19 2.31 3.09 4.08 2.81 2.07 9.19 9.19 2.04 2.0.7 9.19 9.19 2.0.49 20.07 19.97 2.0.49 20.07 19.97 2.0.49 20.07 19.97 2.0.00 0.00 </td <td>Cash flow ROI (%)</td> <td></td> <td>11.42</td> <td>11.90</td> <td>12.87</td>	Cash flow ROI (%)		11.42	11.90	12.87
ROCE (%) 10.91 9.34 11.92 12.10 Total debt repayment period 5.19 4.05 6.84 Profitability 5.19 4.05 6.84 Profitability 5.19 4.05 6.84 Gross profit margin (%) 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 4.08 EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 </td <td>Total debt / EBITDA adj.</td> <td>4.82</td> <td>4.86</td> <td>4.94</td> <td>4.86</td>	Total debt / EBITDA adj.	4.82	4.86	4.94	4.86
Total debt repayment period - 5.19 4.05 6.84 Profitability Gross profit margin (%) 100.00 100.00 100.00 100.00 EBIT interest coverage 3.32 2.31 3.09 4.08 EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Net total debt / EBITDA adj.	4.33	4.22	4.24	4.21
Profitability Gross profit margin (%) 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 100.00 4.08 EBIT DA interest coverage 7.30 6.13 7.07 9.19 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00	ROCE (%)	10.91	9.34	11.92	12.10
Gross profit margin (%) 100.00 100.00 100.00 100.00 EBIT interest coverage 3.32 2.31 3.09 4.08 EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Total debt repayment period		5.19	4.05	6.84
EBIT interest coverage 3.32 2.31 3.09 4.08 EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Profitability				
EBITDA interest coverage 7.30 6.13 7.07 9.19 Ratio of personnel costs to total costs (%) 21.09 20.49 20.07 19.97 Ratio of material costs to total costs (%) 0.00 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Gross profit margin (%)	100.00	100.00	100.00	100.00
Ratio of personnel costs to total costs (%) Ratio of personnel costs to total costs (%) Ratio of material costs to total costs (%) Cost income ratio (%) Ratio of interest expenses to total debt (%) Return on investment (%) Return on equity (%) Ret profit margin (%) Operating margin (%) Cash ratio (%) Ratio of interest expenses to total debt (%) Return on investment (%) Return on equity (%) 7.35 7.67 4.99 5.21 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 2.85 2.24 13.39 12.64 13.39 13.40 11.17 13.06 13.73 13.06 13.73 13.06	EBIT interest coverage	3.32	2.31	3.09	4.08
Ratio of material costs to total costs (%) 0.00 0.00 0.00 0.00 Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	EBITDA interest coverage	7.30	6.13	7.07	9.19
Cost income ratio (%) 86.87 89.08 87.16 86.52 Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Ratio of personnel costs to total costs (%)	21.09	20.49	20.07	19.97
Ratio of interest expenses to total debt (%) 2.86 3.27 2.85 2.24 Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Ratio of material costs to total costs (%)	0.00	0.00	0.00	0.00
Return on investment (%) 6.41 6.66 4.89 4.50 Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Cost income ratio (%)	86.87	89.08	87.16	86.52
Return on equity (%) 20.23 12.64 13.39 Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Ratio of interest expenses to total debt (%)	2.86	3.27	2.85	2.24
Net profit margin (%) 7.35 7.67 4.99 5.21 Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) Quick ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Return on investment (%)	6.41	6.66	4.89	4.50
Operating margin (%) 13.40 11.17 13.06 13.73 Liquidity Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Return on equity (%)		20.23	12.64	13.39
Liquidity 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Net profit margin (%)	7.35	7.67	4.99	5.21
Cash ratio (%) 20.66 24.51 20.00 19.04 Quick ratio (%) 88.53 77.73 71.33 70.64	Operating margin (%)	13.40	11.17	13.06	13.73
Quick ratio (%) 88.53 77.73 71.33 70.64	Liquidity				
	Cash ratio (%)	20.66	24.51	20.00	19.04
Current ratio (%) 98.93 85.91 76.40 76.24	Quick ratio (%)	88.53	77.73	71.33	70.64
	Current ratio (%)	98.93	85.91	76.40	76.24

Creditreform C Rating

Appendix

Rating history

The rating history is available under:

https://www.creditreform-rating.de/de/ratings/published-ratings/

Table 7: Corporate issuer Rating of Orange S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	04.09.2019	www.creditreform-rating.de	Withdrawal of the rating	BBB+ / stable

Table 8: LT LC Senior Unsecured issues issued by Orange S.A.

Event	Rating date	Publication date	Monitoring period	Result
Initial rating	04.09.2019	www.creditreform-rating.de	Withdrawal of the rating	BBB+ / stable

Regulatory requirements

The present rating⁴ is an unsolicited rating. Creditreform Rating AG was not commissioned by the Issuer with the preparation of the rating. The present analysis was prepared on a voluntary basis.

The rating is based on the analysis of published information and on internal evaluation factors. The rating was conducted based on Creditreform Rating AG's "Corporate Ratings" methodology, the "Non-Financial Corporate Issue Rating" methodology, and on the "Rating Criteria and Definitions".

The documents submitted and information gathered were sufficient to meet the requirements of Creditreform Rating AG's rating methodologies. A complete description of Creditreform Rating AG's rating methodologies and Creditreform Rating AG's basic document "Rating Criteria and Definitions" is published on the following internet page:

www.creditreform-rating.de/en/regulatory-requirements/

This rating was carried out by analysts Elena Damijan (e.damijan@creditreform-rating.de) and Rouven Weber (r.weber@creditreform-rating.de), both located in Neuss, Germany. A management meeting did not take place.

On 4 September 2019, the analysts presented the rating to the rating committee and the rating was determined. The rating result was communicated to the company on 6 September 2019. 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.

© Creditreform Rating AG 2019 4 September 2019 12/15

⁴ 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.

Creditreform C Rating

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.

Please note:

This report exists in an English version only.

Conflict of interests

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

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

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

Creditreform ⊆ Rating

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: https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml.

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

Creditreform ⊆ Rating

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 Hellersbergstraße 11 D-41460 Neuss

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

E-Mail info@creditreform-rating.de www.creditreform-rating.de

CEO: Dr. Michael Munsch

Chairman of the Board: Prof. Dr. Helmut Rödl