

CREDIT OPINION

9 March 2023

Update



RATINGS

Latvenergo AS

Domicile	Riga, Latvia
Long Term Rating	Baa2
Туре	LT Issuer Rating - Fgn Curr
Outlook	Stable

Please see the <u>ratings section</u> at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Jan Jurgensen +49.698.67902.154 AVP-Analyst jan.jurgensen@moodys.com

Vitalij Jermolajev +49.69.86790.2103 Associate Analyst

vitalij.jermolajev@moodys.com

Paul Marty +33.1.5330.3371 Senior Vice President/Manager paul.marty@moodys.com

Latvenergo AS

Update to credit analysis

Summary

<u>Latvenergo AS'</u> (Latvenergo, Baa2 stable) credit profile is underpinned by the group's leading position as an integrated utility in its domestic market; its fairly low-cost and environmentally clean hydro generation asset base; the strong contribution of regulated distribution activities to its earnings; and its solid financial profile (see Exhibit 1).

However, Latvenergo's credit quality is constrained by its small size; the group's substantial short generation position versus its supply requirements; volatile hydro generation and variable profitability of its gas-fuelled heat and power plants, given their exposure to commodity prices; and the evolving nature of the electricity markets in which Latvenergo operates.

Latvenergo's Baa2 rating incorporates two notches of uplift for the potential extraordinary support from its 100% owner, the <u>Government of Latvia</u> (A3 stable), in case of financial distress. At the same time, the company remains exposed to political interference.

Exhibit 1

Latvenergo's leverage metrics are likely to remain volatile and burdened by growth capital spending from 2023, but remain within guidance



Sources: Company and Moody's Investors Service

Credit strengths

- » Dominant position in Latvia and status as a leading electricity supplier in the Baltics
- » Relatively stable cash flow from regulated distribution grid activities
- » Solid financial profile
- » Government support, which provides two notches of rating uplift

Credit challenges

- » Relatively small size, which leaves the company vulnerable to changes in the regional electricity markets
- » Earnings from generation exposed to variable hydrology and volatile commodity prices
- » Short position of own generation versus retail supply with a strong seasonal component, which leaves the company exposed to price volatility
- » Strain on supply volumes from competitive retail markets in the Baltics, mitigated by a large market share in Latvia's household segment

Rating outlook

The outlook on Latvenergo's rating is stable. The outlook reflects our expectation that, in the context of the risks and opportunities characterising the evolving Latvian market, the company should nonetheless be able to sustain a financial profile in line with the current rating guidance of funds from operations (FFO)/net debt in the low 20s in percentage terms over the next two to three years.

Factors that could lead to an upgrade

Upward pressure on Latvenergo's rating is unlikely to materialise in the near term but could develop in the medium to long term because of the following:

- » increased visibility into the effect of the ongoing market integration of Latvia with its neighbours and the Nordic countries on the company's business position and financial performance
- » maintenance of good liquidity and a financial profile comfortably and sustainably in excess of the current guidance

Upward rating pressure could also develop if the credit quality of the Latvian government were to significantly strengthen.

Factors that could lead to a downgrade

Latvenergo's rating could come under downward pressure if the company is not able to maintain a financial profile commensurate with the current guidance, that is, if its FFO/net debt were to remain below the low 20s in percentage terms on a sustained basis; the company's liquidity were to deteriorate; there were significant adverse changes in the regulatory or legal frameworks in Latvia; or the credit quality of the Latvian government or the support assumptions currently incorporated into our assessment were to weaken.

Key indicators

Latvenergo's credit metrics are robust but display some volatility, driven by hydrology conditions and wholesale electricity prices

						12 - 18 month forward
	Dec-18	Dec-19	Dec-20	Dec-21	LTM Sep-22	view
(CFO Pre-W/C) / Net Debt	37.7%	34.8%	42.8%	31.8%	32.2%	25% - 30%
RCF / Net Debt	14.9%	17.2%	22.9%	17.5%	24.6%	15% - 20%
FCF / Net Debt	-13.55%	-9.80%	-3.62%	-22.70%	-23.8%	-30%20%
(CFO Pre-W/C + Interest) / Interest Expense	28.6x	28.5x	26.6x	25.3x	34.2x	9x - 14x

Ratios are based on adjusted financial data and incorporate our Global Standard Adjustments for Non-Financial Corporations. For definitions of our most common ratio terms, please see the accompanying <u>User's Guide</u>.

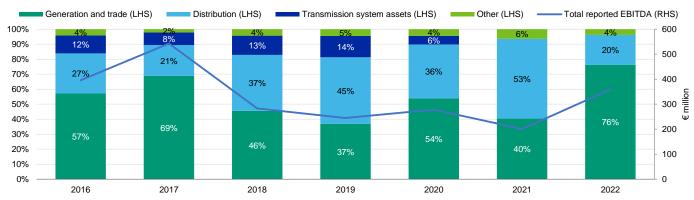
Source: Moody's Financial Metrics™

Profile

Latvenergo is the dominant vertically integrated utility in Latvia, with a total installed capacity of around 2.6 gigawatts (GW), representing around 90% of the total Latvian electricity generation capacity. Latvenergo's main power plants comprise three hydropower plants (HPPs, 1.6 GW) on River Daugava, and two gas-fuelled combined heat and power plants (CHPPs, 1.0 GW) in Riga. The group also owns and operates the Latvian electricity distribution network. Until June 2020, Latvenergo also owned the Latvian electricity transmission grid assets, which were then transferred to Augstprieguma tikls AS (AST) as the state-owned transmission system operator (TSO). Latvenergo is 100% owned by the Latvian government.

Exhibit 3

Latvenergo's earnings are driven by the volatile contribution from its generation business EBITDA (RHS) and segmental share (LHS)



Sources: Company and Moody's Investors Service

Detailed credit considerations

Small size exposes Latvenergo to changes in the Nordic and Baltic electricity markets

Latvenergo is the dominant utility in Latvia and one of the leading electricity end-suppliers across the three Baltic countries, with aggregate sales of around 5.5 terawatt hours (TWh) and an overall market share of around 20% in 2022. Despite its strong position in the domestic market, Latvenergo's scale remains relatively small in the pan-European context, which leaves the company exposed to changes in the relevant Nordic and Baltic electricity markets.

Variable output of HPPs is a key driver of the company's significant earnings volatility

Latvenergo partly meets its end-supply obligations with generation from its own HPPs and CHPPs, whose total output varies considerably, with levels ranging from 3.8 TWh to 5.7 TWh between 2015 and 2022 (see Exhibit 4), because of the high reliance on hydropower and the variable utilisation of CHPPs with high seasonal correlation.

The annual production of Latvenergo's HPPs ranges between 1.8 TWh and 4.3 TWh, depending on the hydrological conditions. During the spring flood period, which typically lasts two to three months, the generation output exceeds the domestic demand, thus supporting electricity exports. With an HPP output of 2.7 TWh reported under the unaudited 2022 fourth-quarter interim results, the year constitutes another strong hydro year after 2021 and 2020, when the full-year HPP output was more than 2.6 TWh and 2.5 TWh, respectively.

The variability of the hydro generation output across years, combined with a strong seasonal component, exposes Latvenergo to significant volatility in earnings, because of HPPs' low fixed-cost nature.

100

50 0

2022

Own generation - Daugava HPPs (LHS)

Own generation - Own generation - Own generation - Riga CHPPs (LHS)

Own generation - other (LHS)

Exhibit 4

Latvenergo's Generation and Trade (G&T) earnings show a close correlation to hydro production Generation output by technology versus earnings from G&T

2016 20 Sources: Company and Moody's Investors Service

2,000

1,000

The steep increase in day-ahead power prices in the Latvian price bidding area in 2022 is earnings-accretive for the company's HPP operations. The average Latvian day-ahead price rose by almost 228% to around €226 per megawatt hour (MWh) in the first nine months of 2022 from that in the year-earlier period, following the outbreak of the military conflict in Ukraine and associated gradual abandonment of Russian energy resources. However, because the period of very high prices (see Exhibit 6) partly coincided with the trough of the Latvian hydrology cycle between June and October 2022, Latvenergo's hydro activities did not reap the maximum benefit of higher electricity prices, which peaked at €468/MWh in August 2022. Throughout the fourth quarter of 2022, Latvian power prices averaged at €226/MWh but remained less volatile than in the previous nine months of 2022.

2019

2020

2021

Price volatility of relevant commodities leads to low visibility into CHPPs' earnings contribution

Latvenergo's CHPPs run mainly in the cogeneration mode during the heating season from October through March. In 2021, the Riga CHPPs, with an installed thermal capacity of 1.6 GW, provided more than 50% of the heat supplied to the district heating system of the city, generating regulated income.

In addition, Latvenergo receives capacity payments, which amount to €21 million annually for 2022-28 and offset the plants' fixed costs. The amounts were substantially reduced as a result of the restructuring of the capacity scheme in August 2017 (for details, see <u>Latvenergo AS - Capacity payment restructuring mitigated by significant financial flexibility</u>, published on 7 September 2017, and <u>Latvenergo AS - Update to credit analysis</u>, published on 19 March 2019).

The CHPPs' earnings are exposed to seasonal weather conditions, as well as volatile gas and high carbon prices. The effects on operating costs are mitigated by Latvenergo's policy to hedge its gas and carbon requirements to a large degree; and by the fact that the regulator will approve district heating tariffs adjusted for commodity price movements.

Earnings from the heat plant operations are further underpinned by income from power sales, which particularly benefited from the rise in power prices since 2021; the capacity payments, covering fixed operating costs; and the technical flexibility of the plants, which allows load adaptation to market conditions on short notice. However, since Latvenergo does not report isolated figures of the CHPPs' contribution to G&T earnings, there is low visibility into whether or not the plants support the segment's profitability.

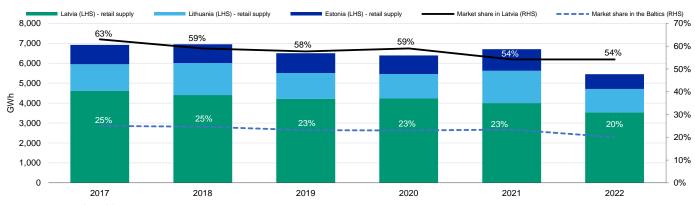
Leading retail supplier in Latvia and the Baltics, but intense competition has reduced the domestic market share

Except for 2021, when volumes sold recovered after the coronavirus pandemic, the group's domestic market share and volumes sold have steadily decreased since 2015, when electricity supply to households in Latvia was liberalised. Notwithstanding, volume reductions are also strategically desired to balance production and sales volumes. Lower retail supply volumes are mitigated by Latvenergo's relatively stable market shares in Estonia and Lithuania of around 10% each, and a retention level well above 80% in the less volatile Latvian household segment, observed over the past few years. The company seeks to defend its competitive position at home and grow abroad by expanding its service offer through the retail supply of gas, solar micro-installations and digital smart home services.

Exhibit 5

Latvenergo's sales are declining

Retail sales and retail market shares in Latvia and the Baltics



Sources: Company and Moody's Investors Service

The retail operations form part of the company's G&T segment. Their profitability is a function of the share of end-supply volumes being covered by the company's own power generation from HPPs and CHPPs, which has a strong seasonal component; and of the scope and price levels of electricity procured in the wholesale market, because on an annual basis, the company's sales volumes exceed its electricity production.

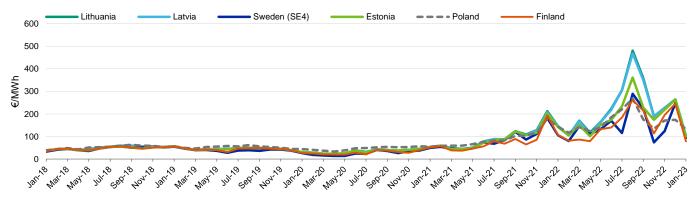
Latvenergo's short position in generation exposes its supply business to price volatility

Latvenergo covers its supply shortfall with imports from the NordPool (NP) electricity exchange, where the company also sells any excess output from its HPPs during the spring flood period. Because of its volatile own generation, in combination with fixed-price tariff offers, and the increased interconnection capacities since 2015 between the Baltic and the much larger Nordic countries as well as Poland, Latvenergo is exposed to Nordic power generation volatility, reflected in converging power prices that are significantly driven by Nordic hydrology.

Generally, Baltic power prices tend to be positioned between the lower Nordic and the higher Polish prices in the day-ahead market. The ensuing risk of price volatility is mitigated by a positive correlation between rising electricity prices (often influenced by a low hydro output) and higher CHPP production; the use of derivative financial instruments; and the complementary hydrology seasons in Latvia and Southern Sweden, the last factor defining the lower end of the NP price range.

Because the Baltic retail markets are largely liberalised, Latvenergo in H2 2021 was able to make several end-user price adjustments to mitigate the energy price rises. However, the positive effect of such adjustments on G&T earnings is subject to lags because of notice periods and negotiations with customers, especially in relation to fixed-price tariffs; customer churn as end-users seek cheaper offers; and the magnitude of the price increases compared with the cost increases. Accordingly, the benefit from these measures largely adds to Latvenergo's earnings in 2022.

Exhibit 6
Prices in the Baltics and NP reflect close links, with Southern Sweden's hydro capacity acting as a price floor Day-ahead electricity prices expressed in €/MWh



Lithuanian and Latvian prices are nearly identical for most of the time; therefore, the Lithuanian graph is barely visible. Sources: NordPool, Polish Power Exchange and Moody's Investors Service

Relatively stable earnings from regulated network activities, though high power prices currently weigh on profitability

Latvenergo also owns and operates the country's electricity distribution network through its 100% subsidiary Sadales tīkls AS (ST), which is regulated by the Public Utilities Commission (PUC).

Since the beginning of 2020, ST has been operating under a new regulatory framework, which is based on a revenue cap approach with an efficiency factor and a regulatory account mechanism, and has a five-year regulatory period. ST's exposure to volume risk is limited by in-period adjustments for revenue deviations of up to 3%, whereas larger differences would be booked to the regulatory account and could be recovered in the next regulatory period.

The current regulatory period commenced on 1 January 2020, with the PUC decreeing an average 5.5% tariff decrease, which is to be compensated for over time by an efficiency programme and higher distributed volumes. The efficiency programme aimed to achieve €26 million in cost savings at ST by 2022, and mostly consisted of controllable staff and overhead cost reductions, and the rollout of smart metres. The programme was successfully concluded end of 2022 with a reduction in headcount of more than 900 and a 98% share of installed metres being smart meters.

As for the regulatory asset base (RAB) and the weighted average cost of capital (WACC), both will remain constant throughout the current regulatory period, which will ensure stable returns on the RAB through 2024. Following a revaluation of the RAB as of year-end 2020, its value now amounts to around €1.6 billion, while the WACC was determined at 3.3% (pretax, real, or 4.6% nominal).

The introduction of a new principles-based regulatory framework provides greater transparency over methodological details, although it lacks the sophistication of the regulatory frameworks prevalent in Western Europe.

As of 31 December 2022, the division reported stable revenue but a 33% EBITDA decline year over year. The decline was driven mainly by a rise in costs stemming from the high electricity power prices and general cost inflation. High power prices affect the distribution operations adversely because physical grid losses need to be covered by procuring the required volumes at prevailing spot market prices, which cannot be recovered through currently applicable tariffs.

To address this situation, in November 2022, ST submitted a request to the regulator for a 75% higher distribution tariff to be applicable from 1 July 2023. The requested tariff also considers the transmission system operator's planned 100% higher electricity transmission tariff from 1 July 2023. Currently, requested tariffs are still under discussion. As the tariff request is based on actual electricity prices the ultimate tariff increase will likely be lower than 75%, given the reduced price levels since November 2022. From a credit risk perspective, tariffs allowing for a better cost recovery would support credit metrics accordingly. Conversely, a tariff that is not adequately compensating for higher expenses would mean reduced earnings and thus would be credit negative.

Subject to the approval of a tariff increase sufficient to address the higher costs, we expect 2023 earnings for the distribution segment to recover to levels seen before the increase in electricity prices since late 2021.

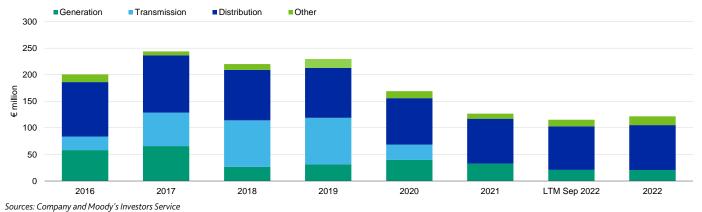
Latvenergo's investment plan under the new 2022-2026 strategy will result in rising debt

In March 2022, Latvenergo's supervisory board approved the new medium-term strategy 2022-26, which includes reinforced investments in renewables, underpinning Latvia's goal to become climate neutral by 2050. With the new strategy, Latvenergo essentially follows a path similar to other regional utilities, such as its Baltic peer Eesti Energia AS (Baa3 stable), investing mainly in onshore wind and solar installations to increase capacities.

We expect Latvenergo to invest a total of €2.5 billion in its asset base over 2022-26, most of which is allocated to the buildout of 600 megawatts (MW) of onshore wind and solar capacity, and for the lifetime extension and capacity increase of the Daugava HPPs. Lastly, the company plans to proceed with the modernisation of its grid assets, which will help to support the regulated earnings base of the group. Until 2030, Latvenergo plans to grow its renewables portfolio further to 2,300 MW of installed renewables capacity, and its plan includes the development of offshore wind farms between 2026 and 2029, together with RWE AG (Baa2 stable) as a strategic partner. The two companies signed a memorandum of understanding in September 2022.

Additional renewable capacities, in particular solar plants, could be helpful to reduce Latvenergo's short position in their retail supply operations and mitigate the company's exposure to price volatility during the summer months, when hydrology levels are at seasonable lows. However, the investment plan, relative to Latvenergo's operating scale, is ambitious, entails execution risk and will require additional debt for the business as it is only partly financed by operating cash flows.

Exhibit 7
Latvenergo's capital investments were at low levels over the last few years



The new 2022-2026 strategy includes a reduced annual payout ratio of 64% of the unconsolidated net profits of the parent company Latvenergo AS. Historically, the government had a track record of extracting a higher share of net profits as dividends, that averaged above 80% of the parent company's net profits reported over 2017-2021.

Latvenergo's financial metrics will be volatile over the next few years, but are likely to remain within the guidance

Reported FFO in 2022 of around €400 million under the unaudited fourth quarter results substantially exceeded the exceptionally weak FFO reported in 2021, despite another hike in power prices since the start of the military conflict in Ukraine. This is because in 2022, unlike in 2021, high electricity wholesale prices partly coincided with the spring-flood period, allowing Latvenergo a high remuneration for excess HPP-based electricity generation. The increase in remuneration contained adverse earnings effects from respectively heightened power procurement costs to cover retail supply obligations. Additionally, earnings and cash flow were supported by the successful application of derivative financial instruments and an increase in electricity sales prices, together with reduced power demand in the context of the high price environment.

In 2023, FFO is expected to normalize, yet to remain above the levels seen over 2018-2020, but lower than in 2022. This is based on our expectations of an ongoing adjustment of electricity retail prices to the market situation, constant HPP production levels with no significant mismatch between the prices at which excess HPP output is sold and electricity is procured, and no adverse tariff decisions in the distribution network segment.

Growth investments will result in negative free cash flow over the coming two to three years. However, we forecast leverage metrics, measured as FFO/net debt, to remain above our guidance for the current Baa2 rating of the low 20s in percentage terms. However, we also expect some volatility in metrics over the period (see Exhibit 1). This compares with the company's financial policy, which was updated in the scope of the new strategy, and includes a minimum target of 25% FFO/net debt instead of a net debt/EBITDA target of "below 3.0x" under the previous strategy.

Government support considerations

Latvenergo's Baa2 rating incorporates two notches of uplift for potential government support from its standalone credit quality, or Baseline Credit Assessment (BCA), of ba1. The uplift reflects the credit quality of the Latvian government, which owns 100% of Latvenergo's shares, as well as our assessment of a strong probability of government support for the group in the event of financial distress, and high default dependence (that is, the degree of exposure to common drivers of credit quality). The Latvian government currently has no plans to divest its stake in Latvenergo in the near term, which underpins our support assumption incorporated into the final rating.

ESG considerations

Latvenergo AS' ESG Credit Impact Score is Neutral-to-Low CIS-2

Exhibit 8

ESG Credit Impact Score



Source: Moody's Investors Service

Latvenergo's ESG Credit Impact Score is neutral/low (CIS-2), indicating that its ESG attributes have no discernible impact on its rating. Its score reflects moderate environmental, social and governance risks. The effect of ESG risks to the rating is mitigated by our expectation that Latvenergo's government shareholder would support the company, if this were to become necessary.

Exhibit 9
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental

Latvenergo's moderately negative environmental risk (**E-3** issuer profile score) reflects the company's generation mix consisting of hydro and gas-fueled cogeneration plants which are exposed to risks arising from volatile hydrology and stricter carbon emission policies, respectively. Latvenergo's hydro plants are exposed to resource volatility related to changing climate patterns, but the company's flexible cogeneration plants mitigate the impact of low hydrology on earnings. Climate-related incidents, such as storms,

may also have a negative impact on the group's electricity distribution grid assets, but since this is a regulated business, we expect any damages to be reflected in tariff determinations over time.

Social

Latvenergo's moderately negative social risk (S-3 issuer profile score) reflects risks related to demographic & social trends, which include adverse regulatory decisions or government intervention in regulatory affairs. While the economic regulation of the distribution grid operations has allowed the company to recover its costs in a timely manner, the current framework was only introduced in 2020 and has yet to build a track record of predictability and reliability.

Governance

Latvenergo's moderate governance risk (**G-3** issuer profile score) reflects that the Latvian government as the sole owner of Latvenergo has a track record of implementing measures that limit the company's profitability and reduce its equity base, such as regularly determining large dividend payouts; the restructuring of capacity payments, including capital release; the unbundling of transmission assets, again accompanied by a decrease in equity; and the reduction in distribution tariffs. While the reduction in tariffs was requested by the company from the PUC, it is notable that the Minister of Economics in June 2019 cited the failure to reduce distribution tariffs as one of the reasons for his dismissal of the supervisory board at the time. All measures are driven by the government's aim to keep end-user prices of electricity low. We view the reduction in the capital buffer and high extraction of dividends as credit negative, but we understand that the government's actions are strictly subject to preserving Latvenergo's solid credit profile.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis

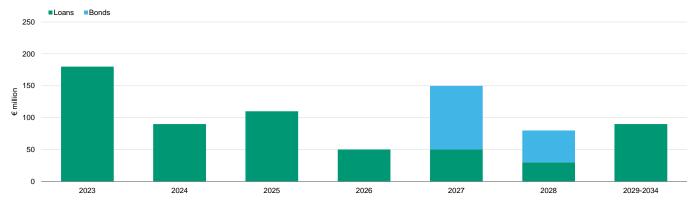
At 31 December 2022, Latvenergo reported €113 million of unrestricted cash and cash equivalents. The company also has access to a total of €290 million committed credit lines of which €119 million were drawn at the end of 2022. The lines are predominantly used for working capital needs and were repaid in early 2023 on account of a reduction in commodity prices. The credit lines mature in H1 2024. Liquidity is additionally supported by €200 million of new term loans, maturing 2029 which were secured in October and November 2022 but remained undrawn at end of 2022. Lastly, the company successfully issued €50 million of green bonds under their green bond framework in February 2023.

We expect the available and newly secured funds to be sufficient to cover €181 million debt maturities and dividend payments in 2023, and forecast negative free cash flow of around €230 million, driven mainly by the company's targeted growth investments. Notwithstanding the fact that operating cash flow generation can be subject to volatility, there could be additional external financing needs in 2023, which would also depend on the level of actual capital expenditure. Latvenergo has good access to debt capital markets and strong banking relationships, which are underpinned by recent debt issuances in a difficult market environment.

Exhibit 10

Latvenergo has a well-spread debt maturity profile and sufficient liquidity

Debt repayment schedule (as of 31 December 2022)



Sources: Company and Moody's Investors Service

Structural considerations

The Baa2 senior unsecured rating of Latvenergo's outstanding green bonds reflects the absence of structural and contractual subordination of the green bond creditors to the claims of other Latvenergo group lenders.

Methodology and scorecard

The principal methodologies used in rating Latvenergo are <u>Unregulated Utilities and Unregulated Power Companies</u>, published in May 2017, and <u>Government-Related Issuers</u>, published in February 2020. Based on the company's forecast financial results, the scorecard-indicated outcome is Baa3, which is above the assigned BCA of ba1. The BCA also incorporates the exposure to market developments in the wider Nordic/Baltic electricity market; uncertainties related to the market transition in Latvia; and volatility in the company's hydro generation, limiting the visibility into its cash flow generation.

Exhibit 11

Rating factors

Latvenergo AS

Unregulated Utilities and Unregulated Power Companies Industry [1][2]	Curre LTM 9/30		Moody
Factor 1 : Scale (10%)	Measure	Score	Me
a) Scale (USD Billion)	В	В	-
Factor 2 : Business Profile (40%)	<u>.</u>		
a) Market Diversification	Ва	Ва	
b) Hedging and Integration Impact on Cash Flow Predictability	Ва	Ва	
c) Market Framework & Positioning	Ва	Ва	
d) Capital Requirements and Operational Performance	A	Α	
e) Business Mix Impact on Cash Flow Predictability	Baa	Baa	
Factor 3 : Financial Policy (10%)	·		
a) Financial Policy	Baa	Baa	
Factor 4 : Leverage and Coverage (40%)			
a) (CFO Pre-W/C + Interest) / Interest (3 Year Avg)	28.1x	Aaa	9>
b) (CFO Pre-W/C) / Net Debt (3 Year Avg)	34.3%	Baa	25%
c) RCF / Net Debt (3 Year Avg)	21.4%	Baa	15%
Rating:	<u> </u>	-	
a) Scorecard-Indicated Outcome	 -	Baa2	
b) Actual Rating Assigned			
Government-Related Issuer	Factor		
a) Baseline Credit Assessment	ba1		
b) Government Local Currency Rating	A3	·	
c) Default Dependence	High		
d) Support	Strong		
e) Actual Rating Assigned	Baa2		-

Moody's 12-18 Month Forward View As of March 2023 [3]							
Score							
В							
Ва							
Ва							
Ва							
Α							
Baa							
Baa							
Α							
Baa							
Baa							
Baa3							
Baa2							

^[1] All ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.

Ratings

Exhibit 12

Category	Moody's Rating
LATVENERGO AS	
Outlook	Stable
Issuer Rating	Baa2
Source: Moody's Investors Service	

^[2] As of 9/30/2022.

^[3] This represents our forward view, not the view of the issuer, and unless noted in the text, does not incorporate significant acquisitions and divestitures. Source: Moody's Investors Service

Appendix

Exhibit 13

Peer comparison
Latvenergo AS

	Latvenergo AS		Eesti Energia AS		CEZ, a.s.		PGE Polska Grupa Energetyczna S.A.			Hrvatska Elektroprivreda d.d.					
		Baa2 Stable		Baa3 Stable		Baa1 Stable		Baa1 Stable		Baa2 Stable					
	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM	FYE	FYE	LTM
(in USD million)	Dec-20	Dec-21	Sep-22	Dec-20	Dec-21	Sep-22	Dec-20	Dec-21	Sep-22	Dec-20	Dec-21	Sep-22	Dec-20	Dec-21	Jun-22
Revenue	883	1,260	1,714	952	1,553	2,309	9,309	10,166	12,671	11,760	13,672	16,744	1,980	2,334	2,570
EBITDA	290	179	271	242	371	691	2,829	3,002	4,710	1,452	2,374	2,290	648	547	81
Total Assets	4,109	3,952	3,959	4,508	4,982	5,603	32,016	53,442	65,351	21,875	22,064	19,873	7,236	7,096	6,848
Total Debt	917	912	958	1,241	1,088	968	8,573	8,311	9,954	3,240	2,826	1,985	802	805	1,147
Net Debt	794	801	907	1,037	863	596	8,291	7,092	6,739	2,139	1,208	(258)	222	147	310
FFO / Debt	37.0%	27.9%	30.5%	20.1%	29.3%	59.9%	31.3%	32.7%	45.3%	67.9%	106.5%	153.2%	83.5%	62.7%	10.1%
RCF / Debt	19.8%	15.4%	23.3%	20.1%	29.3%	54.2%	21.4%	17.3%	45.2%	67.9%	106.5%	153.2%	70.1%	46.9%	-0.1%
(FFO + Interest Expense) / Interest Expense	26.6x	25.3x	34.2x	7.2x	10.9x	25.4x	10.4x	11.8x	18.9x	27.7x	51.3x	485.0x	21.1x	17.2x	4.8x
Debt / Book Capitalization	26.1%	27.4%	29.2%	33.4%	27.8%	21.3%	37.8%	46.3%	64.1%	21.6%	19.0%	14.4%	15.8%	16.6%	24.4%

All figures and ratios are calculated using our estimates and standard adjustments for the consolidated group. FYE = Financial year end. Source: Moody's Financial $Metrics^{TM}$

9 March 2023

Exhibit 14
Select historical adjusted financial data
Latvenergo AS

		FYE	FYE	FYE	FYE	LTM
NECOME STATEMENT Same state Same stat	(in FUD million)					
Revenue 839 842 773 1,065 1,580 EBITDA 202 223 254 151 250 EBIT 34 60 96 (7) 88 Interest Expense 10 10 11 9 9 Net incrome 33 59 93 (2) 93 SALANCE SHEET Net Property Plant and Equipment 3,304 2,758 2,835 2,835 3,031 Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Cash FLOW 1,495 1,607 1,248 1,359 1,679 Cash FLOW FRO 262 268 278 224 298 Cash Flow From Operations (FFO) 303 315 <t< th=""><th></th><th>Dec-16</th><th>Dec-19</th><th>Dec-20</th><th>Dec-21</th><th>3ep-22</th></t<>		Dec-16	Dec-19	Dec-20	Dec-21	3ep-22
EBITDA 202 223 254 151 250 EBIT 34 60 96 (7) 88 Interest Expense 10 10 11 9 9 Net income 33 59 93 (2) 93 BALANCE SHEET Wet Property Plant and Equipment 3,304 2,758 2,835 2,835 3,031 Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 Cash FLOW 262 268 278 224 298 Cash Flow From Operations (FFO) 303 315 291 131 17 Dividends 159 135 <td></td> <td>839</td> <td>842</td> <td>773</td> <td>1 065</td> <td>1 580</td>		839	842	773	1 065	1 580
EBIT 34 60 96 (7) 88 Interest Expense 10 10 11 9 9 Net income 33 59 93 (2) 93 BALANCE SHEET Net Property Plant and Equipment 3,304 2,758 2,835 2,835 3,031 Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 Cash Flow Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (EBITDA					
Net income 10 10 11 9 9 9 Net income 33 59 93 (2) 93 Net income 33 59 93 (2) 93 BALANCE SHEET	EBIT					
Net Property Plant and Equipment 3,304 2,758 2,835 2,835 3,031 Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 Cash FLOW	Interest Expense	10				
BALANCE SHEET Net Property Plant and Equipment 3,304 2,758 2,835 2,835 3,031 Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) </td <td>Net income</td> <td>33</td> <td>59</td> <td>93</td> <td>(2)</td> <td>93</td>	Net income	33	59	93	(2)	93
Total Assets 3,806 3,865 3,358 3,476 4,041 Total Debt 820 887 750 802 978 Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCC / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	BALANCE SHEET					
Total Debt 820 887 750 802 978	Net Property Plant and Equipment	3,304	2,758	2,835	2,835	3,031
Cash & Cash Equivalents 125 116 101 97 52 Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 CASH FLOW CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) NTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8%	Total Assets	3,806	3,865	3,358	3,476	4,041
Net Debt 695 771 649 705 926 Total Liabilities 1,495 1,607 1,248 1,359 1,679 CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3%	Total Debt	820	887	750	802	978
Total Liabilities 1,495 1,607 1,248 1,359 1,679 CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Cash & Cash Equivalents	125	116	101	97	52
CASH FLOW Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Net Debt	695	771	649	705	926
Funds from Operations (FFO) 262 268 278 224 298 Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Total Liabilities	1,495	1,607	1,248	1,359	1,679
Cash Flow From Operations (CFO) 303 315 291 131 17 Dividends 159 135 129 101 70 Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	CASH FLOW					
Dividends 159 135 129 101 70	Funds from Operations (FFO)	262	268	278	224	298
Retained Cash Flow (RCF) 103 133 149 123 228 Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Cash Flow From Operations (CFO)	303	315	291	131	17
Capital Expenditures (239) (255) (185) (191) (168) Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Dividends	159	135	129	101	70
Free Cash Flow (FCF) (94) (76) (23) (160) (221) INTEREST COVERAGE (FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Retained Cash Flow (RCF)	103	133	149	123	228
NTEREST COVERAGE	Capital Expenditures	(239)	(255)	(185)	(191)	(168)
(FFO + Interest Expense) / Interest Expense 28.6x 28.5x 26.6x 25.3x 34.2x LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	Free Cash Flow (FCF)	(94)	(76)	(23)	(160)	(221)
LEVERAGE FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	INTEREST COVERAGE					
FFO / Debt 32.0% 30.2% 37.0% 27.9% 30.5% RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	(FFO + Interest Expense) / Interest Expense	28.6x	28.5x	26.6x	25.3x	34.2x
RCF / Debt 12.6% 15.0% 19.8% 15.4% 23.3% Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	LEVERAGE					
Debt / EBITDA 4.1x 4.0x 2.9x 5.3x 3.9x	FFO / Debt	32.0%	30.2%	37.0%	27.9%	30.5%
	RCF / Debt	12.6%	15.0%	19.8%	15.4%	23.3%
Net Debt / EBITDA 3.4x 3.5x 2.6x 4.7x 3.7x	Debt / EBITDA	4.1x	4.0x	2.9x	5.3x	3.9x
	Net Debt / EBITDA	3.4x	3.5x	2.6x	4.7x	3.7x

All figures are calculated using our estimates and standard adjustments for the consolidated group. Source: Moody's Financial Metrics $^{\text{TM}}$

Exhibit 15 Moody's-adjusted debt breakdown Latvenergo AS

		FYE	FYE	FYE	FYE	LTM
(in EUR million)		Dec-18	Dec-19	Dec-20	Dec-21	Sep-22
As Reported Total Debt		814	888	750	802	978
	Leases	8	0	0	0	0
	Non-Standard Adjustments	(2)	(1)	0	0	0
Moody's Adjusted Total Debt		820	887	750	802	978

All figures are calculated using our estimates and standard adjustments for the consolidated group. Source: Moody's Financial Metrics $^{\text{TM}}$

Exhibit 16

Moody's-adjusted EBITDA breakdown Latvenergo AS

	FYE	FYE	FYE	FYE	LTM
(in EUR million)	Dec-18	Dec-19	Dec-20	Dec-21	Sep-22
As Reported EBITDA	283	245	280	201	300
Unusual Items - Income Stat	ement (83)	(21)	(25)	(50)	(50)
L	eases 1	0	0	0	0
Moody's Adjusted EBITDA	202	223	254	151	250

All figures are calculated using our estimates and standard adjustments for the consolidated group. Source: Moody's Financial Metrics $^{\text{TM}}$

© 2023 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved. CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the credit rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service, Inc. and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Charter Documents - Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on https://ratings.moodys.com for the most updated credit rating action information and rating history.

REPORT NUMBER 1357029

