

L'Air Liquide S.A.

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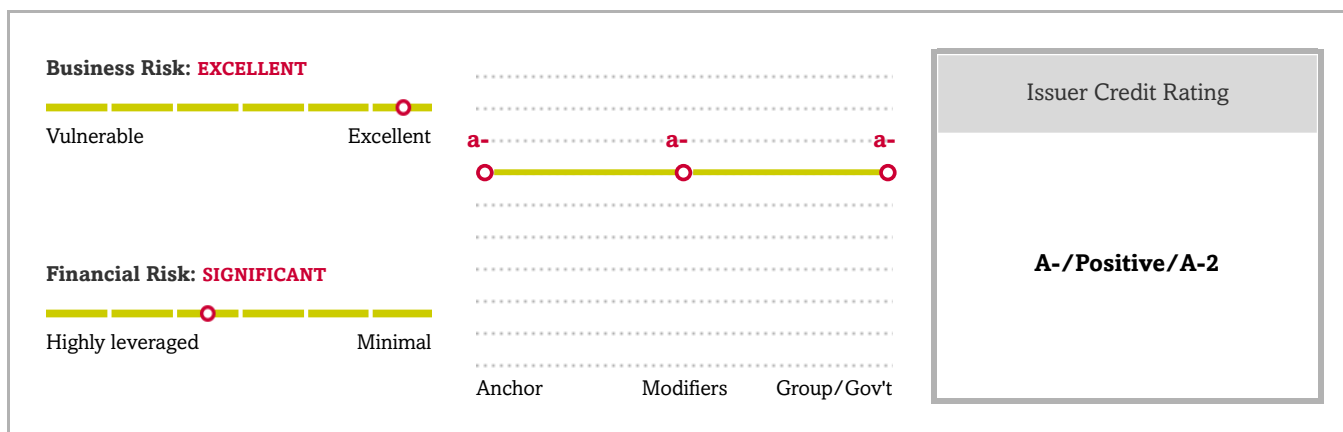
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L'Air Liquide S.A.



Credit Highlights

Overview

Key strengths	Key risks
Leading global player in the industrial gases sector with supportive market fundamentals.	Marginal variability in top-line growth linked to regional macroeconomic changes, cyclical nature of some markets, and currency exposures.
Activity and profitability are highly resilient, benefiting from long-term contracts with Take-or-Pay clauses and exposure to stable sectors including health care.	Fairly high capital expenditure (capex), including for significant growth projects.
Strong diversification by geography and end-markets.	A shareholder-friendly, but predictable, dividend policy.
High profitability, with EBITDA margins expected to be above 28%, and a track record of achieving efficiency targets and realizing synergies.	Acquisitive track record, including continued bolt-ons, and potential for larger acquisitions (although not factored into our base case).
High, predictable, and recurring free cash flow, enabling efficient debt leverage management, as shown following the Airgas acquisition in 2016, with funds from operations (FFO) to debt promptly recovered and likely to exceed 30% in 2021-2022.	

The resilient business model will limit the downside of the global recession. We view Air Liquide's business model as resilient given its exposure to diverse end-markets and geographies and the significant proportion of long-term contracts. We expect strong growth in the health care segment driven by the high demand for consumable medical oxygen this year. Long-term contracts across the segments, with Take-or-Pay clauses in large industries should also limit the negative effects of the pandemic. In Air Liquide's industrial merchant segment, we understand that 55% of sales are resilient, given that revenues from rentals are mainly fixed and considering the group's exposure to defensive end-markets such as food and pharmaceuticals. However, this will only partly mitigate pressures in this segment given the exposure to industrial production and cyclical markets such as auto and construction.

We anticipate improved profitability mainly due to proactive cost management. We expect margins to further increase this year supported by efficiency gains under the NEOS program, which we still expect to deliver €400 million by 2021, while the pandemic has raised incentives to accelerate the program targets. The group's efficiency gains increased by 18% year-over-year reaching €91 million in the first quarter of 2020. These mainly relate to the rollout of digital tools, reduced logistics costs, optimization of the operation of production units, and purchasing gains.

Air Liquide has also implemented an additional program to adjust fixed costs, for example by readjusting the workforce and lowering consultancy and travel expenses. We expect this program, coupled with a lower revenue base,

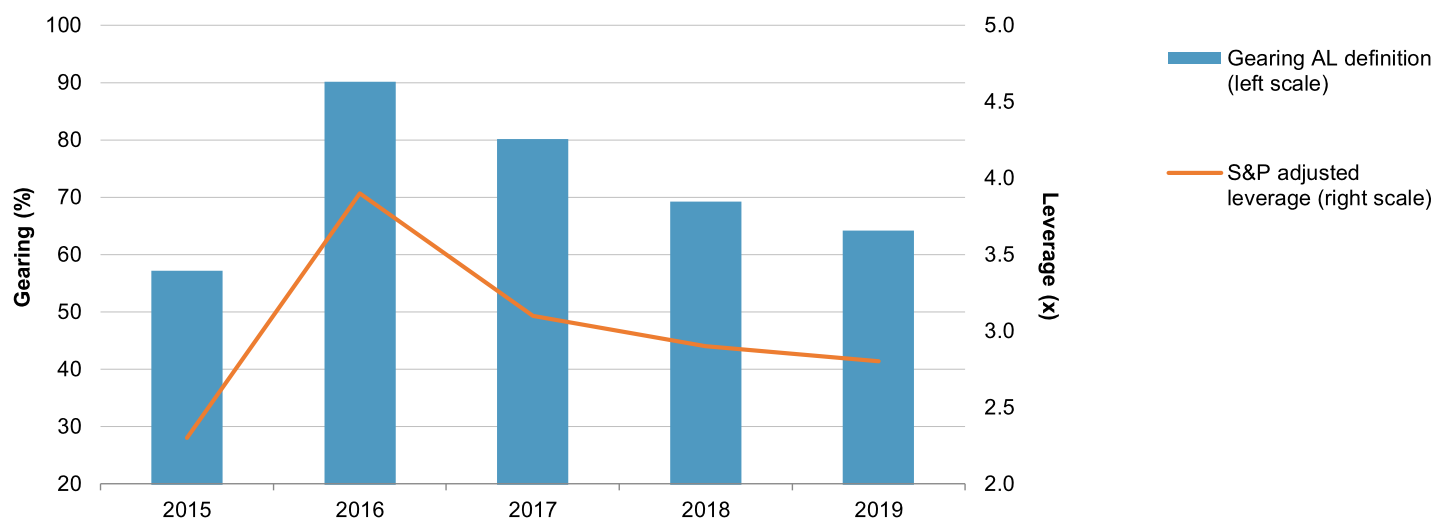
to further boost margins this year.

Finally, we expect management to continue its proactive strategy of reviewing the asset portfolio in order to enhance the group's performance sustainably.

Supportive financial leverage management should strengthen the balance sheet. Financial leverage management has been supportive since the Airgas acquisition in 2016, improving gearing from 90% to about 64% at year-end 2019 (company-defined unadjusted debt to equity) over that period. This is driven by balancing sizable and fairly predictable operational cash flows, capex, and bolt-on acquisitions. We view the shareholder remuneration policy as generally predictable and consistent with profit generation. We expect leverage to further improve this year to levels below 60%, supported by Air Liquide's divestment of Schülke & Mayr, and to reach pre-Airgas acquisition levels next year. The global recession will delay the group achieving its return on capital employed target of 10%, but we do not expect this to impair its ability to reach about 30% adjusted FFO to debt under our calculations.

Chart 1

Supportive Financial Leverage Management



Source: S&P Global Ratings.

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Outlook: Positive

The outlook remains positive, reflecting that we may raise the rating in the next six-12 months, if adjusted FFO to debt improves sustainably above 30%. The balance of management's priorities--improving cash flow generation versus investments and shareholder remuneration--along with explicit financial policy commitment, will be key rating drivers.

Downside scenario

We could revise the outlook to stable if we anticipate FFO to debt will remain below 30%. This could occur if Air Liquide is unable to achieve the expected cost savings, given uncertainties on the recovery in the rest of 2020, following a very challenging second quarter. This could also occur if Air Liquide pursues more sizable investments.

Our Base-Case Scenario**Assumptions**

- Revenues to decline by about 6%-7% in 2020 followed by growth of 5%-6% in 2021.
- S&P Global Ratings-adjusted EBITDA margins improving to 28%-29% in 2020-2021.
- Capex of €2.7 billion-€2.8 billion in 2020 and €2.9 billion-€3.1 billion in 2021.
- Shareholder remuneration of €1.3 billion-€1.5 billion in 2020-2021 assuming a payout ratio of 58%-59%.
- Proceeds from sale of assets of about €900 million in 2020 thanks to the disposal of Schülke & Mayr. We assume minor asset sales in 2021.
- Bolt-on acquisitions of €200 million-€300 million in 2020-2021.

Key Metrics

L'Air Liquide S.A.--Key Metrics*			
	--Fiscal year ended Dec. 31--		
(Bil. €)	2019a	2020e	2021e
EBITDA	5.8	5.7-5.8	6.1-6.2
FFO/DEBT (%)	29.1	29-30	30-31
Debt/EBITDA (x)	2.8	2.6-2.9	2.5-2.8

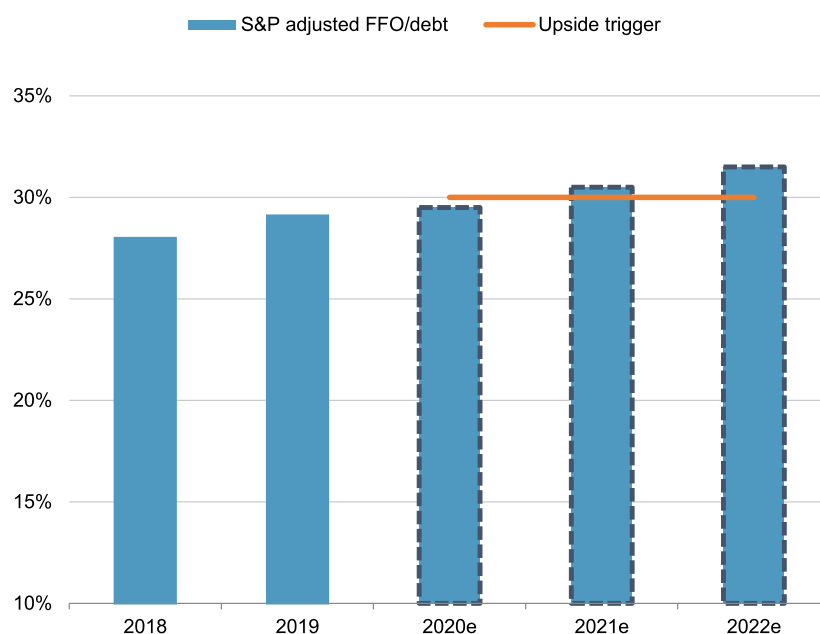
*All figures adjusted by S&P Global Ratings. 2019 year-end debt of \$xx bn consists of net/gross financial debt of \$xx mil. with key adjustments being \$y mil. in leases and \$z mil. in pension. a--Actual. e--Estimate. FFO--Funds from operations.

We have lowered our capex expectation for 2020. As part of its strategy to mitigate the effects of the COVID-19 pandemic, we understand that Air Liquide will focus on investing selectively, especially in its industrial merchant segment where new tanks, trucks, and cylinders might not be needed this year given the reduced activity. We also expect delays in some projects to lead to lower-than-expected spending in the large industries segment.

We still expect FFO to debt to improve to 30% and above from 2021. We believe operating performance, combined with a stronger balance sheet, may support a sustainable improvement in FFO to debt toward 30% and above. If this level is sustained, we could upgrade Air Liquide to 'A' in the next six-12 months. The group's financial policy will therefore be key to achieving a higher rating, notably regarding Air Liquide's willingness to maintain long-term FFO to debt level above 30%.

Chart 2

Improving S&P Global Ratings-Adjusted FFO To Debt



FFO--Funds from operations. e--Estimate. Source: S&P Analysis.
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S&P Global Ratings acknowledges a high degree of uncertainty about the evolution of the coronavirus pandemic. The consensus among health experts is that the pandemic may now be at, or near, its peak in some regions, but will remain a threat until a vaccine or effective treatment is widely available, which may not occur until the second half of 2021. We are using this assumption in assessing the economic and credit implications associated with the pandemic (see our research here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

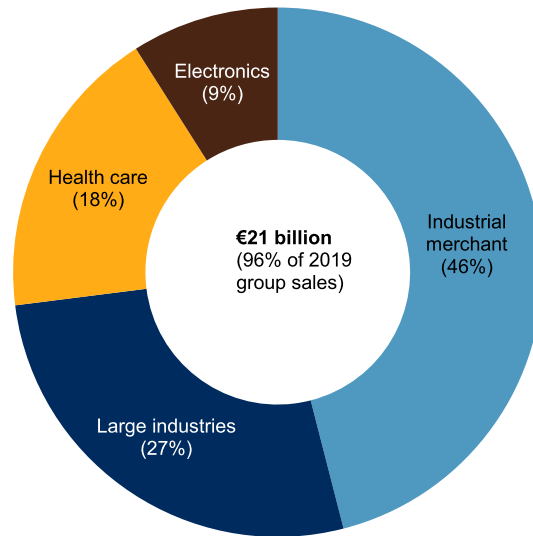
Company Description

Air Liquide is one of the largest global producers of industrial gases, present in 80 countries with 67,000 employees. About 96% of its revenue comes from its gas and services segment. Industrial gas products include oxygen and nitrogen produced in large air separation units, and hydrogen and carbon monoxide produced in steam methane reformers. These are mainly destined for the metals, chemicals, oil refining, health care, food processing, and

aerospace segments. The group's exposure to the industrial merchant segment and to North America has increased substantially following the acquisition of Airgas in 2016, now fully integrated.

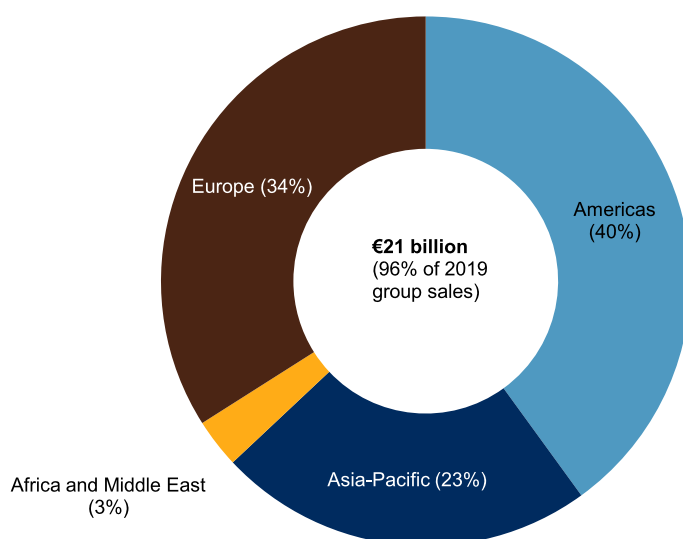
Chart 3

Air Liquide Gas And Services 2019 Revenue By Segments



Source: Air Liquide 2019 Annual Report.

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Chart 4**Air Liquide Gas And Services 2019 Revenue By Region**

Source: Air Liquide 2019 Annual Report.

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Peer Comparison

Table 1

L'Air Liquide S.A.--Peer Comparison

Industry sector: Chemical companies

	L'Air Liquide S.A.	Linde plc	Air Products and Chemicals Inc.
Ratings as of June 28, 2020	A-/Positive/A-2	A/Stable/A-1	A/Stable/A-1
	--Fiscal year ended--		
	Dec. 31, 2019	Dec. 31, 2019	Sept. 30, 2019
(Mil. €)			
Revenue	21,920.1	25,154.6	8,179.3
EBITDA	5,806.4	7,449.8	3,171.3
Funds from operations (FFO)	4,762.6	5,935.8	2,700.8
Interest expense	493.9	278.9	163.8
Cash interest paid	310.0	304.8	173.1
Cash flow from operations	4,326.1	5,717.4	2,758.1
Capital expenditure	2,590.7	3,247.2	1,812.3

Table 1

L'Air Liquide S.A.--Peer Comparison (cont.)			
Industry sector: Chemical companies			
	L'Air Liquide S.A.	Linde plc	Air Products and Chemicals Inc.
Free operating cash flow (FOCF)	1,735.4	2,470.2	945.8
Discretionary cash flow (DCF)	319.3	(1,583.5)	34.2
Cash and short-term investments	1,025.7	2,406.0	2,214.5
Debt	16,377.2	13,385.2	2,069.9
Equity	19,324.4	46,013.0	10,443.9
Adjusted ratios			
EBITDA margin (%)	26.5	29.6	38.8
Return on capital (%)	10.4	5.1	18.0
EBITDA interest coverage (x)	11.8	26.7	19.4
FFO cash interest coverage (x)	16.4	20.5	16.6
Debt/EBITDA (x)	2.8	1.8	0.7
FFO/debt (%)	29.1	44.3	130.5
Cash flow from operations/debt (%)	26.4	42.7	133.2
FOCF/debt (%)	10.6	18.5	45.7
DCF/debt (%)	1.9	(11.8)	1.7

Business Risk: Excellent

We generally view the industrial gases business as more resilient than specialty chemicals. We therefore consider Air Liquide's earnings and cash flows to be more resilient and stable over time. We place a strong emphasis on that aspect of the business when analysing the group's profitability and financial metrics. Consequently, we view the group's EBITDA and profit margins as less volatile than those of most rated peers in the chemicals sector. This is a key consideration in our assessment of the group's excellent competitive position.

Air Liquide is a clear leading player in its market worldwide, which we view as fairly consolidated and benefiting from significant barriers to entry in terms of capital intensity of the asset base, economies of scales, and technological know-how. The group benefits from superior end-market and geographic diversity, with a balanced footprint across all regions. The various business segments also provide diversity from partly uncorrelated end-markets. In addition, the most capital-intensive portion of the business--the large industries segment, which generates a significant portion of group revenues, notably in Asia and Europe--benefits from very long-term contracts, energy cost pass-through clauses, and minimum offtake volumes. Similarly, we view the health care business as bringing stability and growth prospects to the group's revenues and earnings, supported by aging populations in developed markets and rising income in developing economies.

Growth factors remain a key consideration in this highly consolidated market, in our view, where base business activity may show modest sensitivity to macroeconomic conditions, therefore justifying the relatively high investment needs to develop the business. Air Liquide's capex is typically 10%-14% of sales, mostly targeting expansion projects, of which a large part are in growth regions. The investment opportunities portfolio remains quite large, as does the investment

backlog, showing high market activity and dynamic bidding on small and midsize projects in a relatively competitive market. Growth and size aspects explain why mergers and acquisitions are generally high on the agenda in the sector, which we view as a potential risk from a credit perspective.

We view Air Liquide's profitability as above-average for the wider chemicals sector, which is another key strength for our assessment of the business. This is linked to typical market conventions regarding contracts and pricing mechanisms, combined with Air Liquide's strong emphasis on cost management.

The group has raised its targeted total cost savings under its NEOS program to €400 million annually (having exceeded the previous target of €300 million). We note that this target related to efficiencies has been maintained by Air Liquide for 2020 despite the public health crisis. Finally, Air Liquid has implemented an additional program this year aimed at readjusting fixed costs, with specific attention given to the receivables collection. This has been set up in response to COVID-19 disruptions and should help improve profitability with the lower activity and revenues expected in 2020.

Financial Risk: Significant

Air Liquide's capital structure is marked by a fair amount of debt, notably following the Airgas acquisition in 2016, although it has improved since then. This compares with the significant cash flow used to reduce leverage, which we expect will continue in the coming years. It balances our forecast of continued strong operating performance (EBITDA) against our forecasts of investments, working capital needs, dividends, and bolt-on acquisitions.

More specifically, we expect the group will generate about €1.5 billion-€1.6 billion in free operating cash flow in 2020, and €1.6 billion-€1.8 billion in 2021, reflecting estimate of relatively large capex of €2.7 billion-€2.8 billion in 2020 and €2.7 billion-€2.8 billion in 2021. This will leave leeway under our base case for dividends, steadily increasing as per Air Liquide's financial policy, to €1.3 billion-€1.5 billion in 2020-2021.

This should allow the group to reduce leverage further in 2021 and 2022, with adjusted FFO to debt improving to above 30%. The positive outlook reflects the relatively high ratio for the current financial risk profile, meaning that we could revise upward our assessment to intermediate from significant if our base-case materializes.

Financial summary

Table 2

L'Air Liquide S.A.--Financial Summary					
Industry sector: Chemical companies					
	--Fiscal year ended Dec. 31--				
	2019	2018	2017	2016	2015
(Mil. €)					
Revenue	21,920.1	21,011.1	20,349.3	18,134.8	15,818.5
EBITDA	5,806.4	5,427.4	5,213.1	4,692.6	4,192.0
Funds from operations (FFO)	4,762.6	4,463.6	4,029.1	3,492.8	3,848.1
Interest expense	493.9	462.9	594.6	545.7	372.4
Cash interest paid	310.0	288.4	626.3	557.6	343.9

Table 2

L'Air Liquide S.A.--Financial Summary (cont.)					
Industry sector: Chemical companies					
	--Fiscal year ended Dec. 31--				
	2019	2018	2017	2016	2015
Cash flow from operations	4,326.1	4,119.2	4,277.5	3,631.3	2,778.7
Capital expenditure	2,590.7	2,192.8	2,116.0	2,206.3	1,964.8
Free operating cash flow (FOCF)	1,735.4	1,926.4	2,161.5	1,425.0	813.9
Discretionary cash flow (DCF)	319.3	628.1	904.3	406.0	(339.5)
Cash and short-term investments	1,025.7	1,725.6	1,656.1	1,523.0	965.5
Gross available cash	1,025.7	1,725.6	1,656.1	1,523.0	965.5
Debt	16,377.2	15,968.2	16,162.1	18,257.1	9,598.1
Equity	19,324.4	18,207.4	16,718.4	17,125.0	12,770.8
Adjusted ratios					
EBITDA margin (%)	26.5	25.8	25.6	25.9	26.5
Return on capital (%)	10.4	10.2	9.5	10.1	12.7
EBITDA interest coverage (x)	11.8	11.7	8.8	8.6	11.3
FFO cash interest coverage (x)	16.4	16.5	7.4	7.3	12.2
Debt/EBITDA (x)	2.8	2.9	3.1	3.9	2.3
FFO/debt (%)	29.1	28.0	24.9	19.1	40.1
Cash flow from operations/debt (%)	26.4	25.8	26.5	19.9	29.0
FOCF/debt (%)	10.6	12.1	13.4	7.8	8.5
DCF/debt (%)	1.9	3.9	5.6	2.2	(3.5)

Reconciliation**Table 3**

L'Air Liquide S.A.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. €)								
--Fiscal year ended Dec. 31, 2019--								
L'Air Liquide S.A. reported amounts								
	Debt	Shareholders' equity	EBITDA	Operating income	Interest expense	S&P Global Ratings' adjusted EBITDA	Cash flow from operations	Capital expenditure
Reported	13,299.2	18,870.4	5,729.0	3,606.3	420.6	5,806.4	4,712.2	2,636.4
S&P Global Ratings' adjustments								
Cash taxes paid	--	--	--	--	--	(733.8)	--	--
Cash interest paid	--	--	--	--	--	(264.3)	--	--
Trade receivables securitizations	1,133.3	--	--	--	--	--	(80.2)	--
Reported lease liabilities	1,331.4	--	--	--	--	--	--	--
Postretirement benefit obligations/deferred compensation	1,270.5	--	(3.2)	(3.2)	20.9	--	--	--
Accessible cash and liquid investments	(925.7)	--	--	--	--	--	--	--

Table 3

L'Air Liquide S.A.--Reconciliation Of Reported Amounts With S&P Global Ratings' Adjusted Amounts (Mil. €) (cont.)								
Capitalized interest	--	--	--	--	45.7	(45.7)	(45.7)	(45.7)
Share-based compensation expense	--	--	40.2	--	--	--	--	--
Dividends received from equity investments	--	--	4.1	--	--	--	--	--
Asset-retirement obligations	168.7	--	--	--	6.7	--	--	--
Nonoperating income (expense)	--	--	--	26.4	--	--	--	--
Reclassification of interest and dividend cash flows	--	--	--	--	--	--	(260.2)	--
Noncontrolling interest/minority interest	--	454.0	--	--	--	--	--	--
Debt: Put options on minority stakes	99.8	--	--	--	--	--	--	--
EBITDA: Gain/(loss) on disposals of PP&E	--	--	36.3	36.3	--	--	--	--
Depreciation and amortization: Impairment charges/(reversals)	--	--	--	(15.0)	--	--	--	--
Total adjustments	3,078.0	454.0	77.4	44.5	73.3	(1,043.8)	(386.1)	(45.7)
S&P Global Ratings' adjusted amounts								
	Debt	Equity	EBITDA	EBIT	Interest expense	Funds from operations	Cash flow from operations	Capital expenditure
Adjusted	16,377.2	19,324.4	5,806.4	3,650.8	493.9	4,762.6	4,326.1	2,590.7

Liquidity: Adequate

We view Air Liquide's liquidity as adequate, estimating that liquidity sources will exceed liquidity needs by more than 1.2x over the 12 months started March 31, 2020. We also factor in Air Liquide's high credit market standing and prudent liquidity management.

Principal Liquidity Sources	Principal Liquidity Uses
<ul style="list-style-type: none"> Available cash of about €2.7 billion. About €2.5 billion available credit lines, maturing in more than 12 months. About €4.6 billion cash FFO. Asset sales of about €700 million mainly thanks to the disposal of Schülke & Mayr. 	<ul style="list-style-type: none"> Debt maturities of about €3.4 billion, of which June 2020 maturities have been repaid already. Capex of €2.8 billion-€3 billion. Shareholders remuneration of about €1.3 billion-€1.4 billion. Bolt-on acquisitions of €200 million-€300 million.

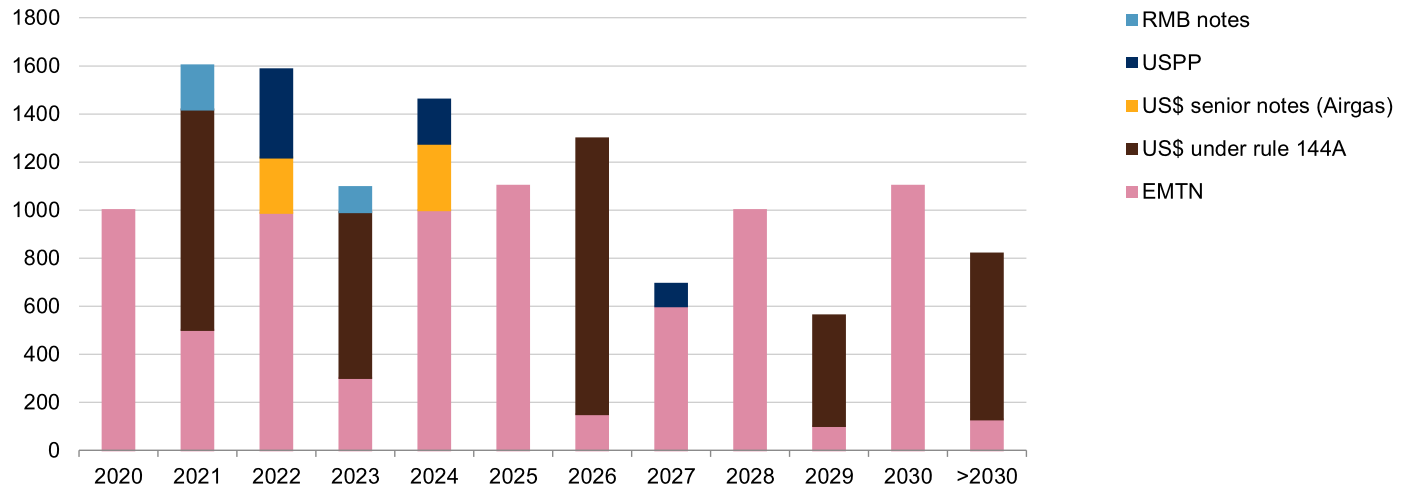
- Working capital outflows.

Debt maturities

Chart 5

Air Liquide--Debt Maturity Profile

As of March 31, 2020--including 2 x €500m April issuance



EMTN--Euro medium-term note. RMB--Chinese renminbi. Source: S&P Global Ratings.

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Environmental, Social, And Governance

Industrial gases imply energy-intensive manufacturing processes, but overall we see this subsector as less exposed than the broader chemicals industry, when balancing both risks and opportunities.

We see Air Liquide as well positioned and in line with industrial gas industry peers with respect to environmental and social risks. The group is heavily focused on environmental factors.

Air Liquide's greenhouse gas emissions are linked to the thermal energy used in its large hydrogen and carbon-monoxide production and cogeneration units--mostly using natural gas--and to the carbon content of the electricity production where the group operates. This encompasses the group's efforts to maximize the efficiency of the production processes, for which it is recognized--under the EU Emissions Trading System--as a sector leader. Air Liquide also favors electricity purchase from low-carbon suppliers, currently representing about 70% of its electricity purchases--that is, from natural gas (methane), renewables, and nuclear. We recognize these initiatives may involve extra costs associated with cleaner energy, although this is partly mitigated by potential energy savings, cost pass-through mechanisms, and savings in terms of emissions quotas. The group aims to reduce its carbon intensity by 30% by 2025 from the 2015 level. Ultimately, the ability to offer more efficient environmental processes also serves Air Liquide's business model by attracting a greater share of outsourcing from industries. Air Liquide is equally highly focused on research in developing blue hydrogen solutions, generated through electrolysis (rather than from methane reforming). We see the development of a greener hydrogen economy as a long-term growth opportunity as well as a strategic challenge.

Issue Ratings - Subordination Risk Analysis

Capital structure

As of year-end 2019, Air Liquide's capital structure primarily comprised total reported gross debt of €13.4 billion, with bonds and private placements of €12.1 billion, bank debt and other financial debt of €1 billion, commercial paper programs of €191 million, and put options of €100 million.

Analytical conclusions

Most of the debt is issued by the group's finance subsidiary--Air Liquide Finance--and guaranteed by holding company L'Air Liquide S.A., in line with its strategy of central financing. We believe the level of structural subordination is marginal. We also take into account that remaining debt tranches integrated from Airgas are fully and irrevocably guaranteed by L'Air Liquide S.A.

We consider Air Liquide's funding sources to be well diversified and improving over time, for example, with the issuance of a dual tranche Panda bond on the Chinese domestic bond market in March 2018.

Risk management policy involves maintaining local debt as the primary financing source in countries considered higher risk.

Ratings Score Snapshot

Issuer Credit Rating

A-/Positive/A-2

Business risk: Excellent

- **Country risk:** Low
- **Industry risk:** Low
- **Competitive position:** Excellent

Financial risk: Significant

- **Cash flow/leverage:** Significant

Anchor: a-

Modifiers

- **Diversification/portfolio effect:** Neutral (no impact)
- **Capital structure:** Neutral (no impact)
- **Financial policy:** Neutral (no impact)
- **Liquidity:** Adequate (no impact)
- **Management and governance:** Strong (no impact)
- **Comparable rating analysis:** Neutral (no impact)

Related Criteria

- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019
- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Use Of CreditWatch And Outlooks, Sept. 14, 2009

Related Research

- Industrial Gas Producer L'Air Liquide Outlook Revised To Positive On Improving Metrics; Affirmed At 'A-/A-2', July 22, 2019

Business And Financial Risk Matrix						
Business Risk Profile	Financial Risk Profile					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly leveraged
Excellent	aaa/aa+	aa	a+/a	a-	bbb	bbb-/bb+
Strong	aa/aa-	a+/a	a-/bbb+	bbb	bb+	bb
Satisfactory	a/a-	bbb+	bbb/bbb-	bbb-/bb+	bb	b+
Fair	bbb/bbb-	bbb-	bb+	bb	bb-	b
Weak	bb+	bb+	bb	bb-	b+	b/b-
Vulnerable	bb-	bb-	bb-/b+	b+	b	b-

Ratings Detail (As Of July 24, 2020)*

L'Air Liquide S.A.

Issuer Credit Rating

A-/Positive/A-2

Issuer Credit Ratings History

22-Jul-2019

A-/Positive/A-2

24-May-2016

A-/Stable/A-2

20-Nov-2015

A+/Watch Neg/A-1

*Unless otherwise noted, all ratings in this report are global scale ratings. S&P Global Ratings' credit ratings on the global scale are comparable across countries. S&P Global Ratings' credit ratings on a national scale are relative to obligors or obligations within that specific country. Issue and debt ratings could include debt guaranteed by another entity, and rated debt that an entity guarantees.

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