

CREDIT OPINION

22 December 2024

Update

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RATINGS

Air Liquide S.A.

Domicile	Paris, France
Long Term Rating	A2
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the [ratings section](#) at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

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CLIENT SERVICES

Americas 1-212-553-1653

Asia Pacific 852-3551-3077

Japan 81-3-5408-4100

EMEA 44-20-7772-5454

Air Liquide S.A.

Update following publication of Q3 2024 trading results

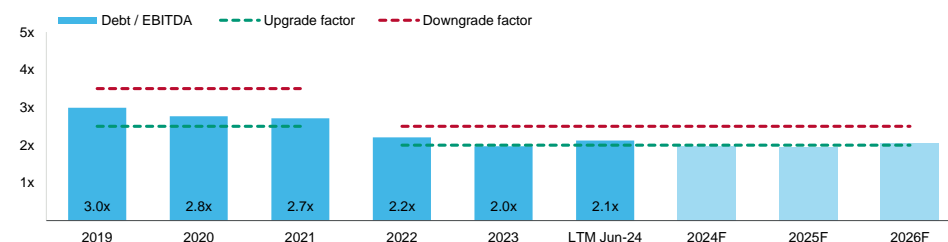
Summary

[Air Liquide S.A.](#)'s (Air Liquide, A2 stable) rating reflects its leading position in the concentrated industrial gas market, with a high degree of revenue visibility provided by long-term take-or-pay contracts in its large industry business unit that contain cost pass-through clauses; a high network density supporting its industrial merchant business unit; a highly regulated market environment for its healthcare business; and growth opportunities arising from energy transition, including carbon capture. The rating also benefits from its exposure across diverse customers, industries and geographies, as well as solid and stable profitability levels.

Nevertheless, the company remains exposed to the cyclical nature of its customers, as Air Liquide supplies sectors such as chemicals and steel producers, and high capital investments and dividends weigh on free cash flow. We expect that Air Liquide's capital expenditures will remain elevated over the next 24 months as the company executes its large order backlog, such that Moody's adjusted free cash flow (FCF) may turn negative over the period.

Air Liquide's financial policy, characterized by a balanced allocation of cash and a commitment to an "A range" rating, also supports its credit quality. The company has delivered sustained de-leveraging since the acquisition of Airgas in 2016, with leverage of 2.1x as of June 2024 compared to above 4.0x in 2016. We expect Moody's adjusted gross debt-to-EBITDA to remain at or moderately below 2.0x in the next 24 months while dividend payments and higher average cost of debt will maintain Moody's Retained Cash Flow (RCF)/debt at around 30% over the period.

Exhibit 1
Air Liquide's Moody's adjusted gross leverage positions it strongly within the A2 rating triggers Evolution of Moody's adjusted gross debt/EBITDA



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Moody's forecasts are Moody's opinion and do not represent the views of the issuer. Upgrade and downgrade factors were reset in 2022 following the ratings upgrade of Air Liquide.

Source: Moody's Financial Metrics™ and Moody's Ratings forecasts.

Credit strengths

- » Global leader in industrial gas market, underpinned by scale, regional network density and strong customer relationships
- » Long-term contracts and balanced geographic and end-market diversification provide revenue visibility and stability
- » Solid and resilient profitability
- » Exposure to markets like home healthcare and electronics segments, which provide organic growth potential

Credit challenges

- » High investment needs, including for growth opportunities related to carbon transition
- » Capital intensity and generous dividend policy constrain FCF generation
- » Some exposure to customers' cyclicality

Rating outlook

The stable outlook reflects the expectation that Air Liquide's credit metrics will remain well within the requirements for the A2 rating. The stable outlook also reflects the expectation that the company will take appropriate measures to protect its credit quality and rating in case of broader based macroeconomic downturn impacting its earnings and cashflow generation.

Factors that could lead to an upgrade

We could consider upgrading the rating if Air Liquide's adjusted financial leverage would be sustained below 2.0x, RCF/Debt sustained above 35%, and if the company would publicly commit to maintaining this stronger credit quality.

Factors that could lead to a downgrade

We could consider downgrading Air Liquide's rating with leverage above 2.5x on a sustainable basis and RCF/Debt below 25% through the cycle. Any indications that its financial policy would become less conservative would also be negative for the rating.

Key indicators

Exhibit 2

Air Liquide S.A.

(in € billions)	2019	2020	2021	2022	2023	LTM Jun-24
Revenue	21.9	20.5	23.3	29.9	27.6	27.0
EBITDA Margin %	26.8%	28.6%	26.4%	24.2%	26.7%	27.4%
EBIT / Avg. Assets	8.4%	8.4%	8.7%	9.7%	9.7%	9.7%
Debt / EBITDA	3.0x	2.8x	2.7x	2.2x	2.0x	2.1x
RCF / Net Debt	20.0%	22.2%	24.7%	31.3%	33.6%	30.1%
EBITDA / Interest Expense	11.1x	12.0x	15.4x	14.1x	14.1x	13.9x
EBITA / Interest Expense	7.4x	8.0x	10.4x	9.7x	9.7x	9.6x
FCF / Debt	1.7%	4.8%	2.6%	2.3%	6.1%	4.3%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.

Source: Moody's Financial Metrics™

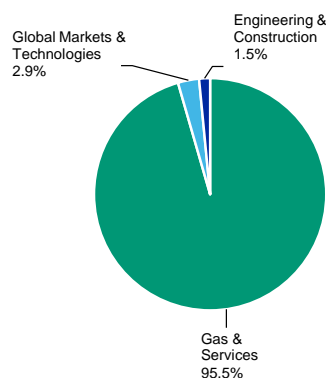
Profile

Headquartered in Paris, France, Air Liquide is a world leader in gas, technologies and services for industries and healthcare, generating €27.6 billion revenue in 2023. The company employs about 66,300 people across 60 countries as of 30 September 2024. After the

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.moody's.com> for the most updated credit rating action information and rating history.

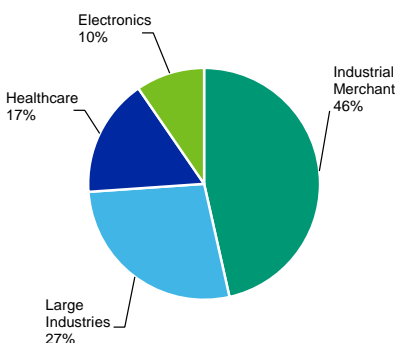
merger of its two main competitors, [Linde plc](#) (A2 stable) and Praxair, Air Liquide is currently the second-largest company in the industrial gas market.

Exhibit 3
Revenue breakdown by business unit
(year-to-date 30 September 2024)



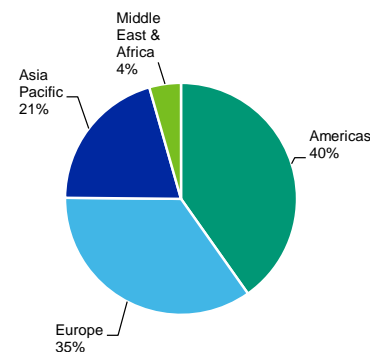
Source: Company information

Exhibit 4
Gas & Services global revenue breakdown
by business lines (year-to-date 30
September 2024)



Source: Company information

Exhibit 5
Gas & Services revenue breakdown by
region (year-to-date 30 September 2024)



Source: Company information

The company divides its operations into three business units: Gas and Services (G&S), which is the main unit (95.5% of sales in the first nine months of 2024), supplying industrial gases and related services; Engineering and Construction (E&C), which designs and constructs industrial gas production units (1.5%); and Global Markets and Technologies (GM&T), which delivers technological solutions to support the new markets of energy transition, maritime logistics and deep tech (2.9%). Through a truly global footprint, the group's G&S sales are well balanced across the world's main manufacturing regions, with the Americas accounting for 40.2% of sales, Europe 34.9%, Asia-Pacific 20.4% and the Middle East and Africa 4.4% in the first nine months of 2024.

Air Liquide is listed on the Paris stock market, and its market capitalization as of early December 2024 was around €93 billion.

Detailed credit considerations

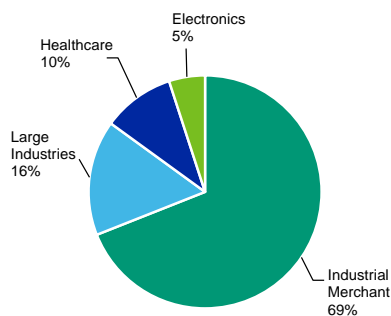
Contracts in Large Industries segment provides revenue visibility and resilient earnings

Air Liquide's resilient business profile with a diversified geographic footprint and revenues well spread across different end-markets, long-term cost indexed take-or-pay contracts in its Large Industries segment, and its leading position in the industrial gas segment of the chemical industry, contribute to its strong credit quality. We expect these defensive characteristics to support resilient EBITDA and cash generation. Throughout a challenging macro environment characterized by cost inflation and elevated energy prices since early 2022, the industrial gas sector has performed strongly relative to the rest of the chemical industry.

Air Liquide's presence in the Large Industries segment, which contributed around 27% to the G&S revenues in the first nine months of 2024, provides a high degree of visibility into profit and cash generation. Air gases are mainly obtained by the separation of air into its main components, oxygen and nitrogen, through air separation units, a process that is energy and capital intensive. This segment predominantly serves customers in the refining, metals and chemical industries through on-site plants and pipeline networks. Because of the high capital intensity of the Large Industries business, supply contracts are generally closed for 15 years. The contracts contain a minimum take-or-pay level, and prices are indexed on electricity and natural gas prices. Air Liquide also operates more than 9,700 kilometers (km) of pipelines in the most gas-intensive manufacturing basins, such as the US Gulf Coast and the Rotterdam area, allowing the company to provide a reliable and cost-efficient service to customers.

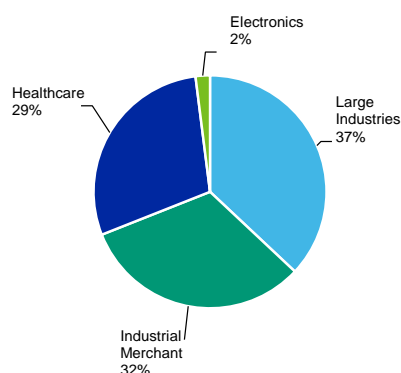
The group's natural gas consumption mainly stems from the operation of steam methane reformers to provide its customers with syntheses gas, carbon monoxide and oxogas and hydrogen, and from cogeneration units to produce electricity and steam. Air Liquide disclosed that around 49% of the 2023 revenues of the Large Industries segment were related to hydrogen, carbon monoxide as well as cogeneration. This also includes sales of hydrogen from electrolysis.

Exhibit 6
G&S revenue breakdown by business line in the Americas (2023)



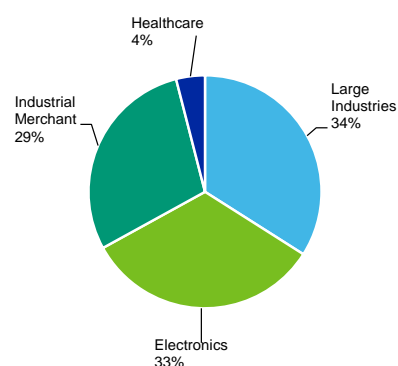
Source: Company's 2023 audited financials

Exhibit 7
G&S revenue breakdown by business line in Europe (2023)



Source: Company's 2023 audited financials

Exhibit 8
G&S revenue breakdown by business line in Asia Pacific (2023)



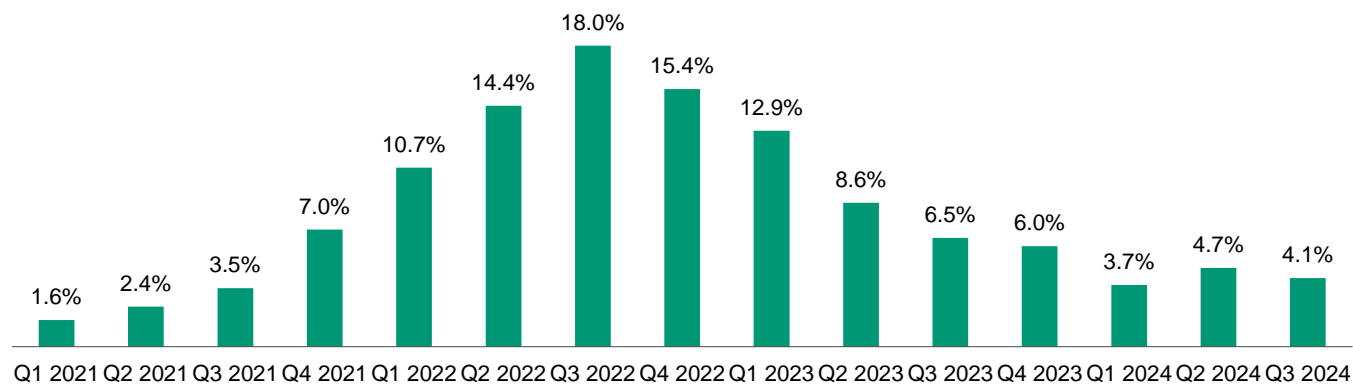
Source: Company's 2023 audited financials

Industrial Merchant, Healthcare and Electronics segments provide additional diversification

The absence of long-term cost indexed take-or-pay contracts in the Industrial Merchant segment makes it more vulnerable to lower profits due to cost inflation and a weakening macro environment compared to the Large Industries and Electronics business. However, Air Liquide has been able to address steep increases in energy costs in particular in 2022 and 2023 by meaningful price increases while preserving volumes. The company has been implementing further price increases in the Industrial Merchant business even in the context of decreasing energy prices, indicative of its competitive strength. Price increases averaged 4.2% in the first nine months of 2024 reflecting in particular successful price campaigns in the US and in Argentina to counter hyper-inflation - this followed price increases of 14.7% in 2022 and 8.4% in 2023.

The company's Industrial Merchant business serves a broad range of industries and customers (46% of G&S' first nine months of 2024 revenue). The Industrial Merchant business mainly relies on gas supply from the Large Industries business unit. Supply modes range from on-site facilities and bulk deliveries to packaged gases in the form of cylinders. Air Liquide's dense distribution and production network constitute a barrier to market entrance because distribution usually only takes place within a 250-km radius around the production site. Around 25% of revenue of the Industrial Merchant business is generated from rental income and another 25% from sales to industries that can be considered defensive, such as the pharmaceutical and food and beverage sectors. Around 95% of the customer base in this segment is small customers who favor simplicity, flexibility and quality of service.

Exhibit 9
Sustained growth in the Industrial Merchant's pricing in particular in the context of high inflation



Source: Company information

Apart from gases for the industrial and technology sectors, Air Liquide also operates in the healthcare sector. Air Liquide's Healthcare division supplies medical gases (oxygen, nitrous oxides and xenon) to around 20,000 hospitals and clinics, and comprehensive

treatments to 2 million home healthcare patients suffering from chronic diseases. Medical gases are treated as drugs and thus constitute a highly regulated market, demanding health authorities' approval. The hospitals and clinics segment is experiencing pricing pressure in developed economies as healthcare systems look to curb spending. However, the home healthcare segment has positive fundamentals, in both advanced and developing economies, as patient care is increasingly shifting from hospitals to homes. An aging population and an increasing rate of chronic diseases are also growth factors in this sector.

Air Liquide's Electronics unit serves the semiconductor, flat panel display and photovoltaic markets. Around 46% of 2023 revenue in its electronics unit was generated by carrier gases, where deliveries are usually based on long-term gas supply agreements. The electronics business has grown strongly over the last couple of years although with some volatility reflecting the volatility of its end-markets; in 2023, it generated revenue of around €2.5 billion, compared with €830 million in 2003.

While contributing only a combined 4.5% of the company's total revenue in the first nine months of 2024, the E&C and GM&T business units are strategically important for Air Liquide. E&C provides crucial engineering support to internal gas projects. Building gas units for third-party customers can also lead to supply contracts for large industry operations. As E&C orders depend on customers' long-term investment decisions, revenue in that business unit is more volatile. The GM&T business unit is focused on maritime logistics, scientific exploration (aerospace) and the development of renewable fuels, such as hydrogen and biogas for which technology is a major differentiator.

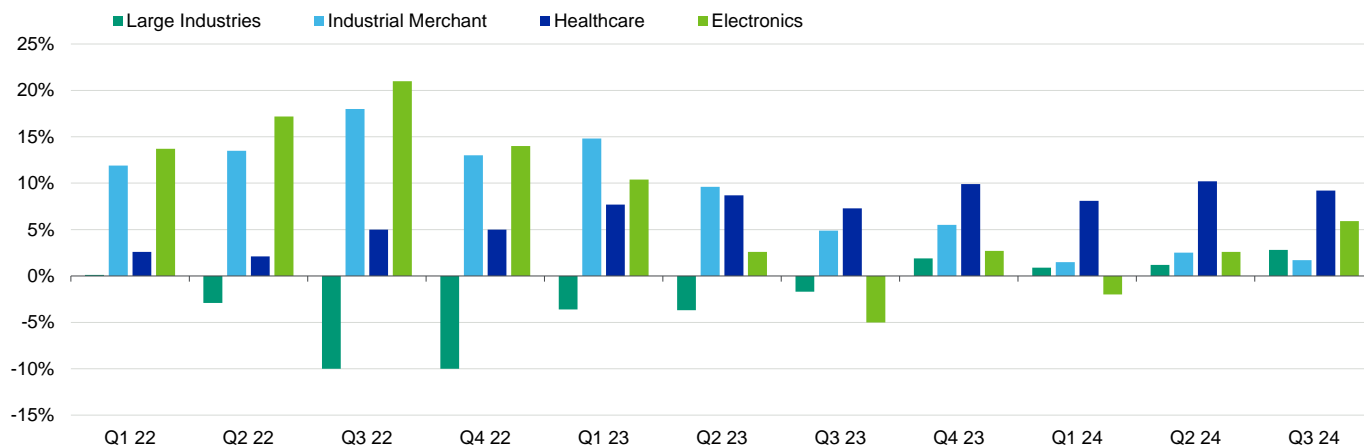
Sustained comparable revenue growth in 2022-2024 in a challenging environment, growing investment backlog supports future growth

We expect continued revenue growth for Air Liquide. The company has experienced strong comparable sales growth of 3.7% in 2023 in an environment characterized by decreasing (but from an elevated level) energy prices and maintained this momentum in the first nine months of 2024 (+2.8% compared to the same period last year). In the Large Industries segment, demand stabilized in 2023 at a low level with a moderate 1.8% decline in comparable sales compared to prior. The segment experienced moderate recovery of sales in the first three quarters of 2024 (+1.6%) despite the negative impact from the disposal of a cogeneration unit in Europe. The moderate recovery was driven by improving demand in the chemicals end-market in particular in the US and the contribution from two start-ups in China and the US, while the global demand from steel producers remained subdued. In 2022 the comparable sales decline in Large Industries was meaningful at 6.6%, negatively impacted by weak demand in particular in Europe, where sharp increases in energy prices had a significant negative impact on volumes from certain industries, including the chemicals and steel sectors. However the relative weakness in Large Industries was more than offset by growth in all the other segments, namely Industrial Merchant, Healthcare and Electronics.

The Industrial Merchant comparable sales growth was 14.2% and 8.5% in 2022 and 2023, respectively, mainly driven by a high price effect and resilient volumes demonstrating Air Liquide's favourable pricing power. While Industrial Merchant continued to display positive comparable sales growth at 1.9% in the first nine months of 2024, the dynamic was slower due to softening volumes, including from hardgoods in the Americas region, more than offset by price increases of 4.2% during the period. The Healthcare business (+8.4% comparable sales growth in 2023 and 9.1% in the first nine months of 2024) was bolstered by the dynamic development of Home Healthcare and the increase in the prices of medical gases in an inflationary environment. Comparable sales in Electronics increased by 2.4% in 2023 and 2.1% in the first nine months of 2024. Electronics benefitted from very solid contribution from start-up/ramp-up projects in carrier gases in Q1-Q3 of 2024 partly offset by continued low demand from Specialty Chemicals. Demand from memory manufacturers negatively impacted sales from the second quarter of 2023 following a very strong rebound in 2022 (+16.4%).

Exhibit 10

Comparable sales growth of Gas & Services business segments on a quarter-on-quarter basis

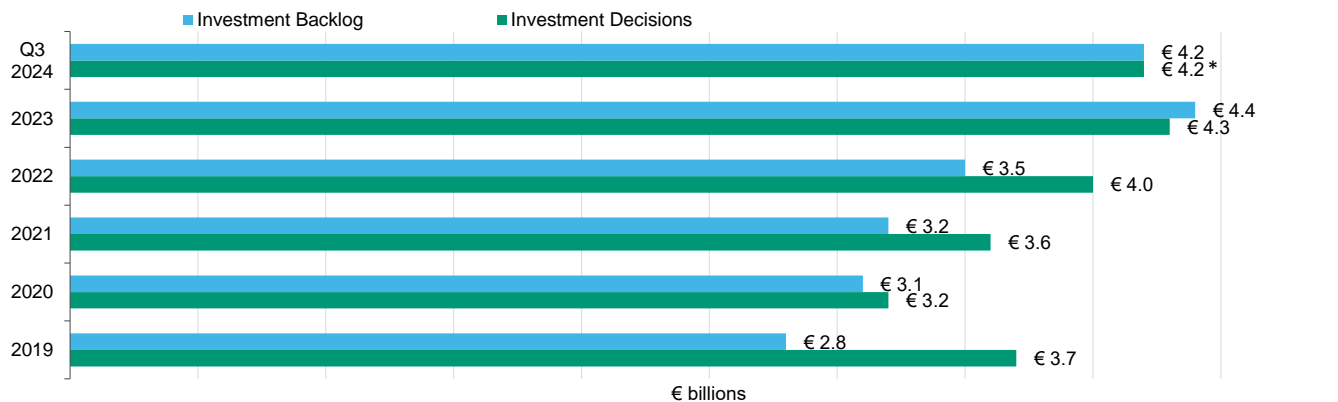


Source: Company information

Air Liquide's investment decisions reached €4.3 billion in 2023 and €4.2 billion in the last twelve months period to Q3 2024, which the company typically spreads over two to three years. The company has also maintained a high investment backlog at €4.4 billion as of the end of 2023 and €4.2 billion as of the end of Q3 2024 compared to €3.5 billion at the end of 2022. This backlog will translate into additional annual sales of well above €1.0 billion after it is fully ramped up. The breakdown of the investment backlog is balanced between Large Industries and Electronics.

Exhibit 11

Continued high level of investments provides good visibility into revenue growth



*€4.2 billion of investment decisions as of the LTM period to Q3 2024.

Source: Company information

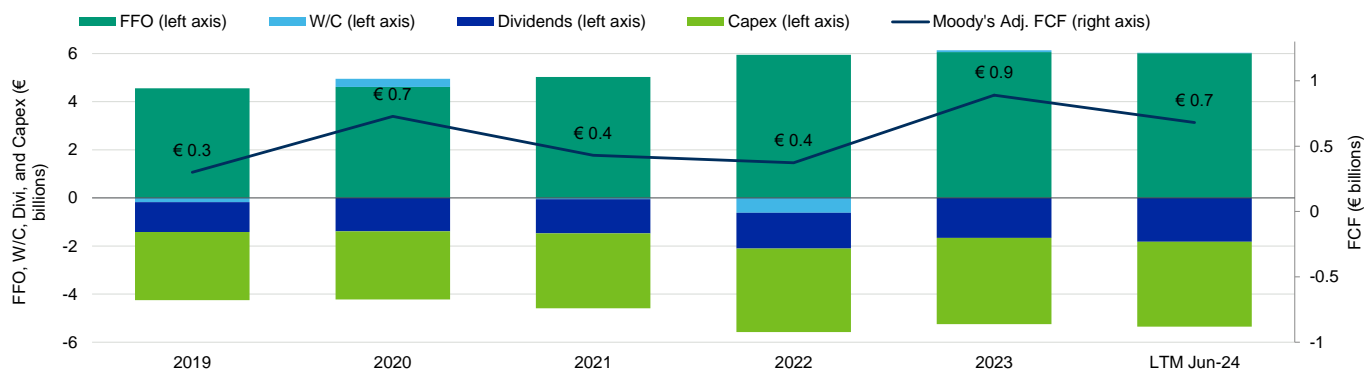
Air Liquide's investment decisions are subject to a thorough process of evaluating risks associated with a given decision, including counterparty risks, asset quality, the location of the customer site and contract clauses, among others. The composition of Air Liquide's investment backlog has shifted towards projects related to energy transition (accounting for more than 40% of 12-month portfolio of investment opportunities as of December 2023) and the electronics industry. In the context of its ADVANCE strategy program the company aims at further accelerating its investment decisions to an accumulated €16 billion in the 2022 to 2025 period, which is expected to support a compounded annual revenue growth rate of 5%-6% over the same period. The company also confirmed its ambitions to invest €8 billion in the field of low-carbon and renewable hydrogen and to triple its sales from €2 billion to €6 billion before 2035. In addition, in 2030 the electrolysis capacities in operation or under construction will reach 3 GW. Air Liquide's carbon capture and storage projects in particular are showing positive momentum.

High capital expenditures will continue to burden FCF, continued focus on cost discipline to support EBITDA generation

Given the company's fairly high investment backlog, we project that capital expenditure including maintenance capital spending will increase over the next two years to well above €4.0 billion from €3.4 billion in 2023. This dynamic will negatively affect FCF generation which we project to be moderately positive in 2024 before potentially turning negative from 2025 depending on the pace of realization of projects. In the context of an unrestricted cash balance as of the end of 2023 of around €1.5 billion (€1.8 billion of cash and cash equivalent as of 30 September 2024 - however without disclosure of amount of restricted cash) and large cash flow from operations, this high level of capital spending will be mostly accommodated from internal sources with the remainder to be funded with incremental debt. We also assume that the company will continue to expand its dividend payments.

Exhibit 12

We forecast Air Liquide's Moody's-adjusted FCF to weaken from a peak in 2023 mainly driven by increasing capital expenditures and dividends



All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months. Source: Moody's Financial Metrics™

Despite the high inflation environment including elevated energy prices, Air Liquide has preserved a high Moody's adjusted EBITDA margin at 26.7% in 2023 and this margin further improved to 27.4% in the LTM period to June 2024 supporting the current rating. The company's Operating Income Recurring on Sales excluding energy pass-through impact (OIR margin as reported by the company) improved by 70 basis points (bps), 80 bps, and 100 bps in 2022, 2023, and the first nine months of 2024, respectively. This margin improvement was driven by price increases and the realization of efficiencies. Such efficiencies amounted to €466 million in 2023, up 23% compared to the same period last year, and €353 million in the first nine months of 2024, up 10% year-on-year, and ahead of management's annual target of more than €400 million for 2023 and 2024. Following strong achievements in the last two years, Air Liquide has revised upwards its OIR margin improvement target to 320 bps by the end of 2025 from 160 bps initially. Air Liquide's profitability level remains however weaker than Linde's which has a comparable business profile. We believe there is thus further potential for improvement over the coming years.

In addition to contributions to earnings from the investment backlog, we expect that the company's projected comparable sales growth and continued focus on profitability will help Air Liquide maintain a low leverage at around 2.0x over the coming 24 months. The projected debt/EBITDA ratio of the company will thus remain at the lower end of the leverage thresholds set for the A2 rating category. At the same time we project adjusted RCF/Debt to remain at around 30% - towards the middle of the range set for the rating category at between 25% and 35%. A material weakening of the macro environment constitutes a downside to this view, but we expect that Air Liquide's performance in such a scenario would continue to be resilient relative to other chemical peers.

Liquidity analysis

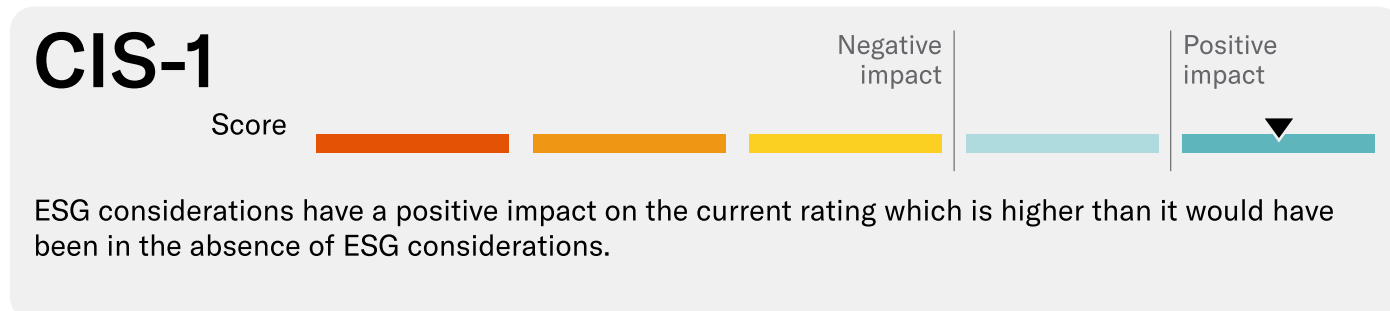
Air Liquide's liquidity profile is strong. As of 31 December 2023, the company had around €1.5 billion of unrestricted cash and cash equivalents on its balance sheet. The total cash balance stood at close to €1.8 billion as of 30 June 2024 (the company does not provide disclosure for restricted cash on an interim basis). Furthermore, the company has access to an undrawn €3.0 billion syndicated revolving credit facility due 2029 and €830 million of other credit lines. In combination with expected adjusted funds from operations (FFO) generation of €6.0 billion to €6.2 billion in 2024, these sources should be more than sufficient to cover capital expenditures, debt maturities, dividend payments and working capital swings.

ESG considerations

Air Liquide S.A.'s ESG credit impact score is CIS-1

Exhibit 13

ESG credit impact score



Source: Moody's Ratings

ESG considerations have a positive impact on Air Liquide's rating. This reflects Air Liquide's strong governance and track record of conservative financial policy, which to some degree mitigate the company's exposure to environmental risks mainly stemming from greenhouse gas emissions through the production process and social risks mainly related to health and safety.

Exhibit 14

ESG issuer profile scores



Source: Moody's Ratings

Environmental

Air Liquide's exposure to environmental risks stems from greenhouse gas emissions which are mainly related to the production of hydrogen and electric power through cogeneration units. Its air separation units consume high amounts of energy. However, contractual cost pass through in the company's Large Industries segment offsets to some degree its exposure to the volatility of energy and CO2 prices. Additionally, Air Liquide has a large order backlog which includes projects related to energy transition.

Social

Air Liquide's exposure to social risks mainly stems from health and safety risks in line with the chemicals industry and relatively frequent fatal accidents in the industrial gas sector. Air Liquide aims to contribute towards decarbonization by the involvement in various green and blue hydrogen projects as well as facilitating decarbonization initiatives of its customers and providing carbon capture services.

Governance

Air Liquide's **G-1** score reflects strong governance practices. The company has a track record of adhering to its conservative financial policy and is committed to maintain an "A-range" rating. Management has demonstrated a history of achieving its financial targets including reducing leverage over several years from an elevated level following the acquisition of Airgas in 2016. In 2022, the company executed the separation of the CEO and Chairman of the supervisory board roles which were previously held by one person resulting in enhanced corporate governance.

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.

Rating methodology and scorecard factors

The principal methodology used in these ratings was [Chemicals](#) methodology published in October 2023. The scorecard-indicated outcome in the forward view is A2 in line with the assigned A2 rating.

Exhibit 15

Rating factors

Air Liquide S.A.

Chemical Industry Scorecard			Current LTM Jun-24		Moody's 12-18 month forward view	
Factor 1 : Scale (15%)	Measure	Score	Measure	Score		
a) Revenue (\$ billions)	29.2	A			31 - 32	Aa
Factor 2 : Business Profile (25%)						
a) Business Profile	Aa	Aa			Aa	Aa
Factor 3 : Profitability (10%)						
a) EBITDA Margin	27.4%	A			28% - 29%	A
b) Return on Average Assets	9.7%	Ba			10.5% - 11.5%	Baa
Factor 4 : Leverage & Coverage (30%)						
a) Debt / EBITDA	2.1x	Baa			1.9x - 2.1x	A
b) RCF / Net Debt	30.1%	Baa			29% - 31%	Baa
c) EBITDA / Interest Expense	13.9x	Baa			12.5x - 14x	Baa
Factor 5 : Financial Policy (20%)						
a) Financial Policy	A	A			A	A
Rating:						
a) Scorecard-Indicated Outcome		A2				A2
b) Actual Rating Assigned						A2

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.

Forecasts are our opinion and do not represent the views of the issuer.

Sources: Moody's Financial Metrics™ and Moody's Ratings forecasts

Appendix

Exhibit 16

Peer comparison

Air Liquide S.A.

(in \$ millions)	Air Liquide S.A.			Linde plc			Air Products and Chemicals, Inc.		
	A2 Stable			A2 Stable			A2 Stable		
	FY Dec-22	FY Dec-23	LTM Jun-24	FY Dec-22	FY Dec-23	LTM Sep-24	FY Sep-22	FY Sep-23	LTM Jun-24
Revenue	31,548	29,855	29,213	33,364	32,854	33,025	12,699	12,600	12,104
EBITDA	7,647	7,967	7,993	11,200	12,503	12,875	4,283	4,860	5,071
Total Debt	17,101	16,060	16,825	19,482	21,039	23,928	8,523	11,230	14,957
Cash & Cash Equivalents	1,875	1,634	1,913	5,436	4,664	5,187	2,711	1,617	2,376
EBITDA margin %	24.2%	26.7%	27.4%	33.6%	38.1%	39.0%	33.7%	38.6%	41.9%
ROA - EBIT / Average Assets	9.7%	9.7%	9.7%	10.2%	11.8%	12.2%	10.6%	11.6%	10.5%
EBITDA / Interest Expense	14.1x	14.1x	13.9x	33.4x	23.5x	21.3x	22.2x	15.1x	14.0x
Debt / EBITDA	2.2x	2.0x	2.1x	1.7x	1.7x	1.9x	2.0x	2.3x	2.9x
RCF / Debt	27.9%	30.2%	26.7%	35.5%	37.3%	33.2%	22.9%	17.8%	12.7%

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.
Source: Moody's Financial Metrics™

Exhibit 17

Moody's-adjusted debt reconciliation

Air Liquide S.A.

(in € millions)	2019	2020	2021	2022	2023	LTM Jun-24
As reported debt	14,730.4	13,588.3	13,955.7	13,452.5	12,111.8	13,271.4
Pensions	1,690.1	1,560.1	1,344.3	1,003.3	1,034.2	1,034.2
Securitization	1,133.3	1,062.3	1,395.1	1,567.4	1,392.6	1,392.6
Moody's-adjusted debt	17,553.8	16,210.7	16,695.1	16,023.2	14,538.6	15,698.2

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.
Source: Moody's Financial Metrics™

Exhibit 18

Moody's-adjusted EBITDA reconciliation

Air Liquide S.A.

(in € millions)	2019	2020	2021	2022	2023	LTM Jun-24
As reported EBITDA	5,703.5	6,083.5	6,114.1	7,134.4	7,442.7	7,439.6
Pensions	(2.2)	(4.8)	(0.9)	(4.0)	(5.2)	(6.1)
Securitization	11	-	3	50	46	43
Unusual Items	158.3	(221.1)	35.6	75.1	(116.8)	(87.3)
Moody's-adjusted EBITDA	5,870.3	5,857.6	6,152.0	7,255.7	7,367.1	7,388.9

All data based on adjusted financial data, which follow our Financial Statement Adjustments in the Analysis of Nonfinancial Corporations methodology. LTM = Last 12 months.
Source: Moody's Financial Metrics™

Ratings

Exhibit 19

Category	Moody's Rating
AIR LIQUIDE S.A.	
Outlook	Stable
Issuer Rating -Dom Curr	A2
Senior Unsecured MTN -Dom Curr	(P)A2
Commercial Paper -Dom Curr	P-1
ST Issuer Rating -Dom Curr	P-1
AIR LIQUIDE FINANCE	
Outlook	Stable
Bkd Senior Unsecured	A2
Bkd Commercial Paper -Dom Curr	P-1
AIR LIQUIDE U.S. LLC	
Outlook	Stable
Bkd Commercial Paper	P-1

Source: Moody's Ratings

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